

An unusual complication of uterine artery embolization

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Introduction

Uterine artery embolization (UAE) is a safe and reliable, minimally invasive treatment for symptomatic uterine fibroids.

Complications arising in the femoral artery puncture site such as infection, bleeding and hematoma formation have been reported. However, formation of a pseudoaneurysm is very rare and only a few cases have been reported so far.

Such pseudoaneurysms can rupture and cause massive bleeding or become infected, which may lead to considerable morbidity.

We report our case to bring to light this rare but potentially life-threatening complication of uterine artery embolization

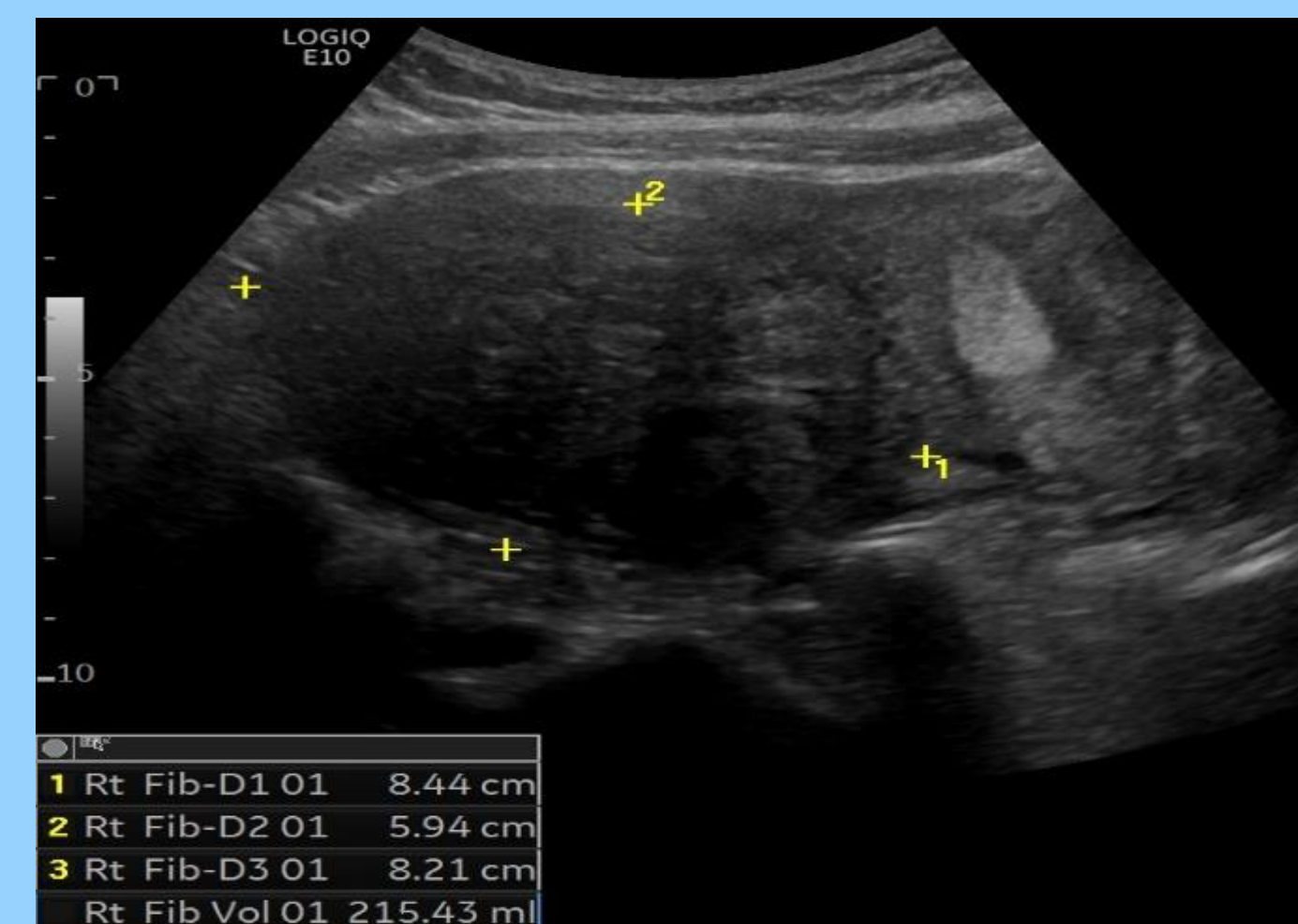


Figure 1:US image of large fibroid



Figure 2: MRI image of large fibroid

Case Report

A 47years old nulligravid lady with no comorbidities and a symptomatic, large posterior wall fibroid of 8x 8 x5 cm (Figure 1 & 2) opted to undergo embolization

Standard procedure of embolization was performed with 500-700 micron Cook PVA particles using Angioseal for hemostasis.(Figure 3: Standard Uterine artery embolization)

Next day she collapsed on mobilization. Spurting of blood was noted from the right femoral artery at the site of puncture. Manual compression was applied and she was swiftly shifted to theatre with an estimated blood loss of a litre

Vascular surgeons explored the right groin and noted that angioseal was dislodged. A proximal repair of the artery was performed and drain inserted. (Figure 4 & 5)

Post-operatively, there were ongoing concerns of bleeding and patient was found to be coagulopathic. She was also hypertensive during and after surgery requiring treatment.

An urgent CT scan showed the presence of a large hematoma centred around the right common femoral vessels with active intravenous extravasation into a 2.4 cm pseudo-aneurysm

The case was managed conservatively in HDU care with application of a tighter compression bandage, strict control of blood pressure and correction of coagulopathy.

She recovered well and good blood flow was noted down her leg with no persistent pseudoaneurysm. (Figure 6)

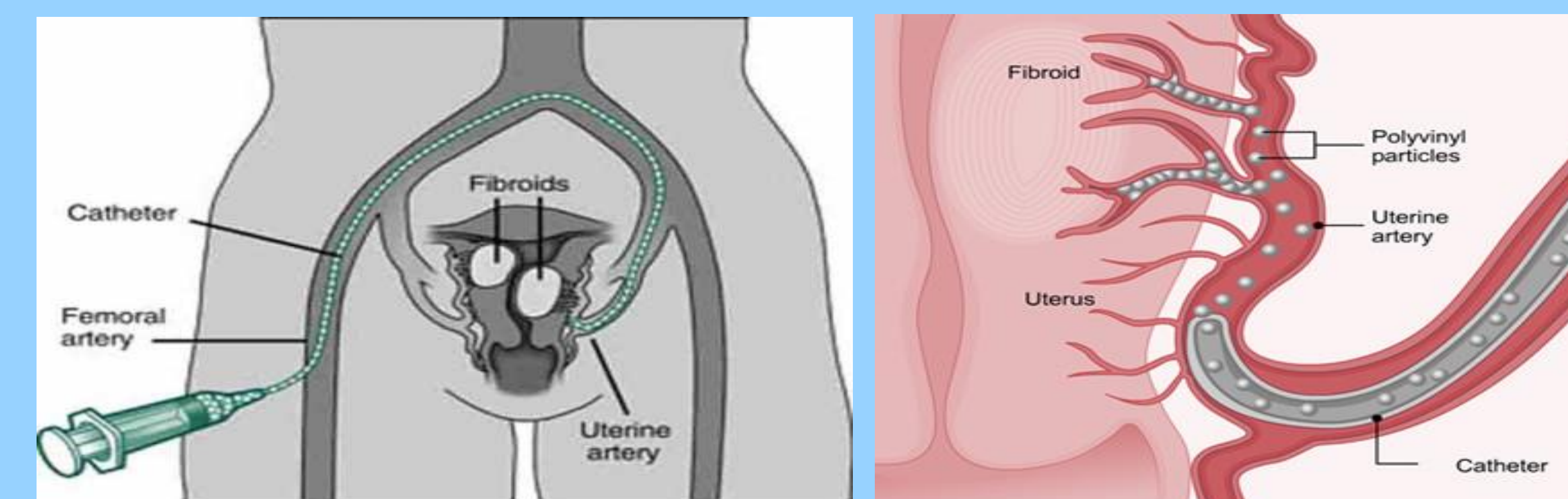


Figure 3 : Standard Uterine Artery Embolization

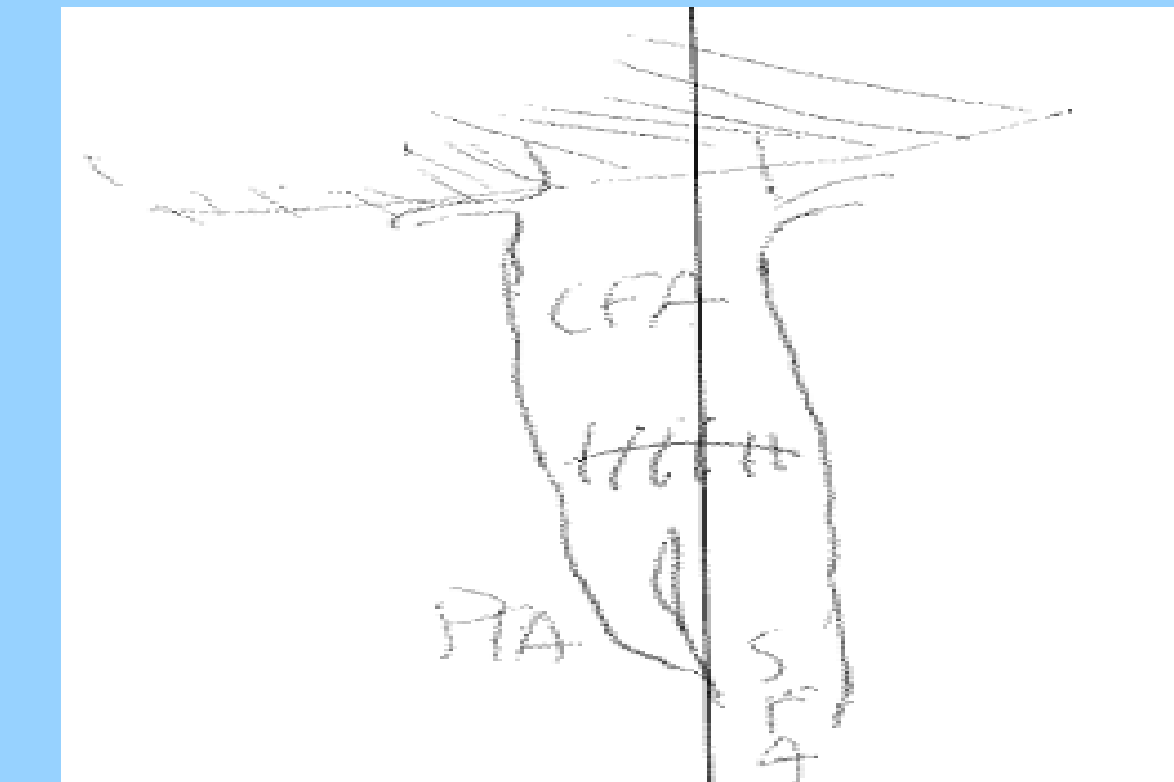


Figure 4 : Diagrammatic representation of repair



Figure 5 : Post op scan showing drain in Rt groin

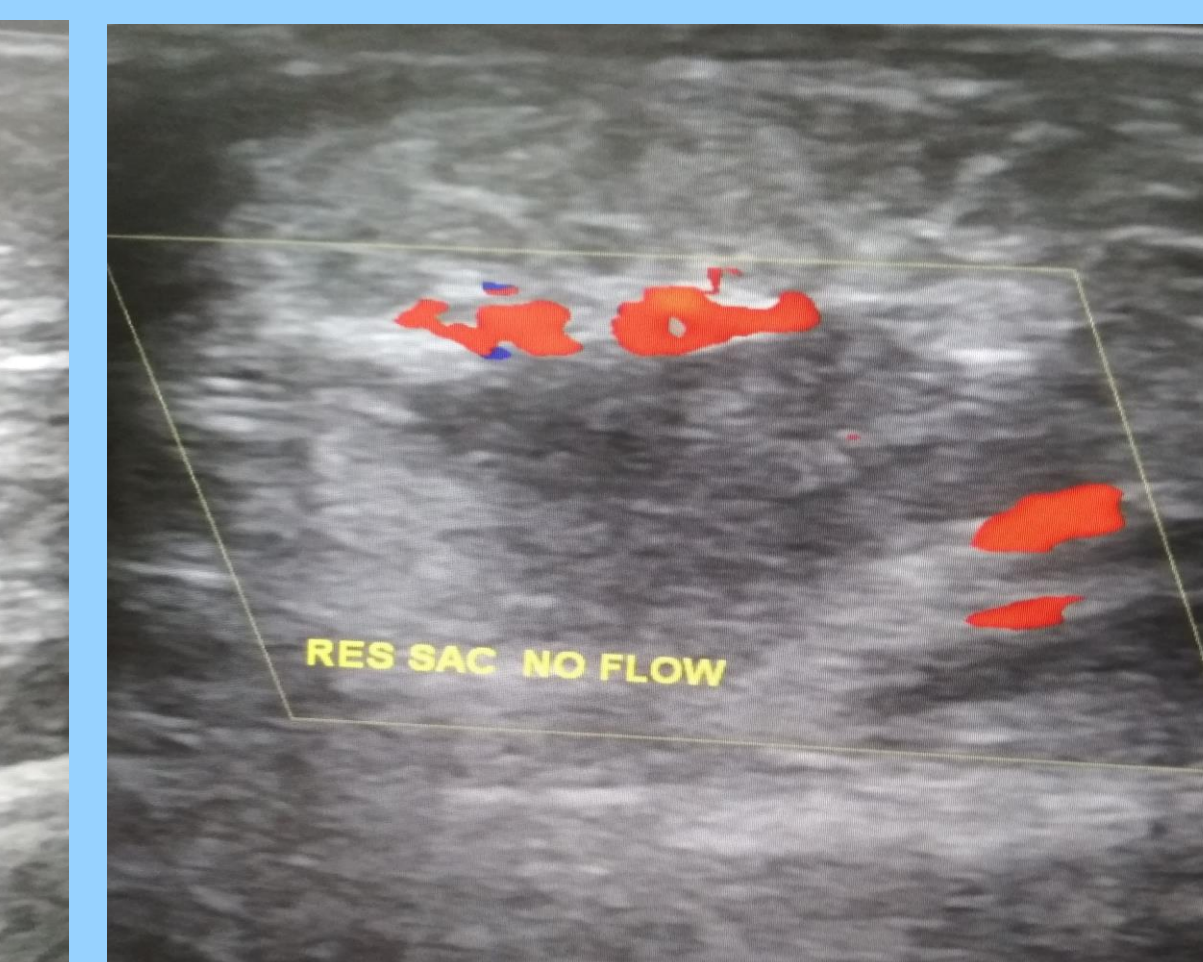


Figure 6 : US image two days post-repair showing pseudosac with no blood flow

Discussion

A pseudoaneurysm is a pulsating hematoma that results from disruption of a portion of the arterial wall. (Figure 7)

Risk factors associated with pseudoaneurysm formation include aberrant puncture, obesity, hypertension, use of antithrombotic agents and inadequate mechanical compression.

Symptoms of possible pseudoaneurysm at 6 to 48 hours after arterial puncture include a pulsatile mass, a palpable thrill, severe bruising, pain, swelling, and hypovolemic symptoms

Pseudoaneurysms can rupture and cause massive bleeding or become infected, which may lead to considerable morbidity and costs if appropriate treatment is delayed.

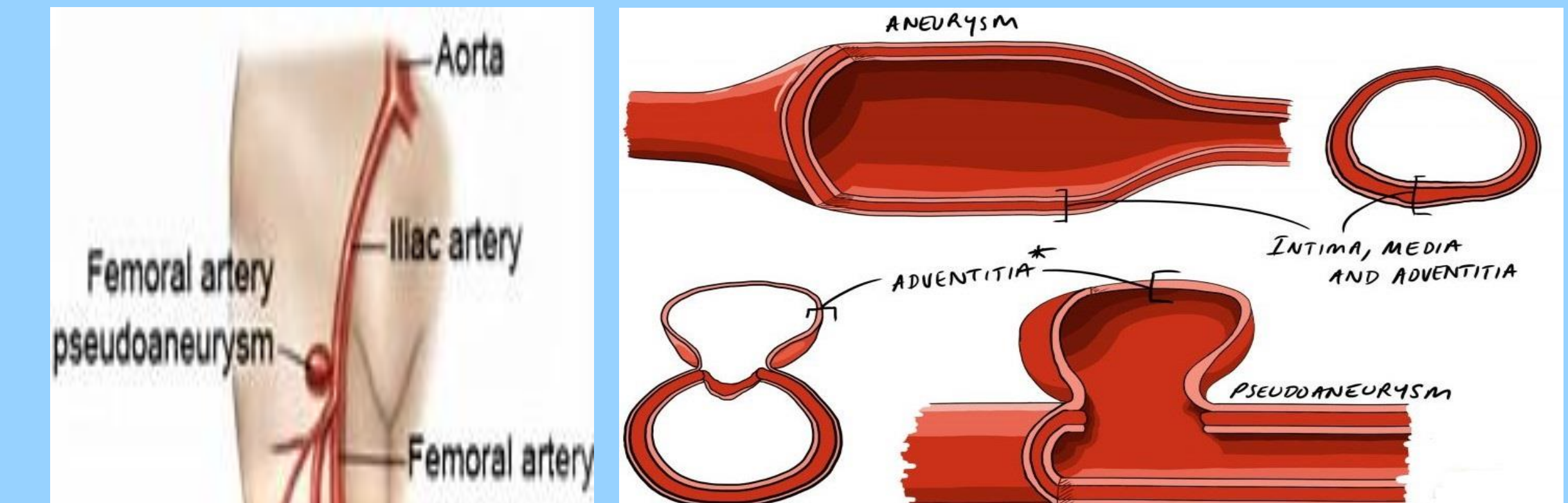


Figure 7 : Pseudoaneurysm explained

Learning Points

- The examination of the vascular access site after UAE before patient discharge and the early identification of occult pseudoaneurysm are utmost important to reduce the morbidity of this rare complication
- Careful patient selection and peri-operative blood pressure management is vital for good outcome
- Standardization of guidance on UAE in line with GIRFT and consent advice in line with Montgomery to ensure patients can be counselled adequately
- Standardizing pathways for major vascular injury management so as to ensure prompt action thereby reducing morbidity and mortality
- Hospitals should have a local protocol outlining pathway for management of immediate complications of UAE
- Organizing and conducting vascular injury drills, including gynecology hemorrhage drills so as to ensure awareness of the local operating pathways in emergencies
- Communication is key – Strengthen links to Interventional Radiology