Injured on the front and back: dual vascular pathology from one iatrogenic vascular injury

A 65-year-old man presented with a 6 cm painless, pulsatile swelling in his right groin. There was a thrill medial to it. His past history included myocardial infarction, stroke, hypertension, atrial fibrillation and mitral valve regurgitation, and he was taking long-term warfarin.

Eight weeks earlier he had undergone a percutaneous mitral valve replacement. This had been done using a 9F sheath without ultrasound guidance and manual compression post-procedure with no closure device. Full anticoagulation was restarted soon after. His iatrogenic injury caused a pseudo-aneurysm on the anterior aspect and an arteriovenous fistula on the posterior aspect of the superficial femoral artery (*Figure 1*).

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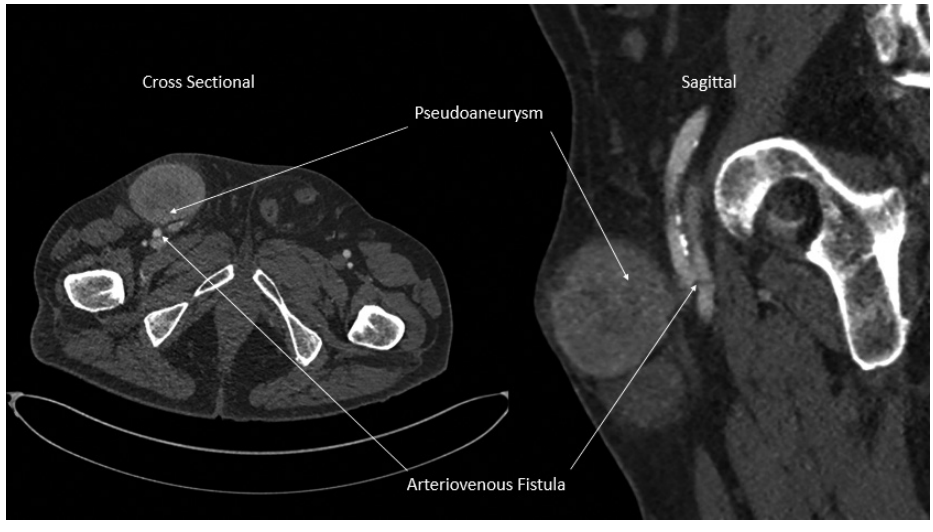
The incidence of pseudo-aneurysm formation post-interventional procedures ranges between 0.6 and 6% (Morgan and Belli, 2003). Ultrasound guidance decreases these risks, and increases the overall success rate of catheter placement (Gong et al, 2012). Although debatable, studies have demonstrated a significant reduction in the incidence of vascular complications using vascular closure devices (Tavris et al, 2012). This case highlights unusual dual pathology as sequelae to one intervention. **BJHM**

Gong P, Huang XE, Chen CY, Liu JH, Meng AF, Feng JF. Comparison of complications of peripherally inserted central catheters with ultrasound guidance or conventional methods in cancer patients. Asian Pac J Cancer Prev. 2012 13(5): 1873–1875. https://doi.org/10.7314/APJCP.2012.13.5.1873

Morgan R, Belli AM. Current treatment methods for postcatheterization pseudoaneurysms. J Vasc Interv Radiol. 2003 14(6): 697–710. https://doi.org/10.1097/01.RVI.0000071089.76348.6A

Tavris DR, Wang Y, Jacobs S et al. Bleeding and vascular complications at the femoral access site following percutaneous coronary intervention (PCI): an evaluation of hemostasis strategies. J Invasive Cardiol. 2012 24(7): 328–334.

Figure 1. Computed tomography angiogram showing the pseudo-aneurysm (anterior) and fistula (posterior) to the superficial femoral artery.



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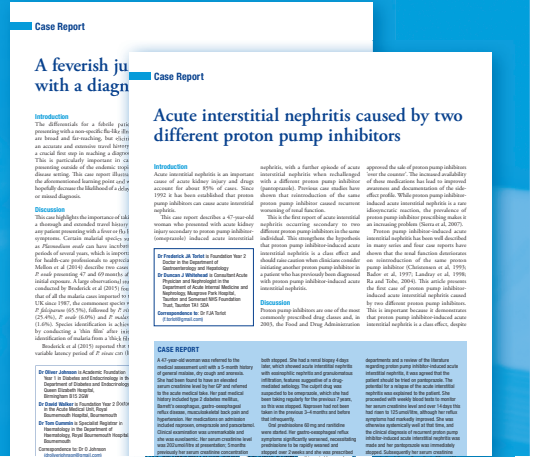

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