Bilateral obturator bypass for combined aortic and femorofemoral graft infection

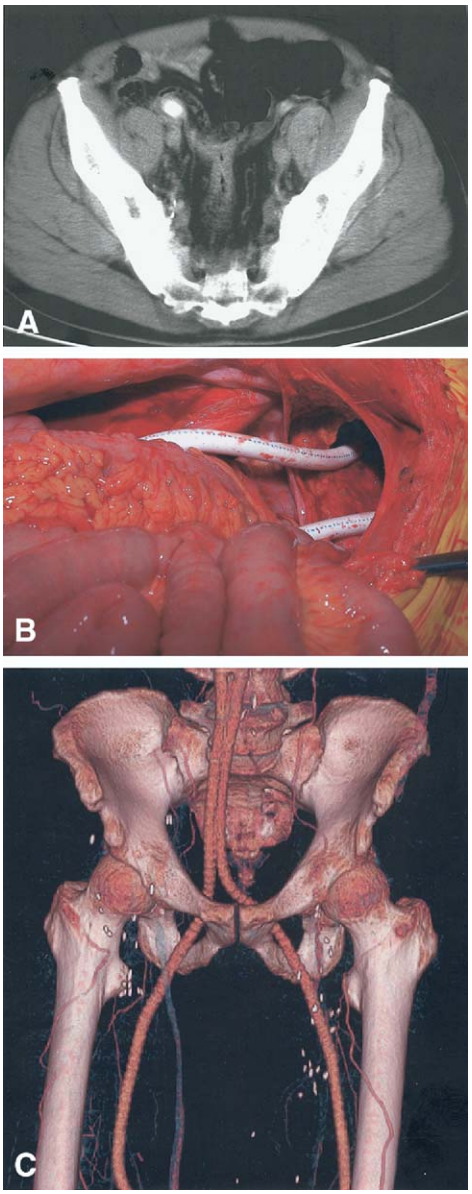
J. Keith Thompson, DO,[a] Rhonda S. Strunk, RT (R) (CT),[b] and **Joseph S. Giglia, MD,[a]** *Cincinnati, Ohio*

A 60-year-old man underwent end-to-end aortobifemoral (ABF) bypass for occlusive disease.[1,2] He subsequently underwent a right-to-left femorofemoral bypass (FFB) for occlusion of the left limb of the ABF. He was referred 4 years later with fever, malaise, and purulent drainage from the right groin. A computed tomographic scan demonstrated fluid surrounding the FFB and the right limb of the ABF (A). A segment of infrarenal aorta proximal to the ABF graft appeared normal.

Standard inframesocolic exposure was obtained via the previous midline incision. No fluid was evident at the graft bifurcation, and it appeared well incorporated. The residual infrarenal aorta was dissected free and prepared for an anastomosis. Openings were made in the ventromedial aspect of the obturator membrane bilaterally while standard medial exposure of the above-knee popliteal arteries was performed. Expanded polytetrafluoroethylene grafts ((W.L. Gore & Association, Inc., Tempe, Ariz) Intering; 8 mm × 40 cm) were tunneled from the popliteal sites through the obturator foramina into the abdomen. (B) The limbs of a bifurcated expanded polytetrafluoroethylene graft (Gore-Tex; 18 × 9 mm) were cut 1 cm from the graft bifurcation, and graft-to-graft anastomoses were performed bilaterally.

After systemic anticoagulation, the infrarenal aorta and the limbs of the ABF were clamped. The limbs were then transected, ligated, and advanced antegrade along the iliac tunnels. The residual body of the ABF graft was excised. The new bifurcated graft was sewn end to end to the infrarenal aorta proximally. The graft-to-graft anastomoses were assessed for hemostasis before the grafts were pulled through the previously fashioned obturator tunnels. End-to-side anastomoses were performed distally. The wounds were closed and covered with occlusive dressings before complete excision of the residual ABF limbs and the FFB via bilateral femoral and suprapubic incisions. The femoral and suprapubic incisions were packed, and the patient was maintained on chronic oral antibiotic therapy. At 24 months, he had no evidence of recurrent infection and was ambulatory at home. A follow-up computed tomographic scan demonstrated no fluid collections and patent grafts (C; cover image).

The treatment of infected ABF grafts is a difficult problem. Options include in situ reconstruction with femoral vein, cryopreserved allografts, or antibiotic-impregnated synthetic grafts. Extra-anatomic reconstruction to the popliteal level is not an ideal solution secondary to poor patency. We suggest that reconstruction with synthetic bilateral obturator bypass is a viable option if there is adequate residual infrarenal aorta. This procedure allows for complete treatment of the femoral pathology and should have improved patency compared with longer extra-anatomic bypasses.



REFERENCES

1. Sharp WJ, Hoballah JJ, Mohan CR, Kresowik TF, Martinasevic M, Chalmers, RT, et al. The management of the infected aortic prosthesis: a current decade of experience. J Vasc Surg 1994;19:844-50.
2. Seeger JM, Pretus HA, Welborn MB, Ozaki CK, Flynn TC, Huber TS. Long-term outcome after treatment of aortic graft infection with staged extra-anatomic bypass grafting and aortic graft removal. J Vasc Surg 2000;32:451-9.

From the Departments of Surgery[a] and Radiology,[b] Division of Vascular Surgery, University of Cincinnati Medical Center.

J Vasc Surg 2006;44:888
0741-5214/$32.00

doi:10.1016/j.jvs.2005.06.016