Respect the radial artery – a rare complication

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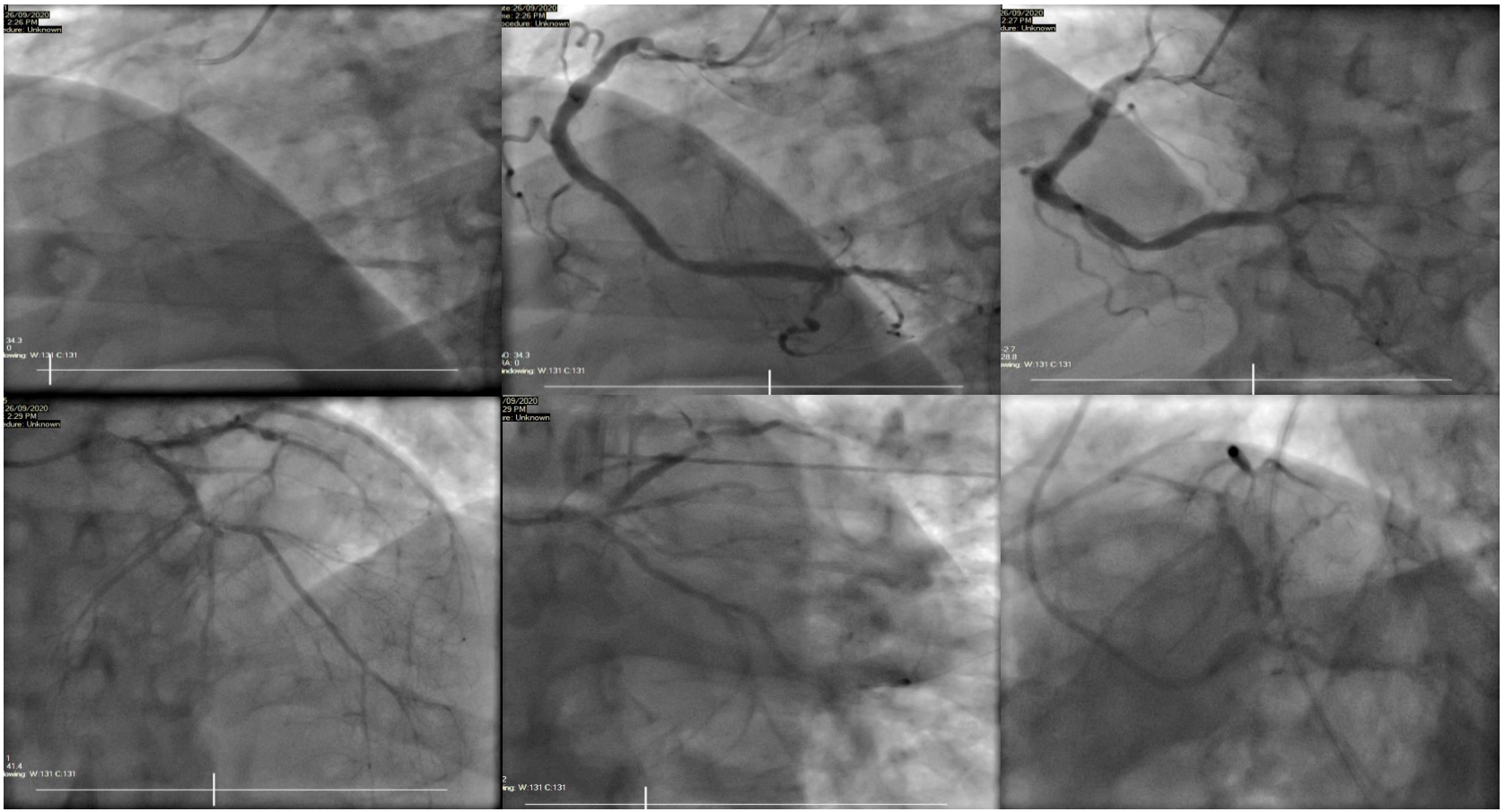
66 Male

- Current presentation:
  NSTEMI - Trop 144 ng/L
  Haemoglobin and renal function normal
- Risk factors:
  History of previous PCI to RCA
  Dyslipidaemia
  Ex-smoker
- Echo:
  Severe LV impairment
- Procedure:
  Rt Radial – successful after few attempts (Lignocaine + GTN)
  Guidesheath slender 6F
  Verapamil 3mgs
  5F diagnostic catheter

Coronary angiogram



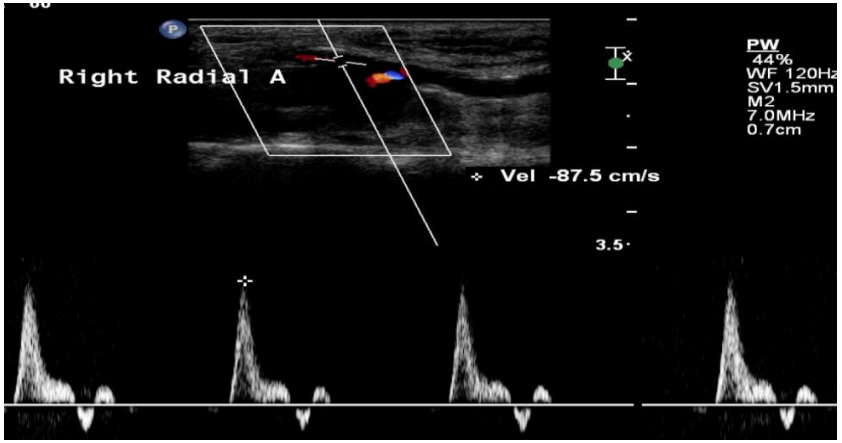
Some arm discomfort during procedure. TR band for radial haemostasis
Referred for CABG– awaiting transfer to surgical centre
MRI requested to check for viability

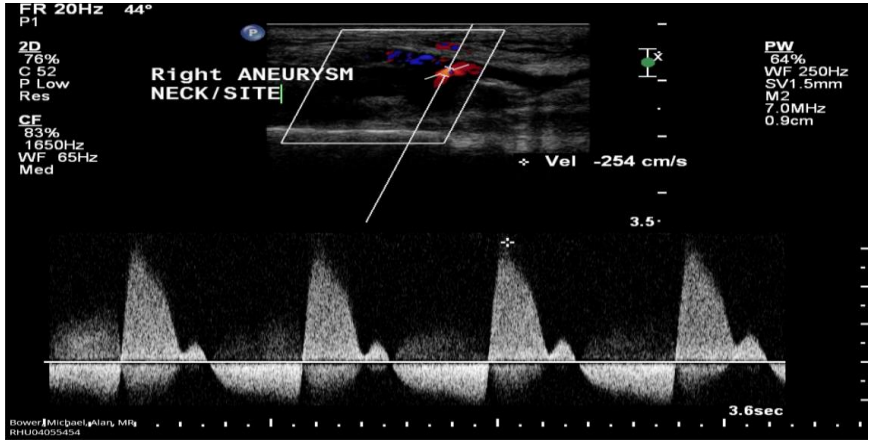
Progress

- Forearm pain worse after 4 -5 days
- Excruciating pain in forearm on day 7 despite boluses of IV opiates.
- Intact pulses and sensation. Mild swelling to forearm. Pain worse on passive movement of arm - ?compartment syndrome

Investigations

- **Doppler Rt Radial** *"False aneurysm in Distal forearm measuring 1.2cm x 0.7 cm; thrombus within aneurysm causing 50% narrowing. Neck visible but unable to measure size accurately"*





- ***CT angiogram upper limbs*** *- "Good opacification and unremarkable appearances of the right brachial artery and proximal radial and ulnar arteries. The mid to distal radial artery is poorly opacified. Just proximal to the distal radius there is a small contrast blush superior to the radial artery - This may represent the false aneurysm and thrombus seen on ultrasound affecting a superficial branch of the distal radial artery however this is poorly opacified and demonstrated on CT. Moderate atherosclerotic disease of the mid to distal right ulnar artery. "*

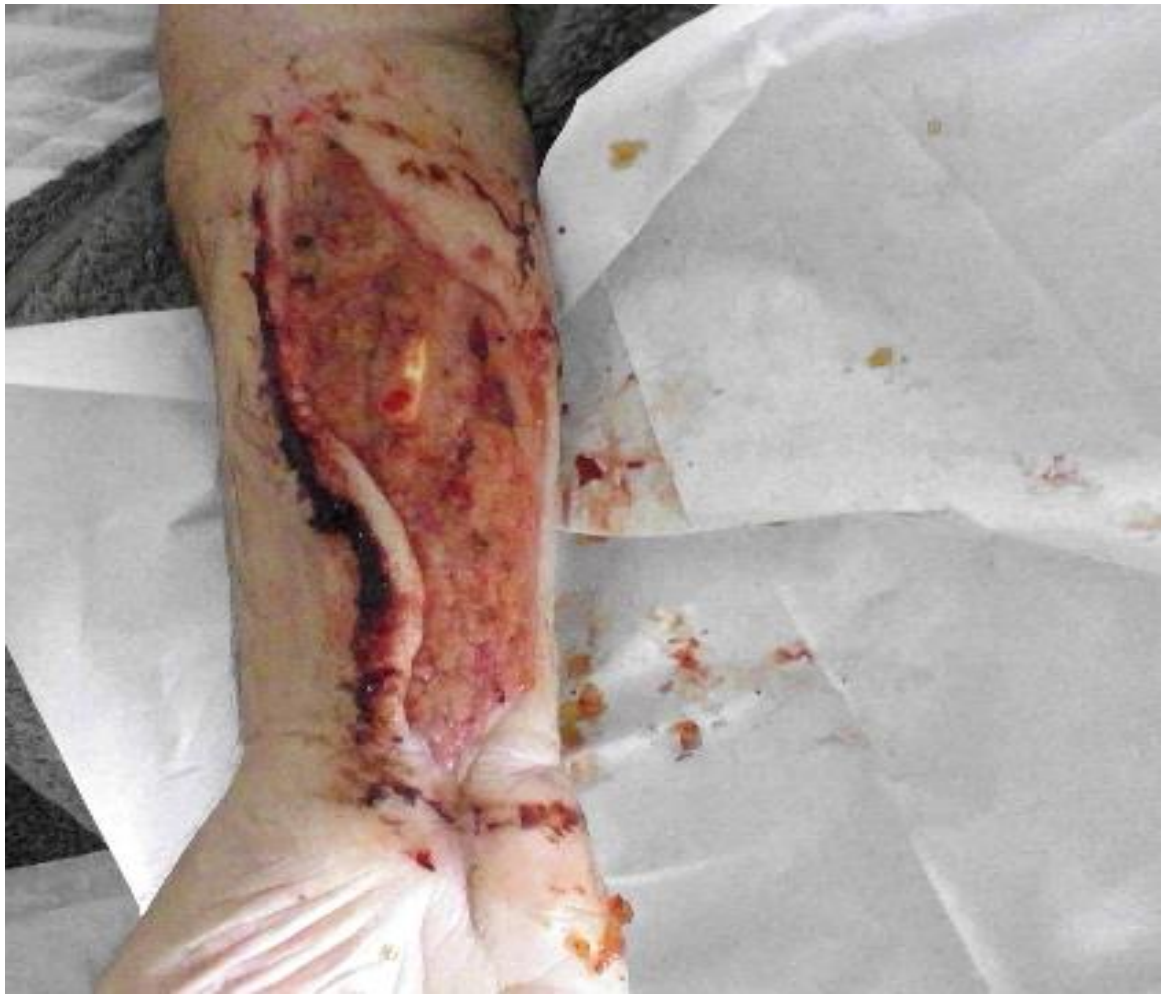
Case progress

- Contacted vascular surgeons and orthopaedic team
- After some persuasion, patient reviewed by orthopaedic team.
- Fasciotomy performed . Surgical entry "*Dusky appearance of muscles, perfused again on fasciotomy. No bleed or haematoma*"

Patient time line

- Cardiothoracic surgeons decided to postpone CABG till skin graft.
- Plastic surgeons not keen to perform skin grafting given extensive coronary disease, recent MI and severe LV impairment.
- Few days later developed low BP and had chest pain – IABP inserted
- Ongoing Haemoglobin drop needing regular transfusion – No obvious source of bleed identified. Repeat CT angiogram of forearm ok.
- Balloon pump removed after 2 weeks
- Prolonged stay in hospital. Heart failure meds initiated and titrated
- Pain free, patient was sent home with an outpatient CABG referral

Healing arm post Fasciotomy



Learning points - 1

- Think of compartment syndrome when there is disproportionate pain to physical findings. **It can present late.**
- The aetiology in our case unclear
- Early identification, adequate analgesia, measures to minimise arm swelling (eg with compression) is crucial.

Learning points 2

- A doppler ultrasound and CT angiogram of the limb
- Role of arm compartment manometry in diagnosis
- Do not delay Fasciotomy if clinically required.
- There is an increased risk of compartment syndrome in patients with arterial disease, poor renal function and low blood pressure