

9. Iida O, Nanto S, Uematsu M, Ikeoka K, Okamoto S, Nagata S. Influence of stent fracture on the long-term patency in the femoro-popliteal artery. *J Am Coll Cardiol Int* 2009; 2:665-671.
10. Tsuji Y, Kitano I, Iida O, Kajita S, Sawada K, Nanto S. Popliteal pseudoaneurysm caused by stent fracture. *Ann Vasc Surg* 2011;25: 840-45.
11. Midy D, Berard X, Ferdani M, Alric P, Brizzi V, Ducasse E, et al. A retrospective multicenter study of endovascular treatment of popliteal artery aneurysm. *J Vasc Surg* 2010;51:850-6.
12. Tielliu IF, Zeebregts CJ, Vourliotakis G, Bekkema F, van den Dungen JJ, Prins TR, et al. Stent fractures in the Hemobahn/Viabahn stent graft after endovascular popliteal aneurysm repair. *J Vasc Surg* 2010; 51:1413-8.
13. Dolmatch B, Dong YH, Heeter Z. Evaluation of three polytetrafluoroethylene stent-grafts in a model of neointimal hyperplasia. *J Vasc Interv Radiol* 2007;18:527-34.
14. Cina CS. Endovascular repair of popliteal aneurysms. *J Vasc Surg* 2010;51:1056-60.

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INVITED COMMENTARY

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This report by Calligaro et al regarding stent angioplasty across the inguinal ligament, although a limited experience with a select group of patients, lends promise to a technique previously thought to be avoided at all costs. Crossing the inguinal ligament was thought to lead to stent kinking, fracture, and certain occlusion. There were also concerns about occlusion of the profunda femoris artery when stenting into the area of the femoral artery and the femoral bifurcation. These concerns regarding occlusion, enhanced hyperplasia, and the profunda femoris precluded most physicians from using this technique despite less than ideal situations, including scarred groins or patients with active bleeding. Open surgical techniques often required thromboendarterectomy extending above the inguinal ligament to the external iliac artery or distally into the second and third portion of the profunda.

However, the authors report a patency rate of >90% at 2 years with stent angioplasty that crosses the inguinal ligament. Calligaro et al used a covered Viabahn endograft (W. L. Gore and Associates Inc, Flagstaff, Ariz) and did not report experience with standard

bare-metal stents. The proposed advantages of the endograft in this location involved the persistent outward, radial force of the nitinol material with kink resistance. Similar advantages have been postulated with endografts to treat popliteal aneurysms. The covered endograft also has obvious advantages when bleeding is an indication for treatment, as in the case of a pseudoaneurysm or bleeding from a percutaneous intervention. In these cases, open repair can be a challenge due to the patient's vascular anatomy or medical condition, or both. Interestingly, there were no significant complications involving the profunda femoris artery in this experience.

Stent angioplasty across the inguinal ligament would also allow the performance of more complex hybrid procedures using endovascular techniques into the common femoral artery, where disease is often located. This is an important report, which will give vascular surgeons some confidence in moving forward with endograft stent deployment across the inguinal ligament when necessary to avoid scarred and hostile groins in high-risk patients.