

# Iatrogenic and traumatic femoral artery pseudoaneurysm successfully treated via endovascular approaches

Kazemzadeh GH, Pezeshki M, Fani A, Jalili J, Ghoddusi H

Department of Vascular Surgery, Emam Reza Hospital, Mashhad University of Medical Sciences , Mashhad , Iran

*Vascular & endovascular surgery research center, Imam Reza Hospital, Faculty Of medicine, Mashhad university of medical sciences*

## Introduction:

Pseudoaneurysm represents a haematoma that forms as a result of an incomplete disruption of the artery. This haematoma which is formed outside the arterial wall, recanalizes to form the pseudoaneurysm which consists of a perfused sac inside a fibrous capsule and is connected to the artery by a “neck”.

Although pseudoaneurysm formation secondary to puncture injury to the common femoral artery is common. Pseudoaneurysms and hemorrhage of the profunda femoris artery (PFA) are rare injuries following trauma or orthopedic procedures performed in the proximal femur.

Presentation may be acute or delayed ;rarely they are caused by dislocated bone fragments most of them are due to iatrogenic trauma itself during the operation.

These Pseudoaneurysms can present in different clinical pictures such as a painful pulsatile mass, thigh swelling and bleeding and anemia. If not diagnosed properly , these injuries can be life- or o

We report three cases of PFA iatrogenic injuries that were successfully controlled via endovascular approaches.

## Case Report :1

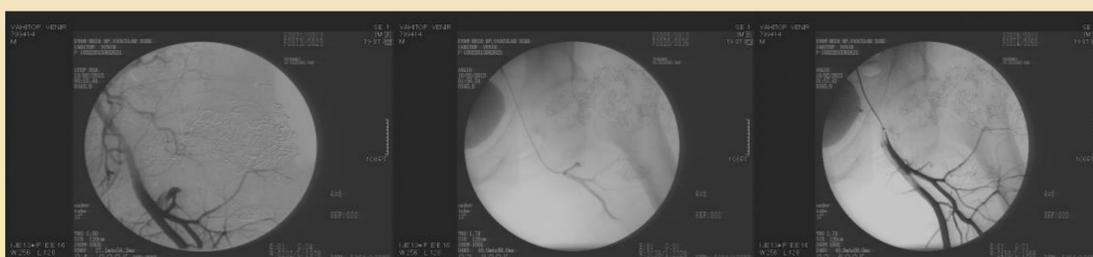
A 54y/o obese male who was undergone THR operation.

The orthopedic surgeon removed the femoral bone head in lateral position and it caused massive arterial bleeding (about three liters). Upon vascular surgery consultation we immediately packed the operative site and transfer the patient to the angiography unit.

After selective left femoral artery angiography and rotate the patient's left lower extremity we saw the extravasation from one branch of the left deep femoral artery.

We use two coils (2 and 2.5) to occlude the bleeding branch and they stopped the bleeding.

The next day THR procedure was done without any bleeding during the operation and the patient discharged some days later



### \*Presented by :

Gholamhossein Kazemzadeh MD

Associate professor of Vascular surgery , Department of vascular surgery , Emam reza hospital Mashhad university of medical sciences, Mashhad Iran

Case Report 2

## Case report :2

A 25 year old male who was a victim of posterior right thigh stab wound near the popliteal fossa with proneal nerve injury.

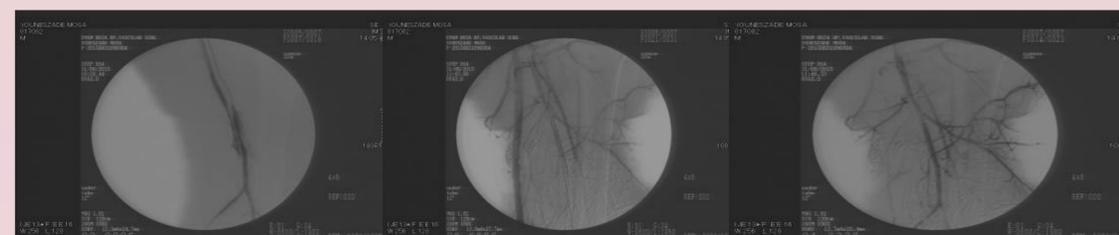
He was undergone proneal nerve repair by an orthopedic surgeon via a posterior approach to popliteal fossa and during the nerve exploration the PFA became injured and bleeding started.

The orthopedic surgeon packed the bleeding area and sent the patient to the vascular center.

We did selective left femoral artery angiography and saw extravasation from a pseudoaneurysm in the distal part of the PFA and we used a stent graft (5\*10) to cover the injured area.

After that the packed gauzes were removed and there was no bleeding in that area.

The patient was discharged two days later without any complications.



## Case report :3

The patient was a 42 year-old man who was referred to our center with severe tachycardia and anemia.

Patient had history of stab wound injury to his left thigh about 7 months ago that his stab wound had been repaired in emergency department in another center without any follow up.

On physical examination a huge mass was palpable in left upper thigh (Fig 1.3). Distal pulses were present and in auscultation no bruit was detected. After emergency admission and resuscitation and correction of severe anemia with blood transfusion DSA was done which revealed a huge arterial pseudoaneurysm originating from proximal left PFA (Fig 2.3). So, coil embolization of pseudoaneurysm neck was done (Fig 3.3) and because of its mass pressure effect surgical evacuation of the pseudoaneurysm sac was done (Fig 4.3). After one year follow up the patient is symptom free



## Reference:

- 1-Chinese Journal of Traumatology 2013;16(4):233-236 . 233 . Chin J Traumatol 2013;16(4):233-236  
Pseudoaneurysm of profunda femoris artery following dynamic hip screw fixation for intertrochanteric femoral fracture  
Shailendra Singh, Sumit Arora\*, Ankit Thora, Ram Mohan, Sumit Sural, Anil Dhal)
- 2- Alwhouhayb M, Howard A, Çeliker V. A false aneurysm mistaken for a DVT after hip surgery. Ulusal Travma ve Acil Cerrahi Dergisi. 2005;11(2):178-179.
- 3- Chong KC, Yap EC, Lam KS, Low BY. Profunda femoris artery pseudoaneurysm presenting with triad of thigh swelling, bleeding and anaemia. Annals of the Academy of Medicine Singapore. 2004;33(2):267-269.
- 4- Smejkal K, Zvák I, Trlica J, Raupach J, Neumann J. Traumatic pseudoaneurysm of arteria femoralis profunda—the case report. Rozhledy v Chirurgii. 2007;86(3):116-119.