Endovascular management of a large iliac artery pseudo-aneurysm caused by a failing hip replacement prosthesis; Case report and technical challenges

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Disclosure

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I do not have any potential conflict of interest
Case Report

Personal History

65 y/o Gent.

Past Medical History

HTN
A Fib
Dilated cardiomyopathy
Acromegaly
THR x4 Rt and x2 LT.
Previous episode

- Transferred from peripheral hospital with threatened acute Rt leg ischaemia.
- Cardiac arrest and DC shock before surgery
- ICU, BKA 4 days later
- DC on anti-coagulation.
- Good rehabilitation, using prosthesis.

![Heart Rhythm in Atrial Fibrillation, Cardioversion (Shock), Normal Heart Rhythm](image)
Current episode

• Presented to peripheral hospital with
  - Rt hip / iliac fossa pain
  - Failing prosthesis
  - +ve Inflammatory markers
What next?

• 2 trials of aspiration without radiological guidance

• Both aspirated blood

• Both were negative for bacterial growth
Fig 1a: CTA showing 10 cm pseudo-aneurysm of right iliac artery

Fig 1b: CTA showing right hip prosthesis eroding through hip bone causing the pseudo-aneurysm.
Management Options ??

Open Repair?
- Try repair
- Patch-plasty
- Interposition graft (vein)
- Interposition graft (synth)

Endovascular Repair?
- Coiling
- Coiling + non-covered stent
- Covered stent-graft
Management Options??

- Open Repair?
  - High Morbidity
  - High Mortality
  - Previous surgeries

- Endovascular Repair?
  - Friable Arterial wall
  - Difficult localisation with THR
  - Controversial with infection
DSA Pre
Fig 3a: Follow-up CTA showing complete sealing of the pseudo-aneurysm

Fig 3b: Follow-up CTA showing patent Stent-graft in right external iliac artery
Literature review

- Pseudo-aneurysm of the external iliac artery is a rare but serious vascular complication of total hip arthroplasty.
- These injuries were reported to have 7% mortality and 15% incidence of limb loss.(1)
- Covered stent graft for infected pseudo-aneurysms are reported in literature.

Antibiotic cover is required for 3 months post-op (2,3)

THANKS