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Retrograde CTO

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Patient Presentation

56y M

CABG 2009 – LIMA to LAD/D1 + SVG to RCA
Inferior STEMI 2021 – 1 x DES to occluded SVG to RCA

Preserved LV function
Spinal Surgery
T2DM on oral tablets
Plantar Fasciitis

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Diagnosis

Worsening typical angina despite OMT with 2 anti anginals

Stress imaging (MPS) – 7/20 segments of inferior territory ischaemia

Angiogram: occluded SVG to RCA with mid-RCA CTO

Heart team MDT decision for CTO intervention

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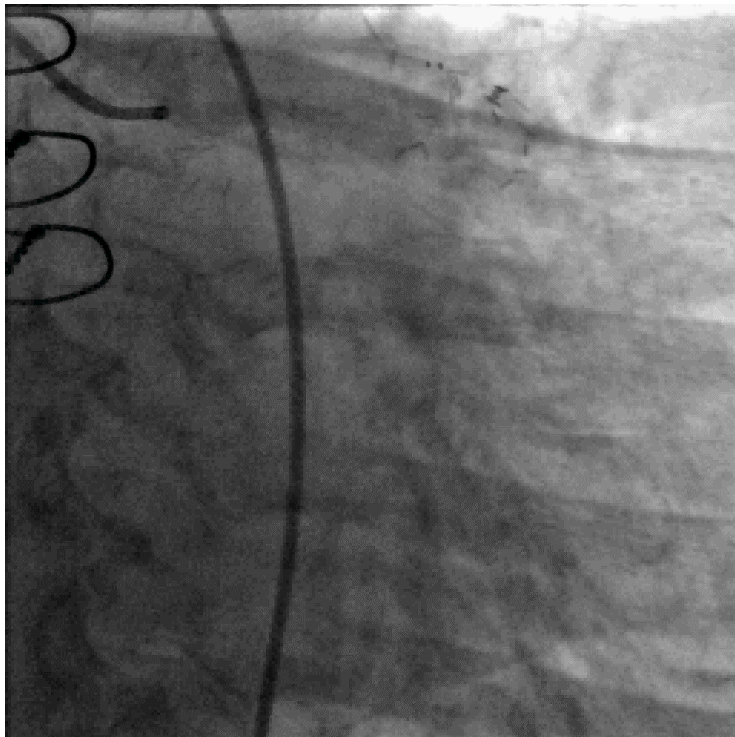
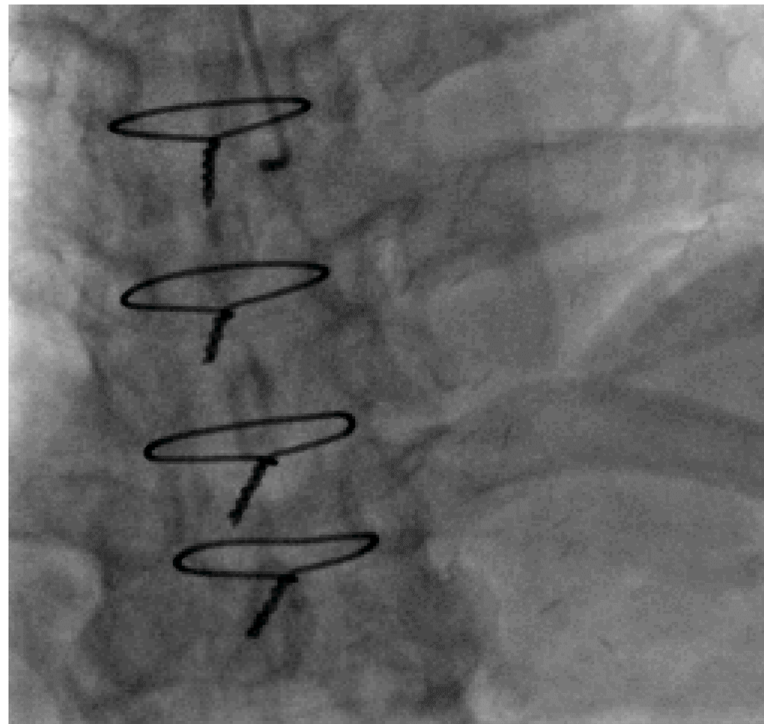
Angiogram





Diagnosis: J-CTO score

Failed previous attempt

Angiographic evidence of calcification

Bend > 45 degrees

Lesion length > 20mm

J CTO score of 4

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What is your proposed strategy?

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Treatment

1st attempt - failed AWE and RWE via LAD septal

Patient sent home with further medical therapy but remained very symptomatic

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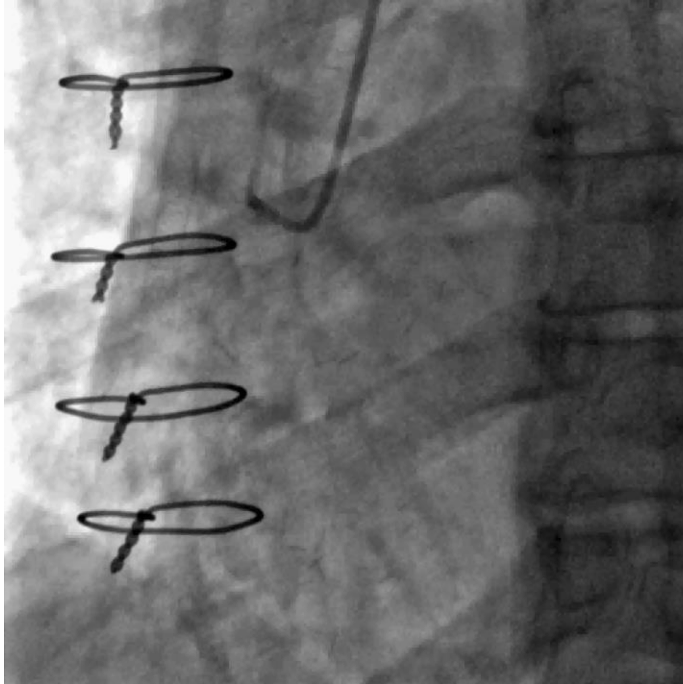
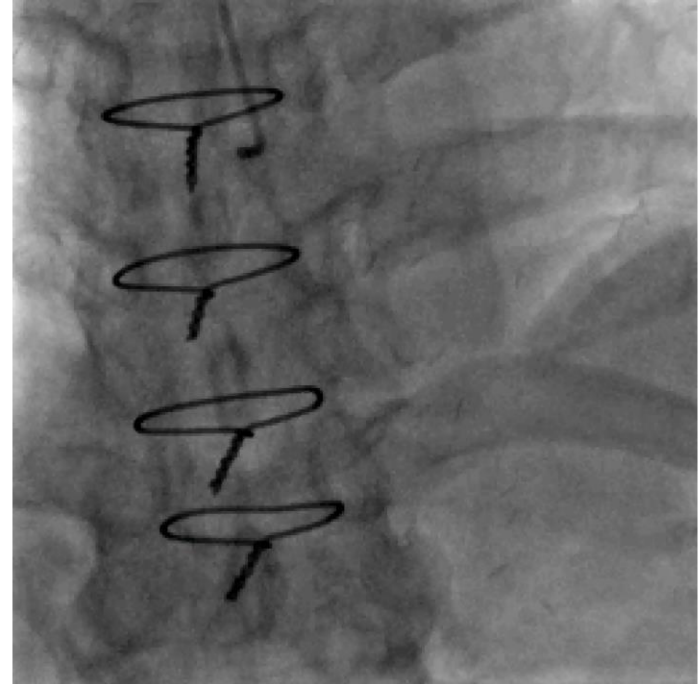
2nd Heart MDT

Remained surgical turndown

Decision: Retrograde intervention via failed SVG graft

What's your approach?





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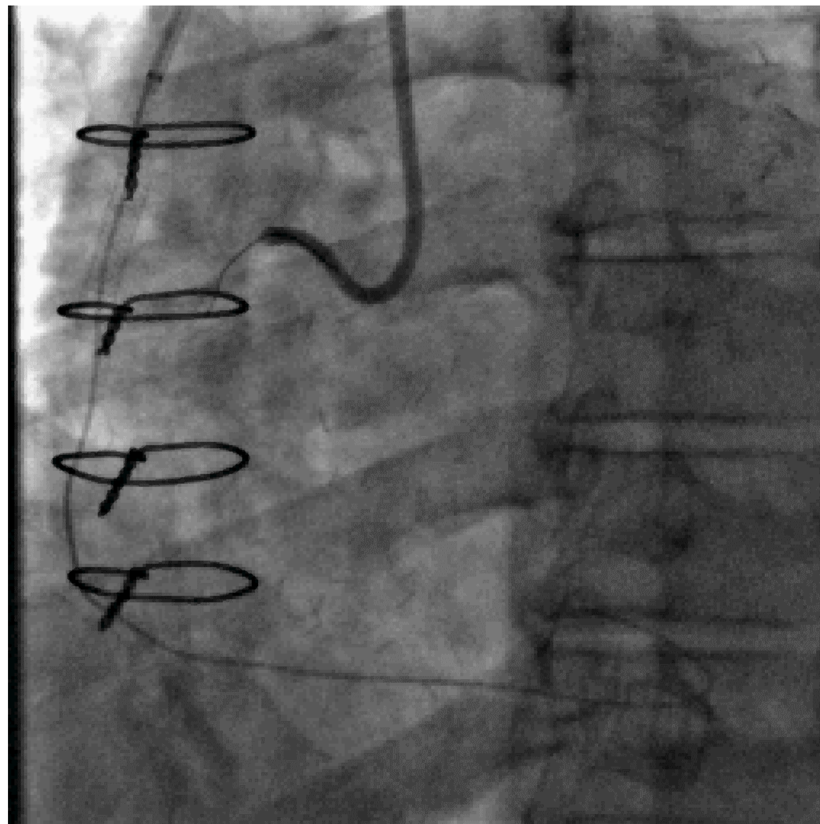
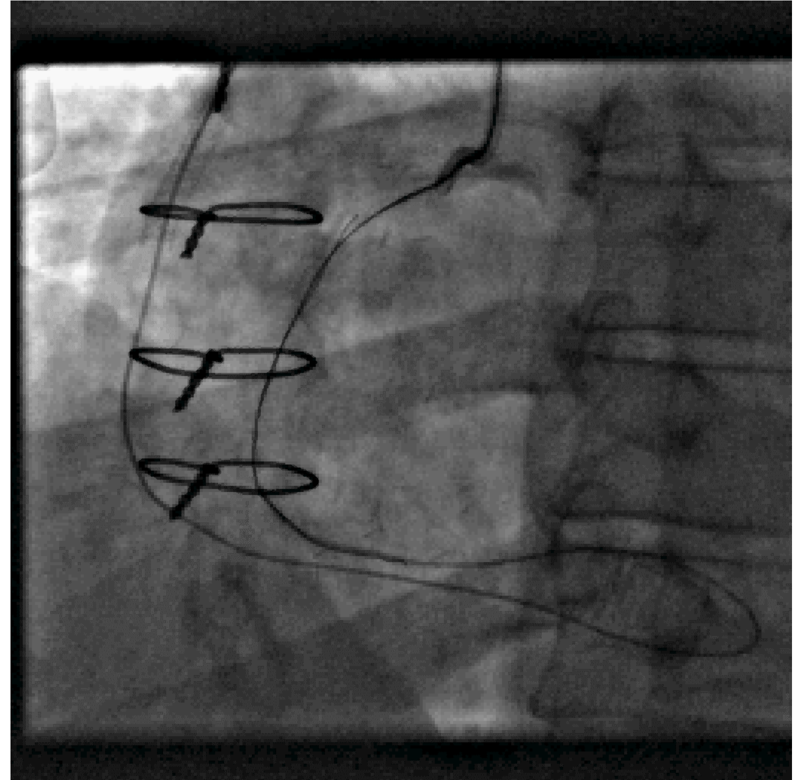
Procedure details

- 7FR RRA – AL 0.75 to RCA
- 8FR RFA – MPA to PLV graft
- 8FR Guide extension to the graft. Cross to distal PLV with Pilot 50 wire
- Corsair XS microcatheter passed to the tip and confirmation of location with tip injection



Cont

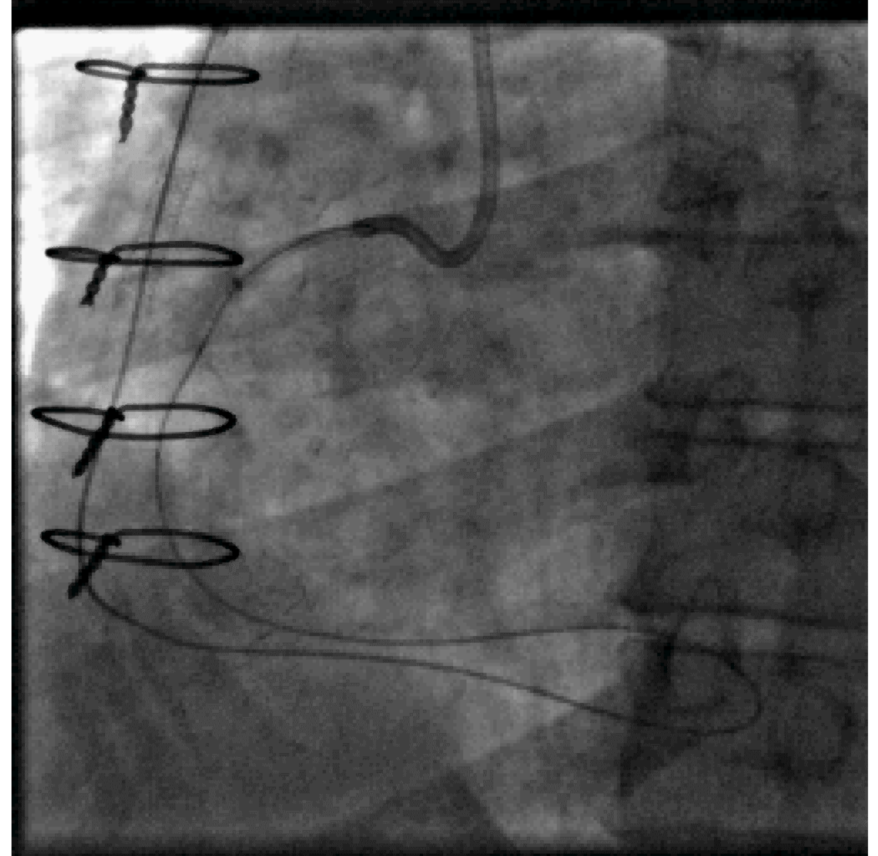
- Antegrade – Pilot 50, 200 and Gaia 1+2 wires used with microcatheter support to attempt AWE – dissection plane but unable to find true lumen
- Antegrade wire used as a marker
- Retrograde wire escalation with Pilot 200, Gaia 1 +2 then de-escalated to Pilot 50
- Successful cross to the true lumen retrogradely
- 6FR guide extension advanced to mid RCA and retrograde MC advance to guide extension



Details cont

- Pilot 50 wire swapped with RG3 wire

- Advanced and successful externalisation!



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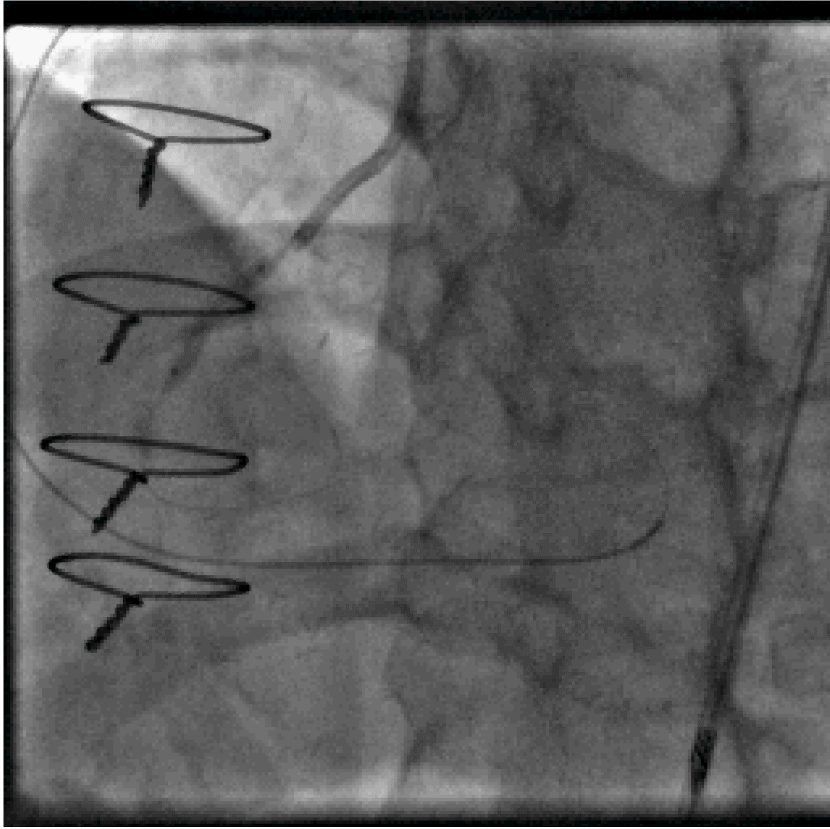

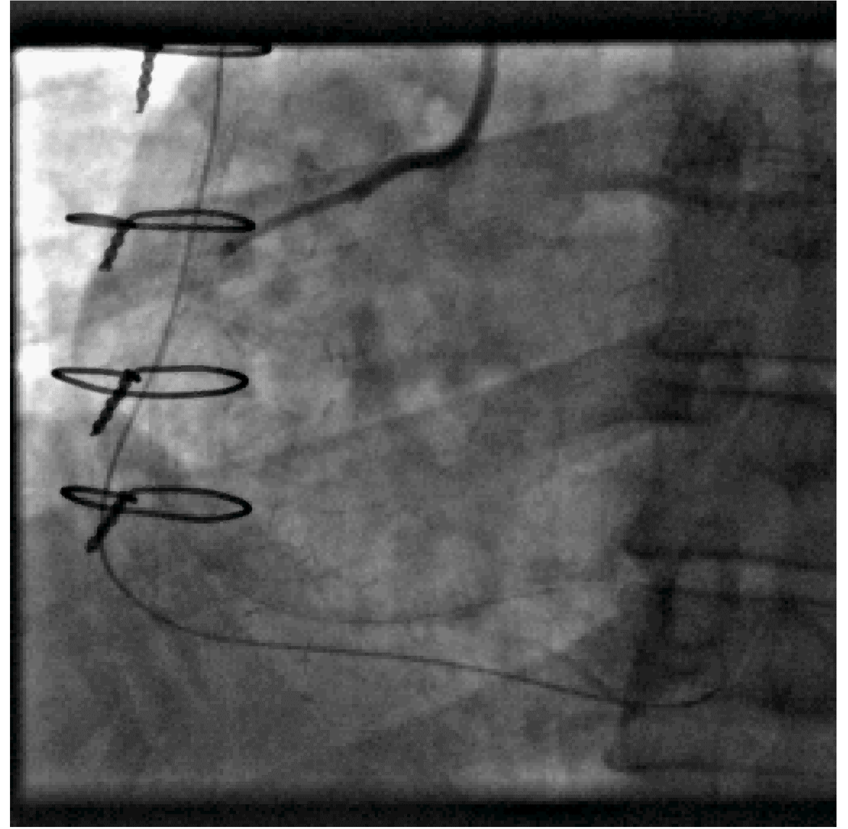

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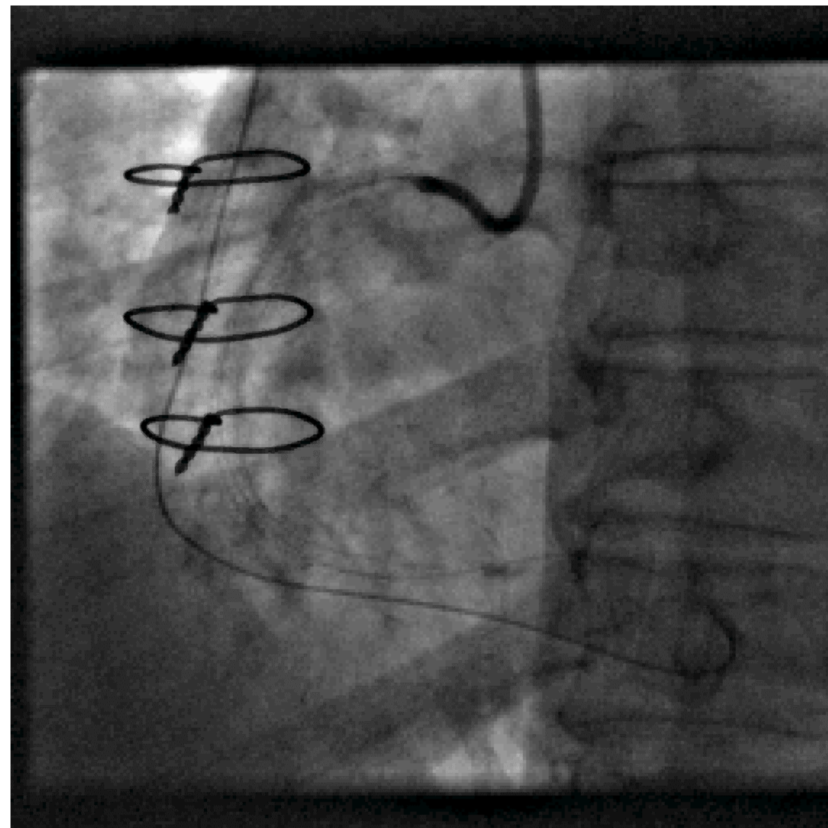
Procedural outcomes

- 3 x DES to deployed from distal PLV to ostium of RCA with 3.0, 3.5 and 4mm stents
- Post dilated with 3.25, 4 and 4.5NC to high pressures respectively



Procedural outcomes

- Small residual dissection in PLV which was managed conservatively – no ECG changes or chest pains from patient
- Antegrade filling of PDA which was left alone for the time being
- Brought back to clinic in 2 months time – resolution of symptoms!