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.
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
CT Angiography
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?
  - Primary 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
Post-Op
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
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