

Open Management of Infected Aortic Endograft after Coil Embolization Complicated by Aortoenteric Fistula

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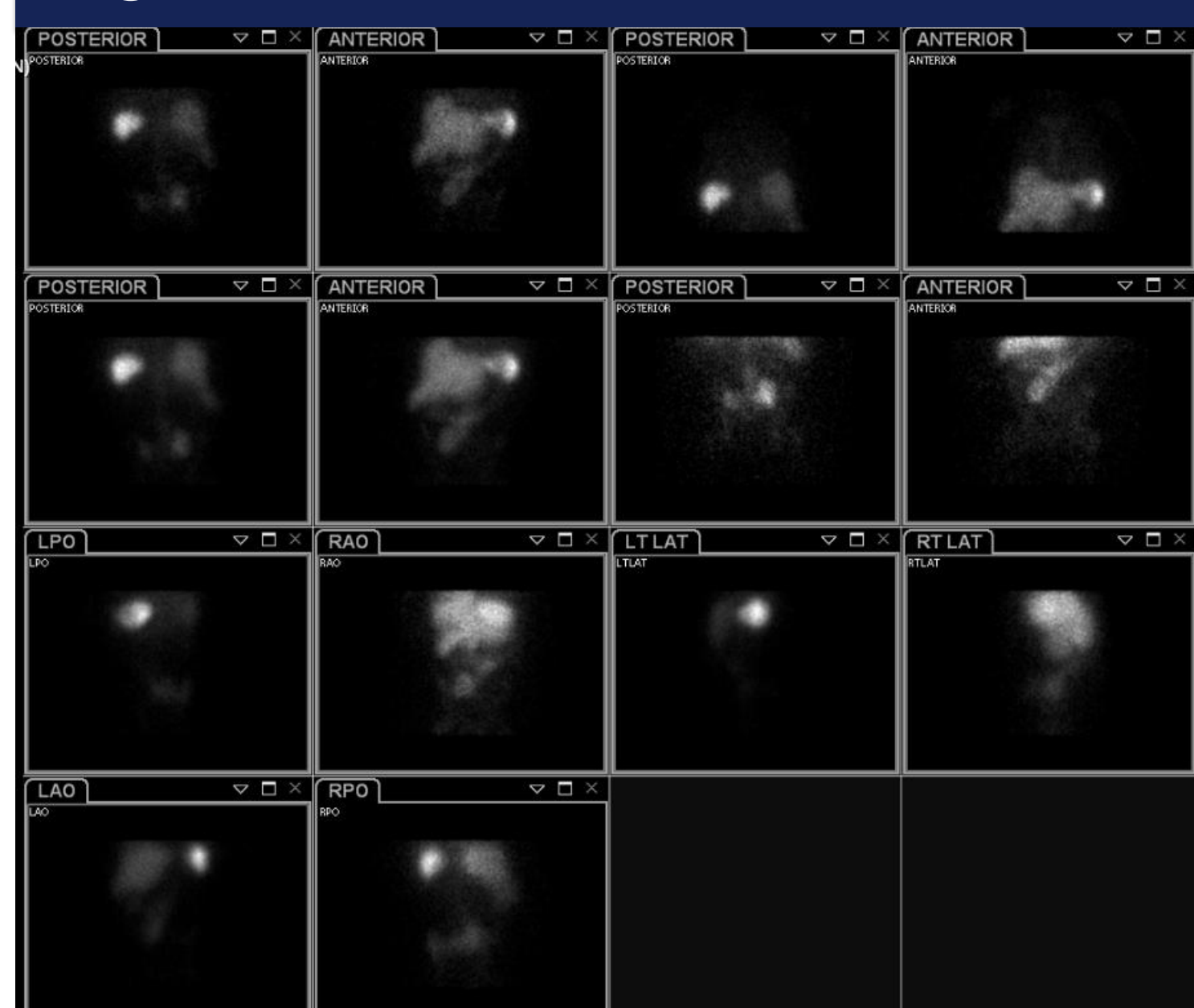
Background

This report outlines the management of an infected aortic endograft with concurrent aortoenteric fistula via explantation, primary repair and reconstruction. Our case also highlights numerous percutaneous endoleak interventions as a possible nidus for this infection.

Case Presentation

This report outlines a 55-year-old female with an infrarenal aortic aneurysm treated with endovascular repair. Her postoperative course was complicated by a type Ib endoleak at the right iliac limb that required coil embolization of the internal iliac artery and extension. Furthermore she had persistent type II endoleak from a sacral and lumbar arcade, treated with further embolization. She then presented approximately 2 years after the index operation with vomiting and persistent anemia. A nucleotide uptake study showed radiotracer activity prominent at the endograft bifurcation. A CT scan also demonstrated right sided hydronephrosis likely obstructive due to her aneurysm. Given her imaging, we planned for explantation and reconstruction with concomitant cystography with urologic surgery.

Figures



Nucleotide uptake study showing radiotracer activity near the iliac limb and flow divider. Also visualized is uptake near the coil embolization.

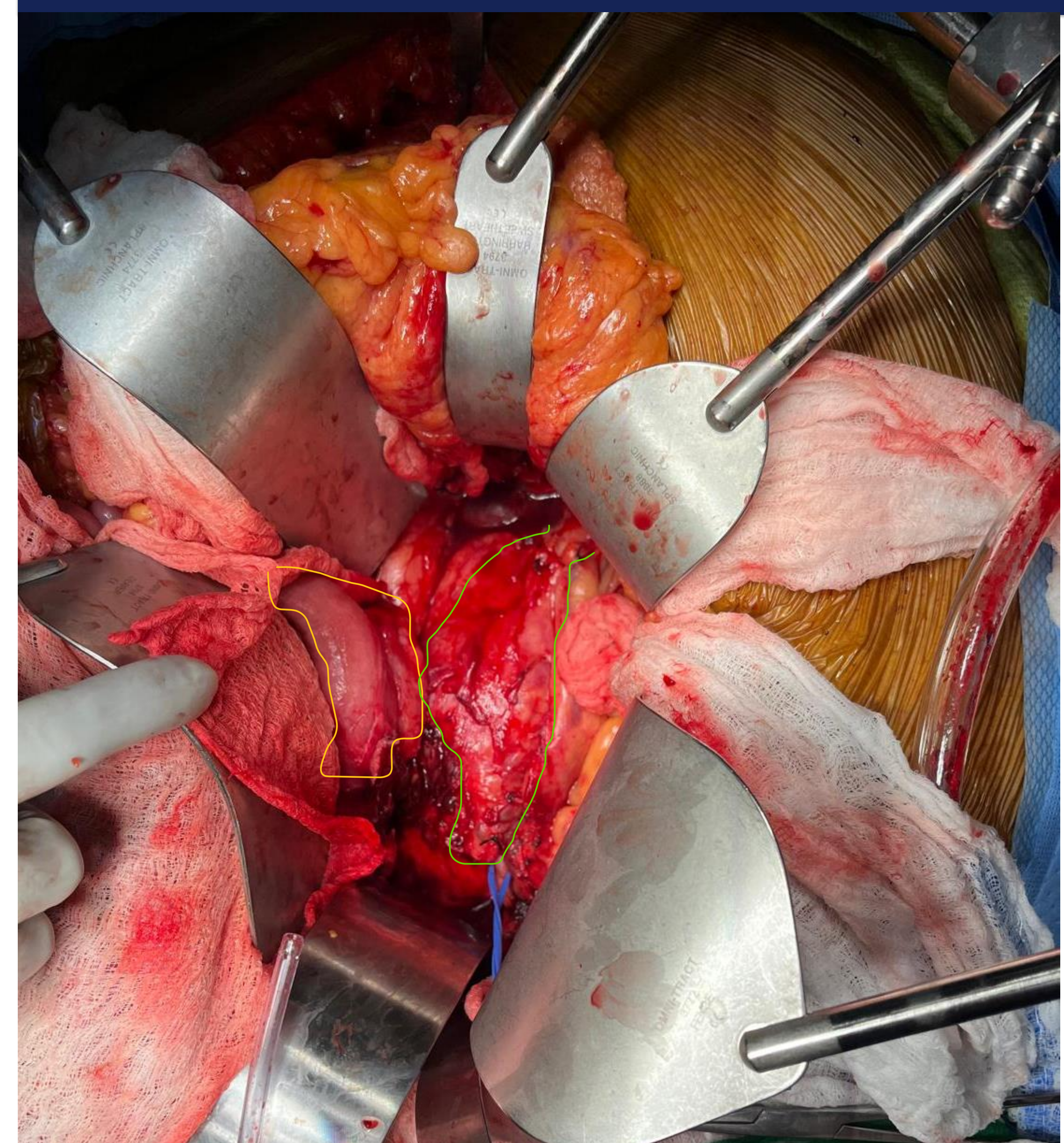
Intervention

Prior to the procedure, urologic surgery performed a right nephrostogram and placement of bilateral ureteral stents. She underwent a right groin cutdown as well as exploratory laparotomy. During our exposure, deep infection was noted in the retroperitoneum including a right psoas abscess. This was irrigated and washed out. The aneurysm sac was dissected free and found to be contiguous with the second part of the duodenum consistent with an aortoenteric fistula. We intraoperatively consulted general surgery. However, we first addressed explantation of the endograft. A supraceliac aortic clamp was used for control. Using wire cutters, the proximal endograft was transected and removed in parts including limbs. The barbs of the suprarenal fixation were adherent and were left in place as they were unable to be safely removed. The clamp was then moved infrarenally and the aorta was reconstructed using a rifampin soaked bifurcated graft. On the right side a distal femoral anastomosis was performed and on the left side, an anastomosis was performed to the iliac bifurcation. The proximal anastomosis was performed in an end-to-end fashion. General surgery then addressed the aortoenteric fistula by performing a wedge resection of the duodenum that was repaired with a 2 layers of handsewn anastomoses. The new graft was then covered with an omental flap. The right ureter was also covered with a portion of omentum. A right nephrostomy tube was placed by the urology team. The abdomen was then closed. Her post-operative course was unremarkable. The left ureteral stent was removed while the right ureteral catheter and nephrostomy tube were left in place. Her endograft and intraoperative cultures were positive for *S. Anginosus*. She was discharged home on suppressive Augmentin.

Discussion

The previous embolizations may have created a nidus for infection. The psoas abscess and fistula likely represent downstream complications from the infected endograft. Given the endograft, the enteric fistula did not present with large volume hematemesis but was likely contributing to the patient's chronic anemia.

Figures



Aortoenteric fistula with duodenum shown in yellow and aortic aneurysm sac shown in red.