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Image Focus: Mycotic aneurysm of the femoral artery: a surgical challenge

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A 64-year-old male presented with 3 weeks of dyspnoea, progressive left crural pain, fever, and weight loss. Laboratory tests revealed leukocytosis with elevated CRP and blood cultures identified *Streptococcus agalactiae*. Exams revealed a severe stenotic bicuspid aortic valve and a left superficial femoral vein thrombosis. The patient was initially referred to the cardiology unit and the initial diagnosis was aortic valve endocarditis. Persistent left crural pain led to a lower limb angio-CT, which uncovered a large (56 mm) mycotic pseudoaneurysm at the ilio-femoral junction with extensive thrombosis (Figure 1). The patient was transferred to our university centre in septic shock. Due to the imminent risk of pseudoaneurysm rupture, an emergency intervention was performed. We

conducted an ilio-femoral bypass with a silver-coated Dacron graft, followed by extensive debridement of the groyne and rifamycin wash-out. Cultures revealed polymicrobial infection. Despite targeted antibiotics, persistent local infection led us to replace the prosthesis with a cryopreserved allograft (Figure 2). Unfortunately, 14 days after, ruptured allograft led us to perform an ilio-femoral bypass with a contralateral venous autograft. In search of a long-term solution distant from infection and soft tissue leakage, we opted for a trans-obturator bypass with a PTFE graft from the left primitive iliac artery to the left superficial femoral artery (Figure 3). Following surgery, the patient underwent antibiotic therapy tailored to the identified pathogens and their sensitivities for 12 weeks. Subsequent

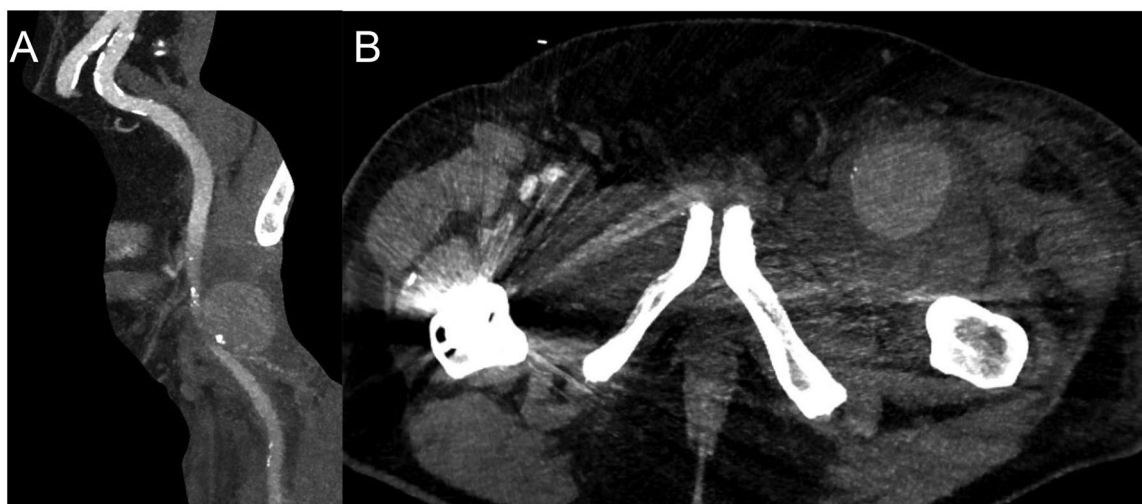


Figure 1. (A) Curved multiplanar reconstruction of the left ilio-femoral axis and (B) transverse plane of angio-CT showing a large mycotic pseudoaneurysms developed at the left ilio-femoral junction.

wound care involved rifamycin impregnated plasters, followed by skin grafting before discharge to a rehabilitation hospital.

Although mycotic aneurysms account for less than 1% of all aneurysms, they are associated with significant morbidity and mortality [1,2]. The clinical presentation is often non-specific and requires a high index of suspicion for accurate diagnosis. Femoral artery involvement is common, often presenting with localised infection and systemic signs. Management requires individualised revascularisation strategies, especially in infected fields. Obturator bypass offers a durable,



Figure 2. Common femoral artery reconstruction with cryopreserved allograft.

extra-anatomic solution in complex groin infections, with acceptable patency and complication rates. Modern techniques such as cryopreserved allografts or antibiotic-impregnated materials offer potential options for treatment. Endovascular repair with covered stents is also emerging as a promising alternative for femoral artery pseudoaneurysms [2]. However, in cases of severe infection, primary revascularisation may be complicated by the presence of infected tissue, making prosthetic grafts unsuitable, and the lack of suitable vein grafts due to co-existing venous thrombosis. In such situations, extra-anatomic bypass procedures are preferred to avoid reinfection [3]. Mycotic aneurysm is a rare but serious vascular condition that can lead to life-threatening risks. Our case highlights the complexity of managing mycotic aneurysms and the importance of considering alternative approaches, such as extra-anatomic bypass, in challenging clinical scenarios.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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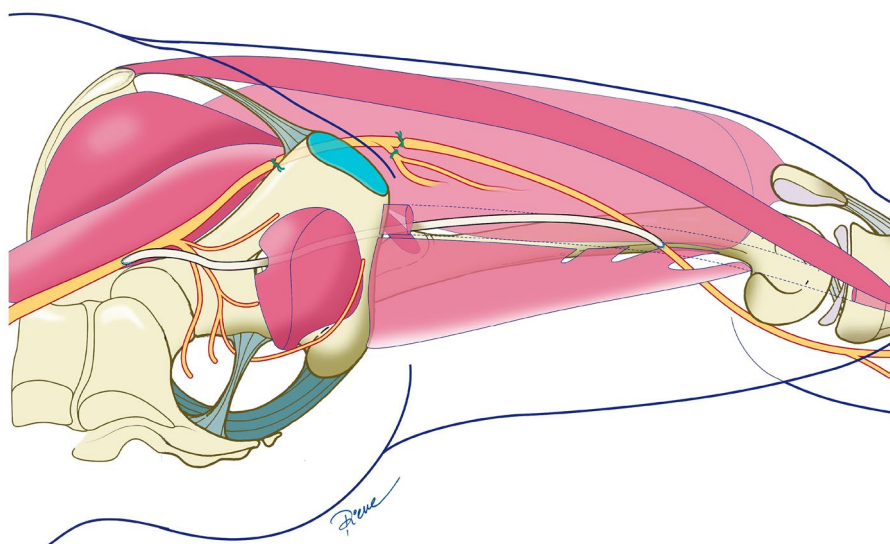


Figure 3. Extra-anatomic trans-obturator bypass illustration.