



Popliteal artery entrapment with symptomatic recurrence

Mark O'Donnell, Louise Cousins, Ravi Goel, Johnathan Porter, Adam Haque, Alexander Seegar, Neil Wilde, Peter Woodhead, Rob Salaman.
Cumbria and Lancashire Vascular and Endovascular Specialist Centre,
Royal Blackburn Hospital, Lancashire, United Kingdom.

Peripheral Special Interest Group Session
Society for Clinical Vascular Surgery - Wednesday 16th March 2016

Safe | Personal | Effective



Disclosure

- No disclosures declared.
- No financial relationship with content.



Learning Outcomes

- Review of case history.
- Radiological analysis.
- Review of therapeutic outcome.
- Exploration of diagnosis.



Case History

- 34 year old male patient presented to the out-patient clinic with left calf pain on exertion in January 2012.
- Active football player and found he could no longer run. No occupational issues with his construction job.
- No critical rest pain or tissue loss.
- No history of injury.
- Contralateral leg asymptomatic.

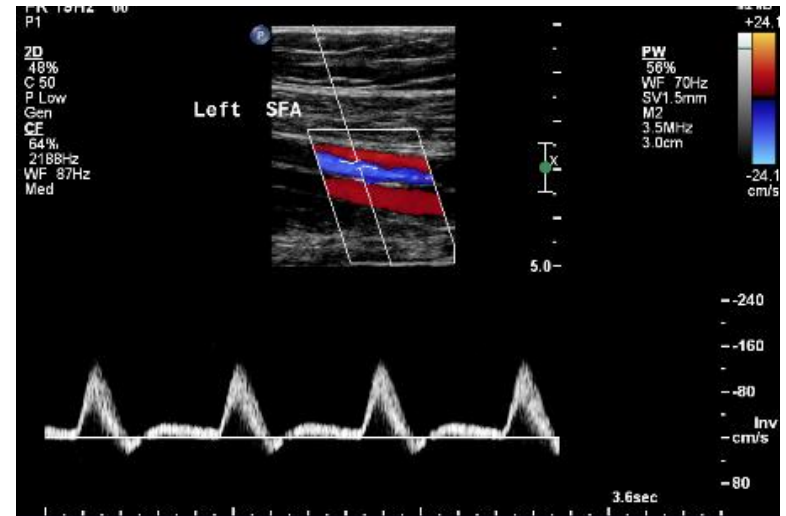
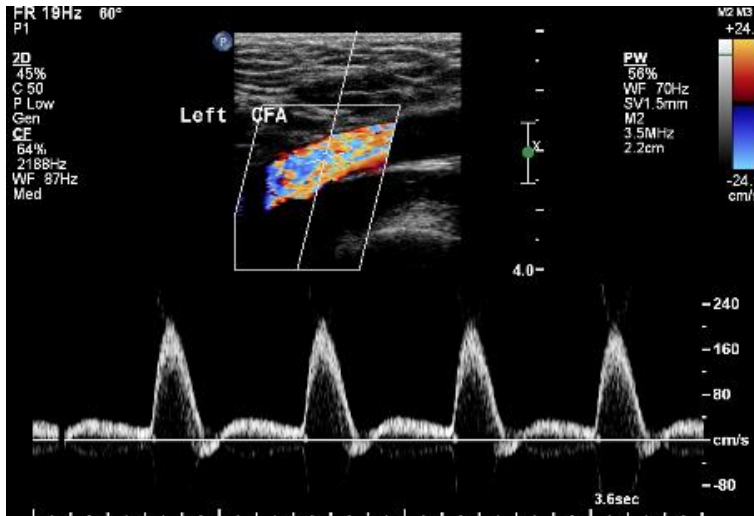


Clinical Examination

- Left foot cool with slightly reduced capillary return.
- All pulses palpable.
- No evidence tissue loss.



Arterial Duplex



- Normal aorto-iliac, common femoral and superficial femoral flow.



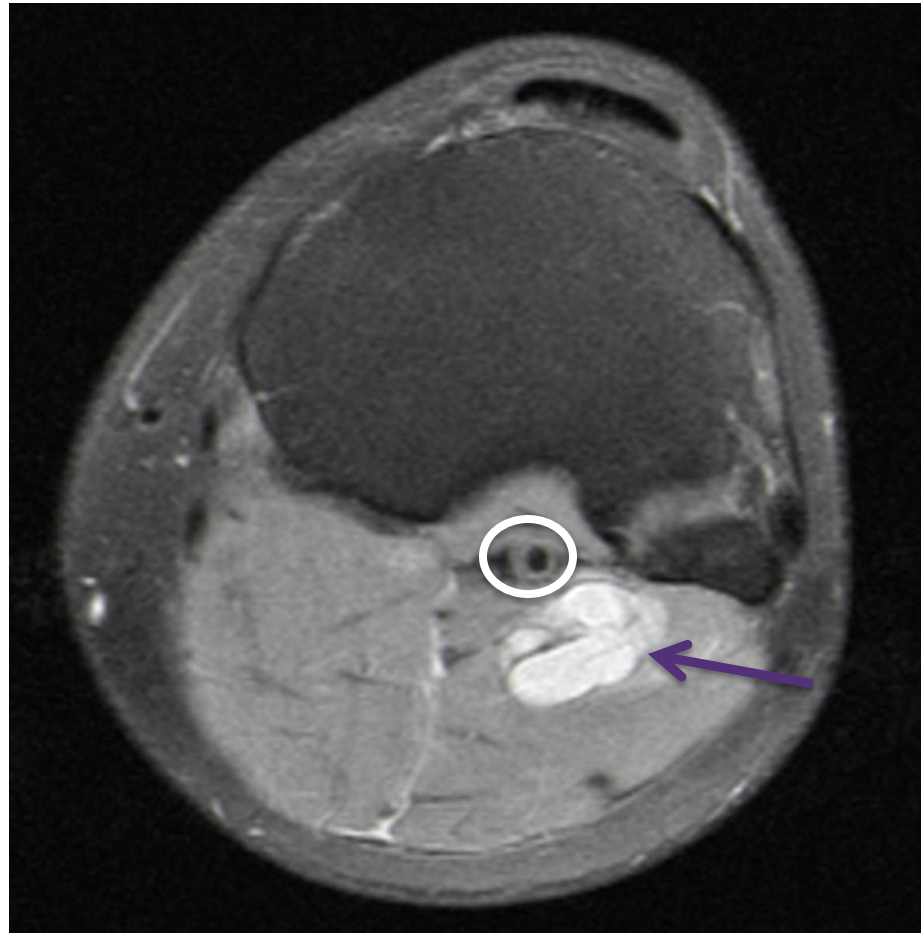
Arterial Duplex



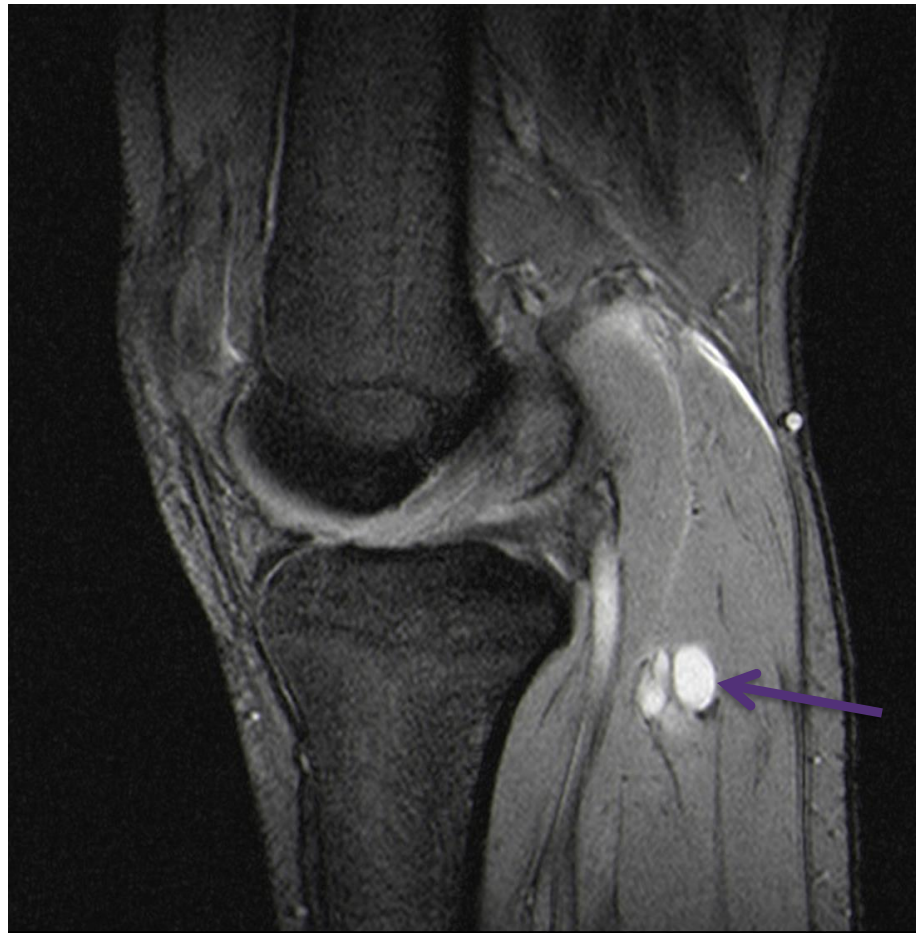
- Flow in the AK popliteal artery triphasic. However, velocities in the BK popliteal artery were elevated.
- However, no focal stenosis was visualised.



Magnetic Resonance Imaging



Magnetic Resonance Imaging

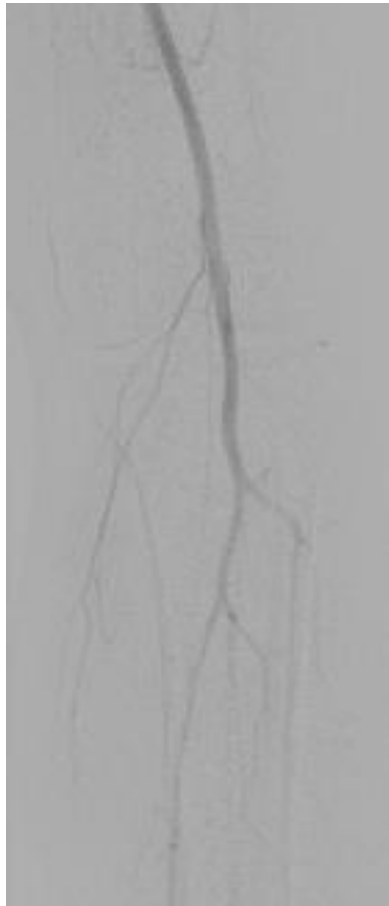


Safe | Personal | Effective



Transfemoral Angiogram

Rest



Plantarflexion

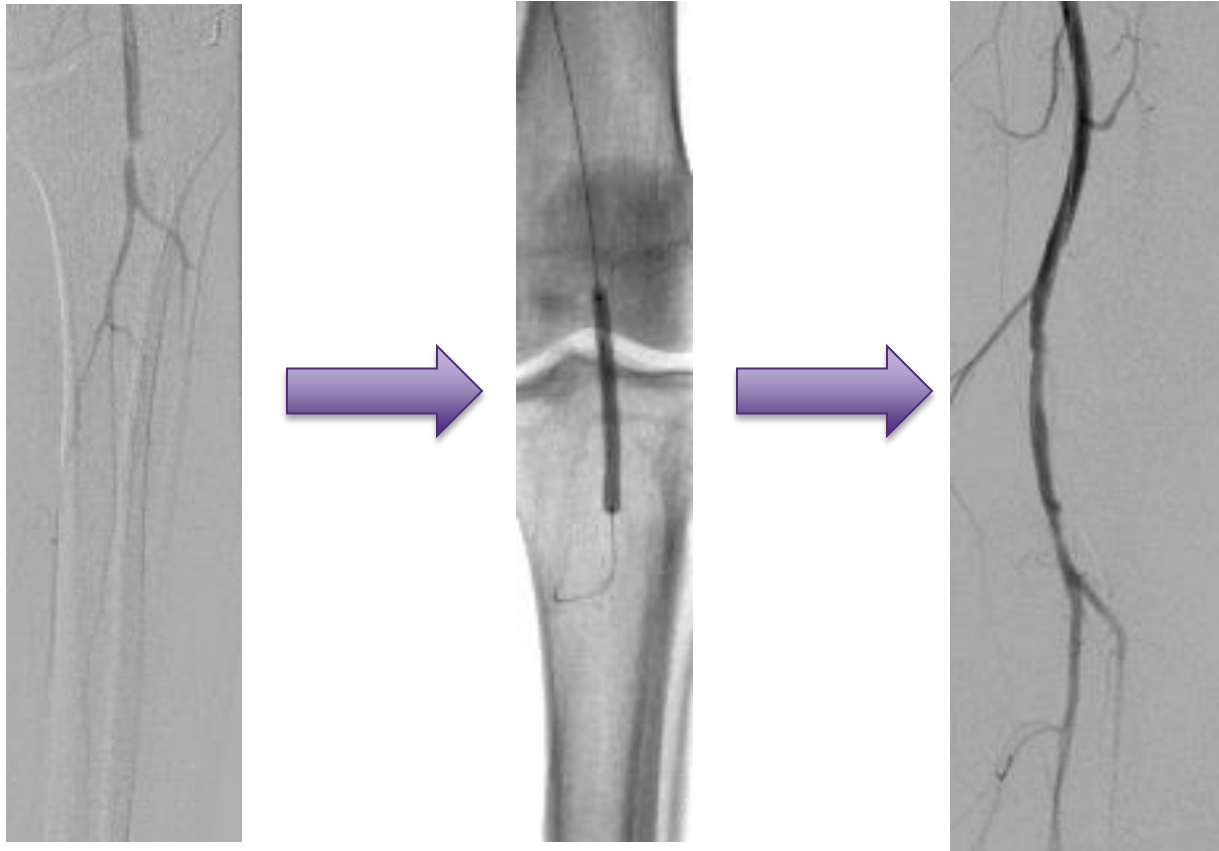


Action Plan

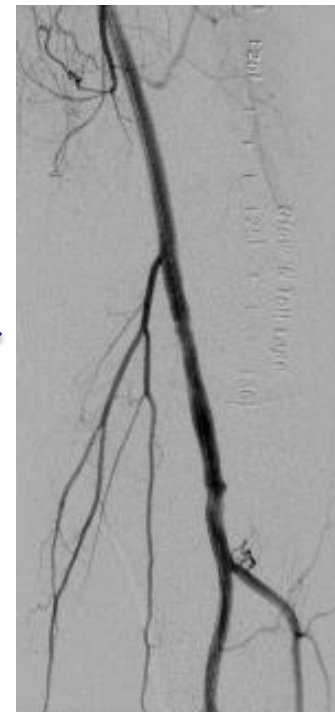
- Dynamic duplex confirmed impingement of popliteal artery by a loculated cyst.
- Ultrasound guided drainage – 2mls of gelatinous fluid aspirated.
- Recurrence of symptoms.
- Repeat angiogram – confirmed area of continuing stenosis of BK popliteal artery on plantar flexion.
- Exploration in prone position with excision of cystic area along with scarred segment of popliteal artery with vein bypass reconstruction.



Third angiogram



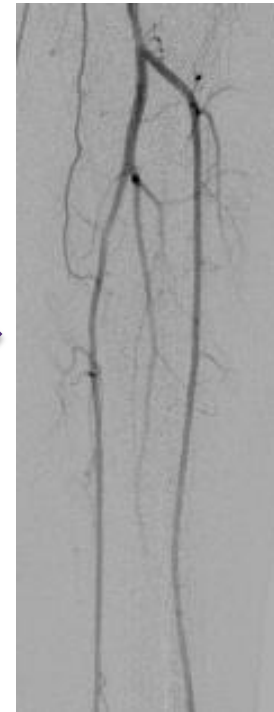
Fourth angiogram



Fourth angiogram



Intra-arterial
nitrate



Current Status

- Long discussion with patient;
 - Leg viable.
 - Still claudicating.
- Exercise advice.
- Non-smoker.
- Dual antiplatelet and statin therapy.
- Oral nifedipine.



Diagnosis

- Popliteal artery entrapment syndrome.
- Cystic adventitial disease.
- Premature atherosclerosis.
- Buerger's disease.
- Vasculitis / Inflammatory pathology.
- Endofibrosis.
- Fibromuscular dysplasia.



Questions ?



Safe | Personal | Effective

