IVUS GUIDED RCA CTO PCI

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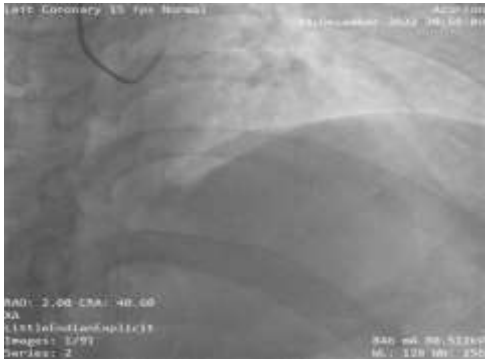
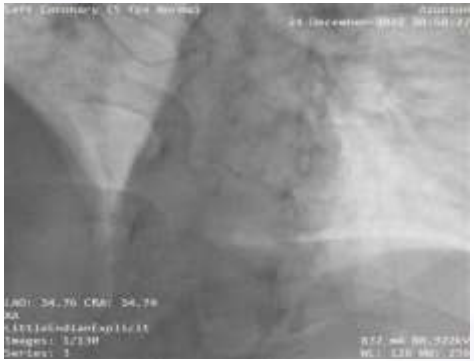
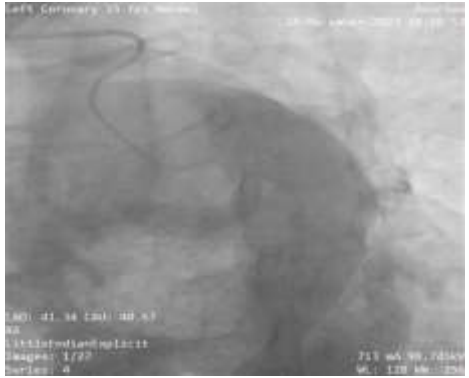
CLINICAL DETAILS

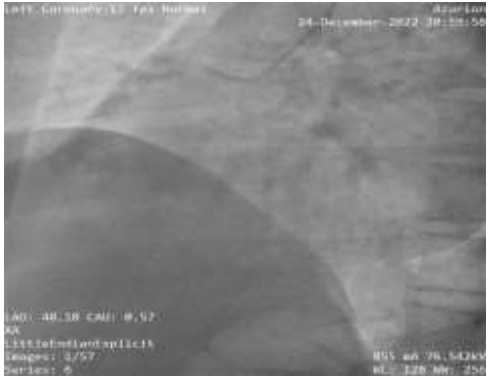
- 52 year old male patient named Mr E H
- Hypertension(2 years), Diabetes(1st time detected), Dyslipidemia(Recently investigated)
- Presented with Unstable Angina for past 1 month(repeated episodes)
- ECG- No significant ST-T changes, Echo- EF-55%, Trace MR
- Stress sestamibi done at outside hospital showing high grade inducible ischemia in RCA territory

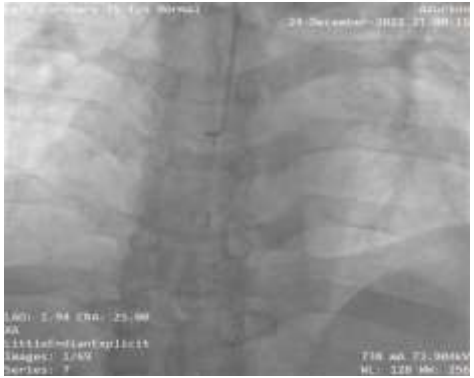
Coronary Angiogram shows RCA CTO and stenosis in proximal Circumflex with mild disease in LAD









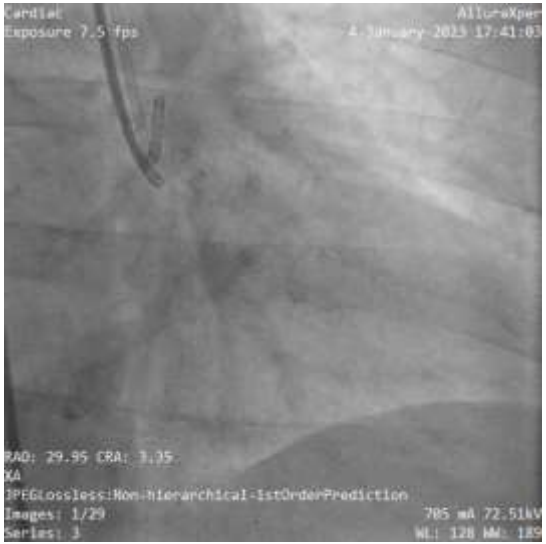


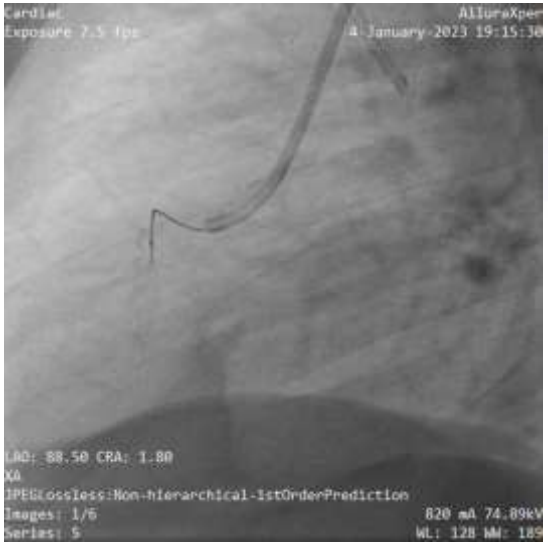
Interventional Plan

- Target Vessel- RCA(J-CTO-2)
- Access- Right Femoral-7F JR , Right Radial 6F EBU
- Strategy- 1)Antegrade Wire Escalation(AWE)

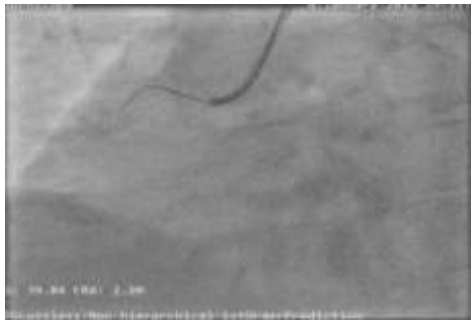
  2)Antegrade Dissection and Re-entry(last resort)

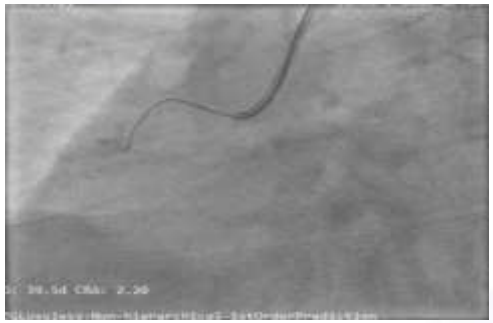
We started off with a Finecross microcatheter and Pilot 50 polymer jacketed guidewire. The Pilot 50 was able to penetrate the proximal cap but could not progress further.

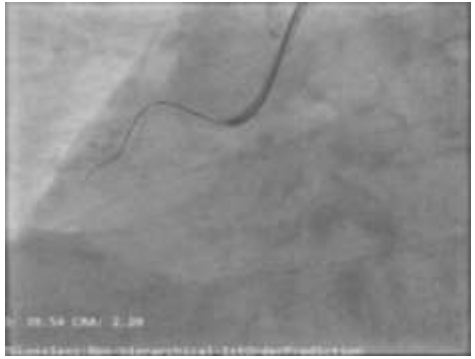




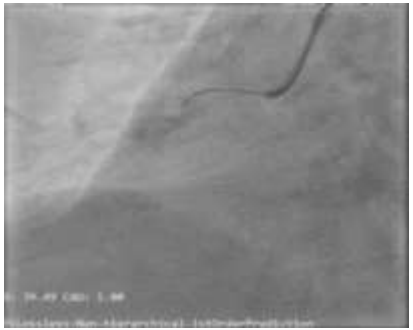
We switched to a Gaia 2nd wire. The Gaia seemed to enter the extraplaque space

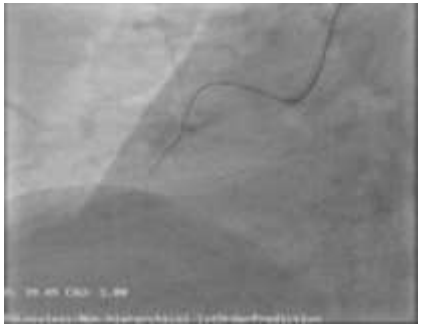


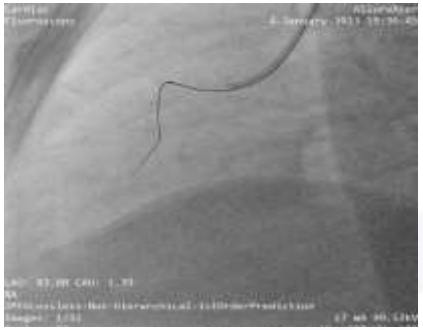


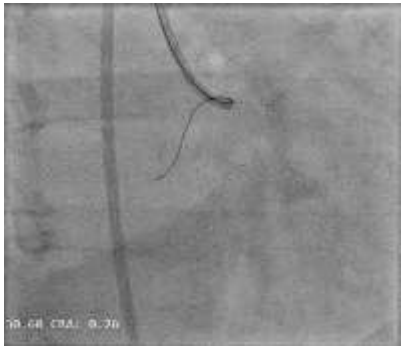


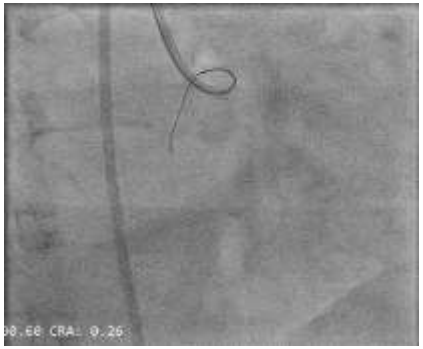
We pulled the Gaia 2nd back and tried to go through a different path. The Gaia seemed to enter a small RV branch. There was sudden loss of torque transmission to Gaia wire. We pulled the wire and the wire tip fractured inside the microcatheter. We remove the whole system out.

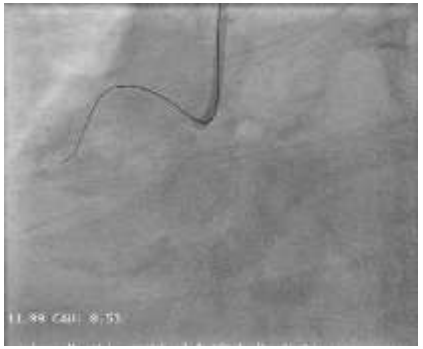




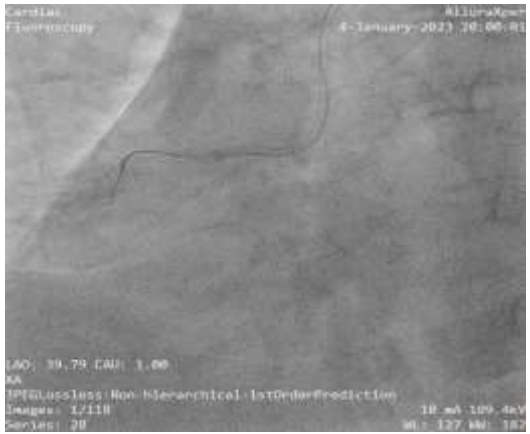


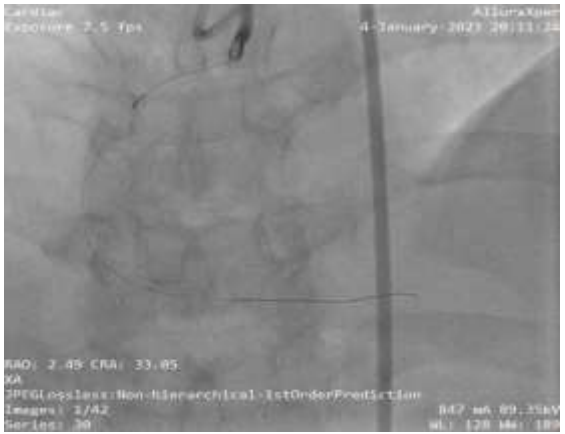


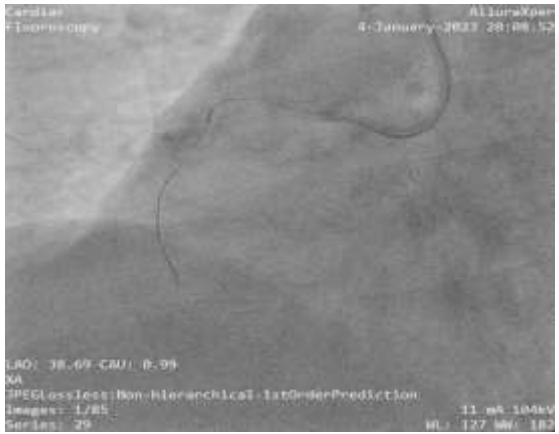




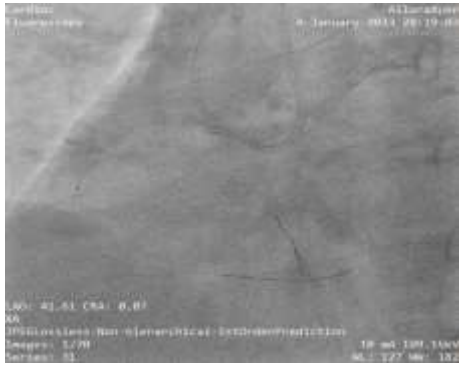
We switched to an AL-1 guiding catheter. We used a Caravel Microcatheter with a PILOT 150 guidewire. The wire was able to enter the true lumen of RCA as confirmed by antegrade and retrograde injection.

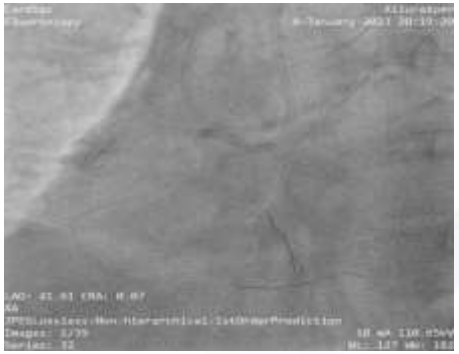


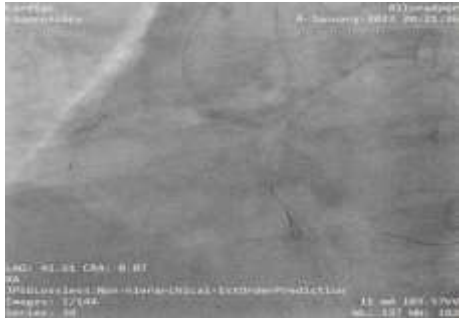




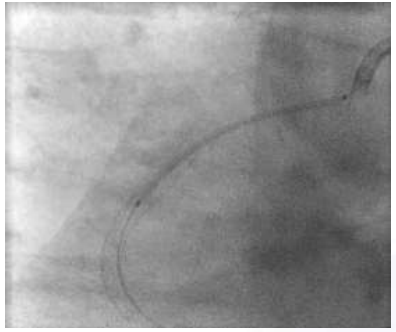
The Caravel failed to cross the lesion. We removed the microcatheter and used a 1.0 balloon to cross and dilate the lesion. We dilated it further with a 2.0*20 semi compliant balloon and exchanged the PILOT 150 with a workhorse wire using a FineCross microcatheter

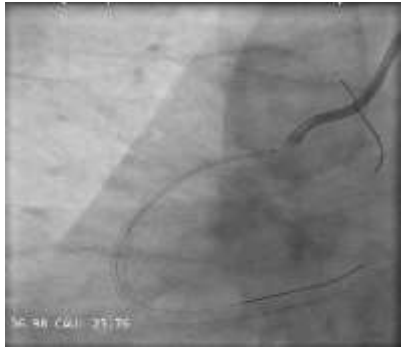


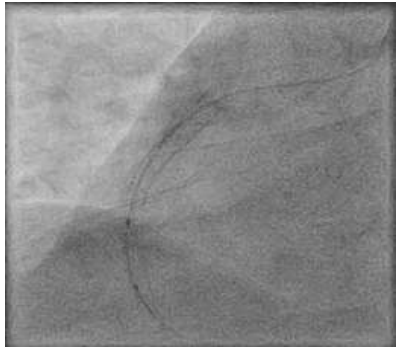


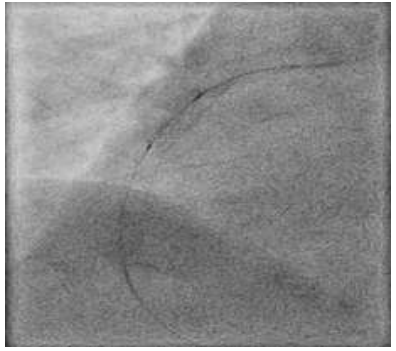


The lesion was predilated with 3.0 non compliant balloon. 2 DES 3.0 *38 and 3.5*34 was placed from ostium to mid RCA. IVUS was performed and stent optimized with 3.5 and 4.0 mm non compliant balloons.

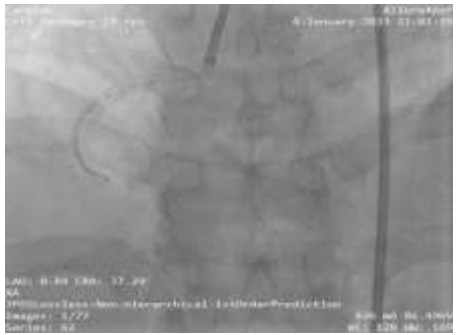


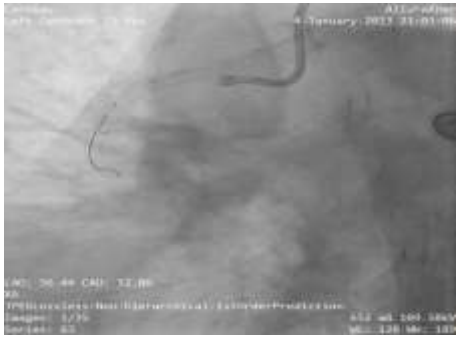


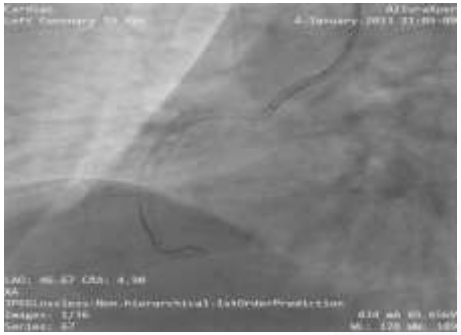


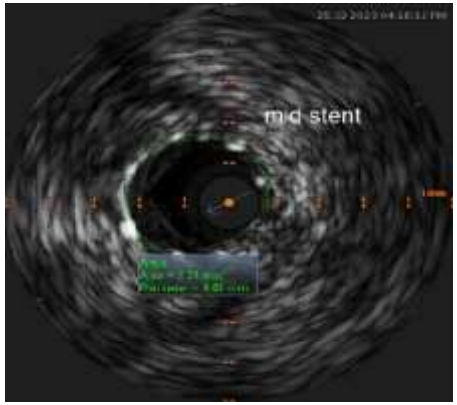


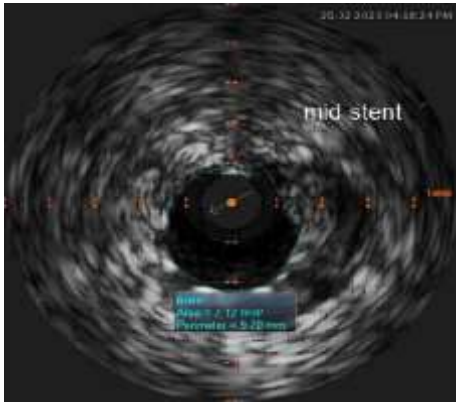
The final angiographic and IVUS result was satisfactory

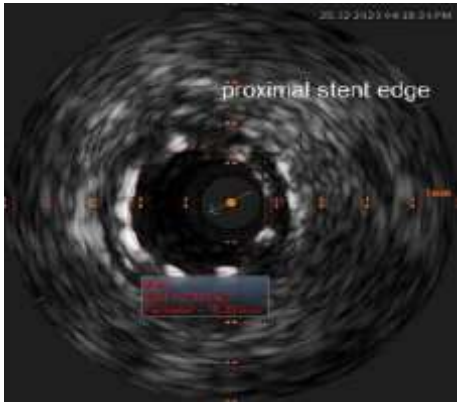












Take home messages

- Antegrade wire escalation may be the only available strategy in some cases
- Gaia series wires can fracture at the tip on excess rotation
- Proper guiding support is essential in difficult to cross lesions
- Imaging helps in improving long term outcomes in CTO PCI