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### Case Report

# Chronic leg swelling and palpitation as a late complication of post-traumatic arteriovenous fistula: A case report

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#### ABSTRACT

**Introduction:** Chronic post-traumatic arteriovenous fistula (AVF) is a late complication of vascular injury and can be presented with symptoms of congestive heart failure, venous hypertension and distal ischaemia. We present an unusual case of chronic leg swelling in adult caused by post-traumatic AVF.

**Case presentation:** A 52 year old white-male patient complained of palpitation, pain and swollen right leg. Arterial pulses distally from the groin were present. His medical history revealed him to have sustained gunshot injury of the left thigh 5 years before. Angiography showed a large AVF between superficial femoral artery and femoral vein. The patient underwent surgical repair of AVF with ligation of AVF between superficial femoral artery under spinal anaesthesia. Completion angiography confirmed AVF exclusion. Leg swelling healed within a month.

**Conclusion:** Post-traumatic fistula should be obliterated as soon as possible. Untreated fistula results in complications including renin-mediated hypertension and high-output heart failure, venous and/or arterial insufficiency.

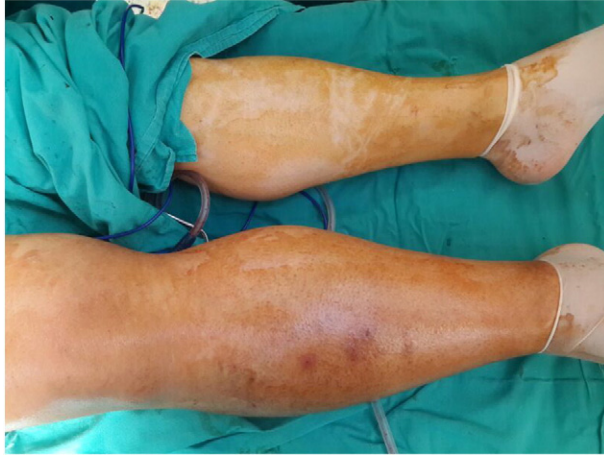
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#### Introduction

Post-traumatic pseudoaneurysms and arterio-venous fistula (AVF) are infrequently seen in the civilian health care system. AVFs are associated with bone fractures, penetrating or high-injury blunt trauma, sport activities and less frequently, after orthopedic injuries [1].

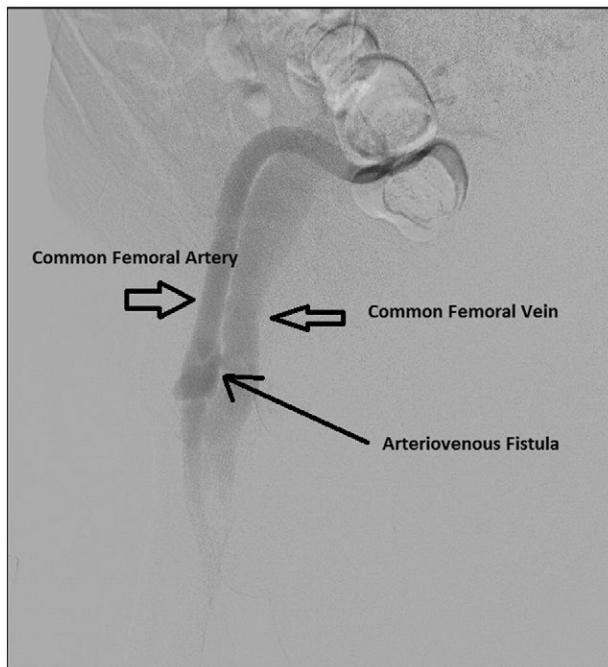
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**Fig. 1.** Preoperative condition of lower extremity. Patient's lower extremity had diameter difference due to increased venous inflow and venous insufficiency.

Treatment options are endovascular intervention, artery ligation or reconstruction, external compression, coil embolisation, or echo-guided thrombin injection [2–4]. The endovascular repair enables a less traumatic anatomic reconstruction of such lesions. Open surgery is obligatory and safe method in cases with endovascular approach is impossible. The present case represents an unusual clinical presentation of a large chronic right groin AVF 5 years after a gunshot wound and demonstrates the successful use surgical repair this complex long-standing traumatic AVF.



**Fig. 2.** Angiography revealing arteriovenous fistula. Traumatic arteriovenous fistula presented between common femoral artery and common femoral vein. Both vascular structures are aneurysmatic.

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