

IMAGES IN INTERVENTION

Contralateral Embolization of Intima After Transfemoral Aortic Valve Replacement

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An 88-year-old woman with a history of breast cancer and aortic stenosis presented with heart failure. Echocardiogram showed severe aortic stenosis and valve area of 0.5 cm². Due to her comorbidities, she was deemed to be at high risk for valve surgery and was evaluated for transcatheter aortic valve replacement.

Arterial access was obtained using a cutdown, and control of the distal right iliac artery was obtained. A 6-F sheath was placed in the left femoral artery for angiography. The 22-F introducer sheath was advanced through the right femoral artery. Following successful deployment of a Sapien 23-mm valve (Edwards Lifesciences, Irvine, California), the right femoral sheath was removed and the artery was controlled. There was intimal debris in the femoral arteriotomy. A localized endarterectomy was performed; pulsatile inflow was observed; and the artery was closed primarily. Following restoration of flow, an angiogram confirmed normal flow down the right iliofemoral arterial tree ([Figure 1](#), [Online Video 1](#)). Next an angiogram of the left iliofemoral arterial system was performed prior to removal of the left 6-F sheath. This demonstrated an irregular filling defect in the distal femoral artery ([Figure 1](#), [Online Video 2](#)). Arteriotomy was performed and a piece of intima was found within the lumen. Initially, a dissection of the femoral artery was suspected ([Figure 2](#)); however, once this endarterectomized intimal segment was retrieved, it was clear that the left femoral artery was completely intact ([Figure 3](#)). The intimal segment found was detached from the right iliac artery during

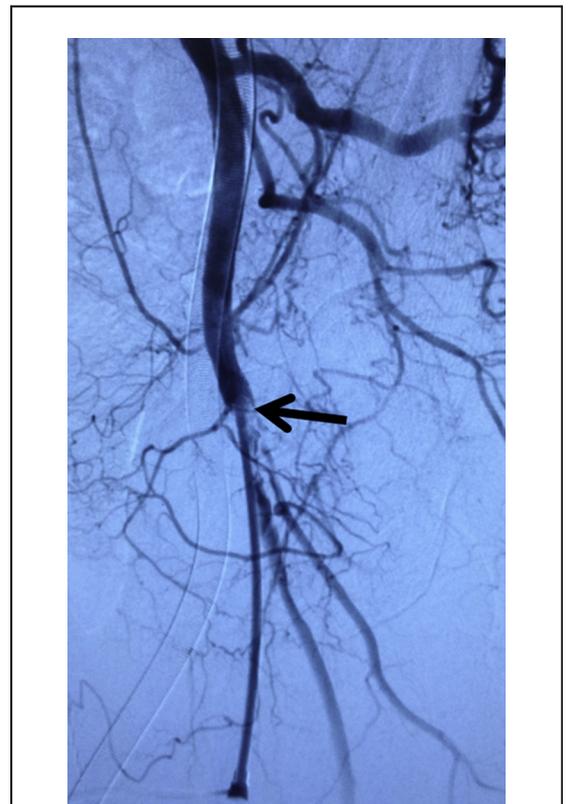


FIGURE 1 Angiography of the Left Femoral Artery

The **black arrow** is pointing to a filling defect representing an occlusion at the level of the common femoral artery. See accompanying [Online Videos 1](#) and [2](#).

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FIGURE 2 Intimal Segment Removed From the Left Femoral Artery

The cylindrical shape and diameter indicate it embolized from the contralateral iliac artery.

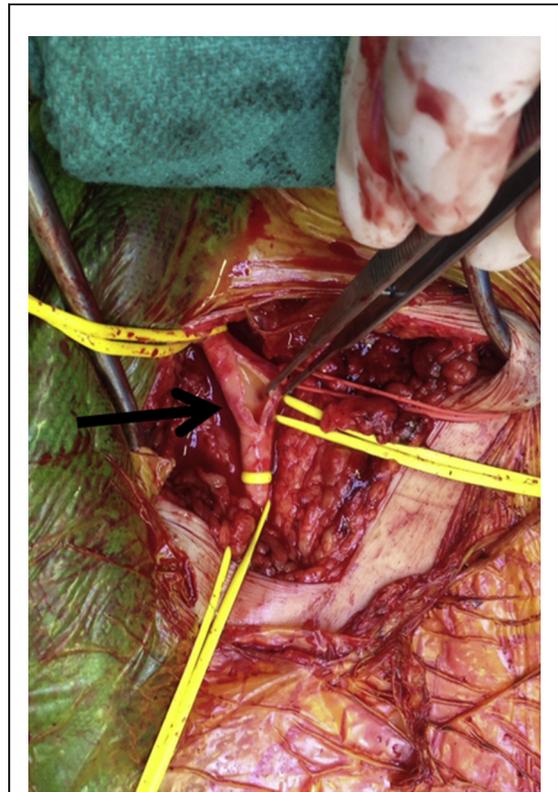


FIGURE 3 Arteriotomy of the Left Femoral Artery

After removal of the embolus, the site of occlusion was inspected. The **black arrow** points to the vessel with an intact intimal layer.

the insertion of the introducer sheath, and then was embolized down the left iliac system.

Vascular complications during transcatheter aortic valve replacement are reported to occur in 8% to 30.7% of patients receiving the Sapien valve via the transfemoral approach (1). There is a reported association of vascular complications with mortality (2). Our case represents the unique scenario of contralateral intima embolization causing complete

occlusion of the femoral artery. Early detection and surgical repair prevented damage to the extremity.

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KEY WORDS contralateral embolization, endarterectomy, left femoral artery, transfemoral portic valve replacement

APPENDIX For accompanying videos, and their legends, please see the online version of this article.