

개방형 경골 근위부 절골술 후 발생한 슬와 동맥의 가성낭종 Pseudoaneurysm of the Popliteal Artery Complicating Medial Opening Wedge High Tibial Osteotomy

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CASE REPORT

The popliteal artery is vulnerable to injury during surgeries performed around the knee joint. Pseudoaneurysm of the popliteal artery following a high tibial osteotomy is rare. Few case reports describe the development of this complication after a lateral closing wedge high tibial osteotomy.

Our patient underwent an uneventful medial opening wedge high tibial osteotomy and autogenous bone grafting fixed with dual plating for medial osteoarthritis of the knee. The procedure was performed under tourniquet control, which was released only once after the wound closure. Postoperatively, the dressing was soaked, and a large volume of hemorrhagic collection was present in the suction drain. The patient experienced decreased sensation over the sole, which was successfully treated conservatively with medication. Other clinical parameters like motor function and distal pulses were normal. The patient was discharged after 2 weeks. Two days later, the patient presented with pain and numbness over the entire lower limb and a pulsatile swelling in the popliteal fossa.

A femoral angiogram revealed a pseudoaneurysm arising from the popliteal artery just below the osteotomy site. Open vascular surgery with resection of the pseudoaneurysm and end-to-end anastomosis using contralateral saphenous vein interposition graft was performed. During the vascular surgery, a pinhead-sized tear was clearly identified on the anterior wall of the popliteal artery, which may have occurred while using the oscillating saw during opening wedge high tibial osteotomy. Careful placement of retractors around the osteotomy site during sawing and flexing the knee to displace the popliteal artery away are recommended to prevent this complication.

Pseudoaneurysms of the popliteal artery following a high tibial osteotomy are rare. Major complications of popliteal artery injury, such as limb loss, can be prevented by prompt diagnosis and urgent treatment. Pseudoaneurysms of the popliteal and anterior tibial arteries following lateral closing wedge high tibial osteotomy have been reported. To our knowledge, this is first report of a popliteal artery pseudoaneurysm occurring after a medial opening wedge high tibial osteotomy. Direct injury to the vessel while using the oscillating saw probably led to the condition.