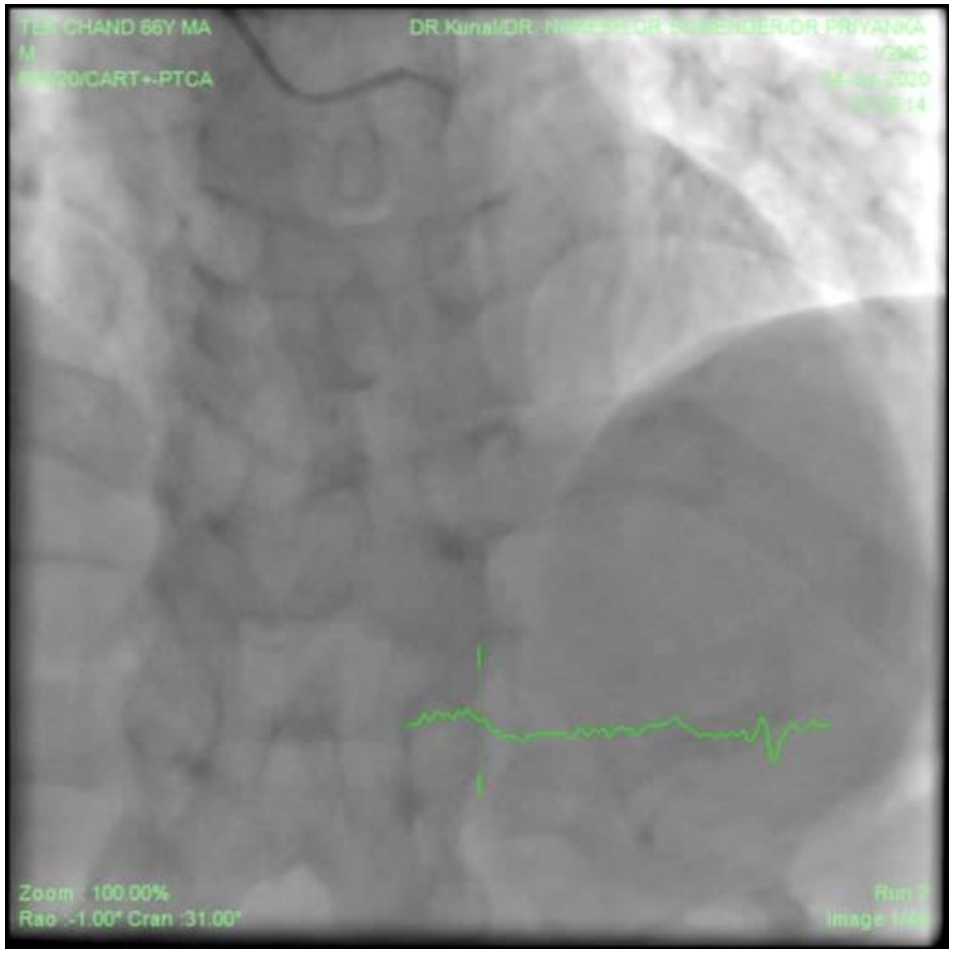
An unusual case of deformation of ostial left main stent

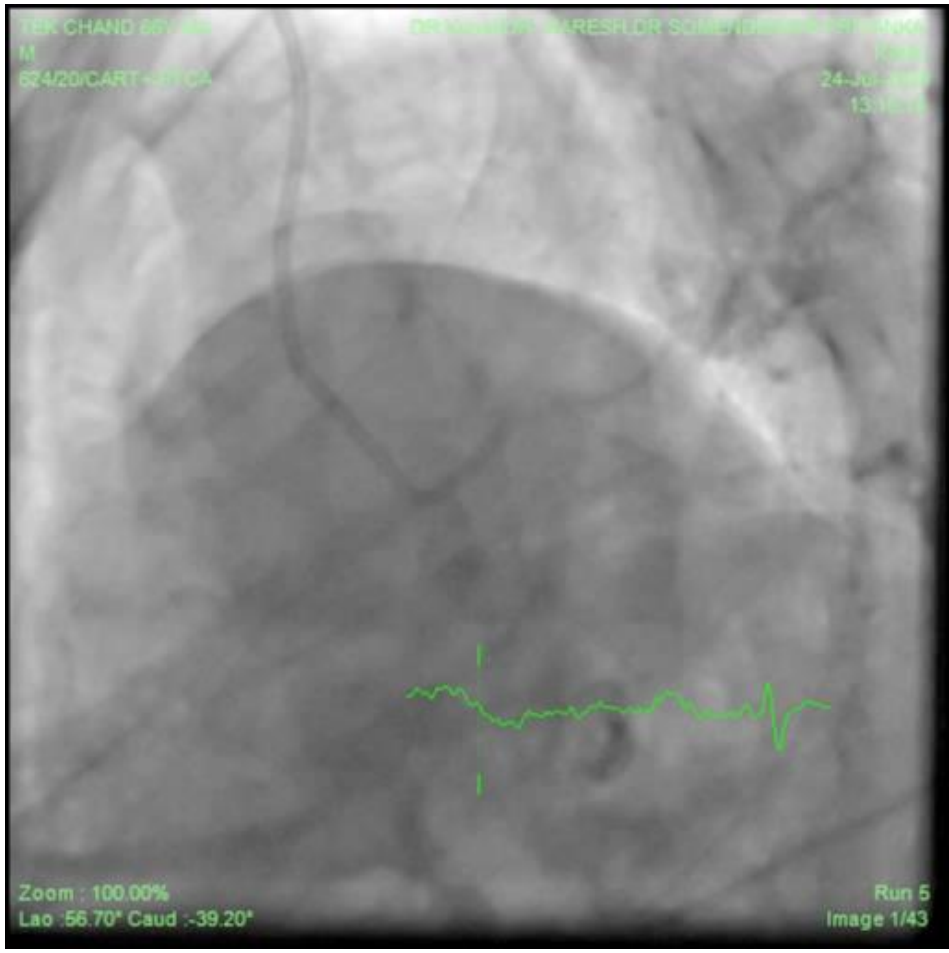
Patient's details

- 66 years old male patient
- History of Hypertension, Smoker
- Non-diabetic
- Suffered from ST elevation-Anterior Wall MI (post-thrombolysis) and presented on day 2 with Post MI Angina
- KILLIP- class 1, BP=130/80 mm Hg
- SPO2=98%
- Echocardiogram= Mild hypokinesia of LAD territory, EF=45%
- RT-PCR for COVID Negative
- S.Creatinine- 1.1 mg%, Haemoglobin=14.2 g%, Random blood sugar=121 mg%

Right radial artery –Coronary angiography

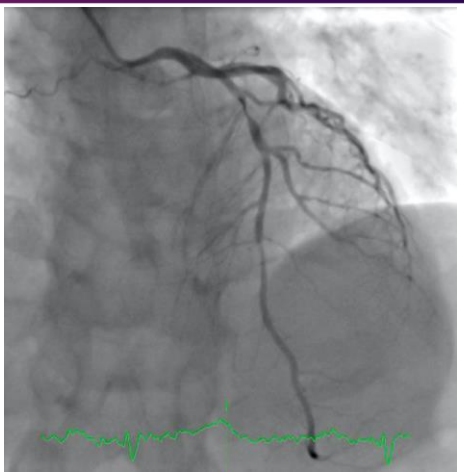


Diffuse LAD disease with 90% stenosis in mid segment

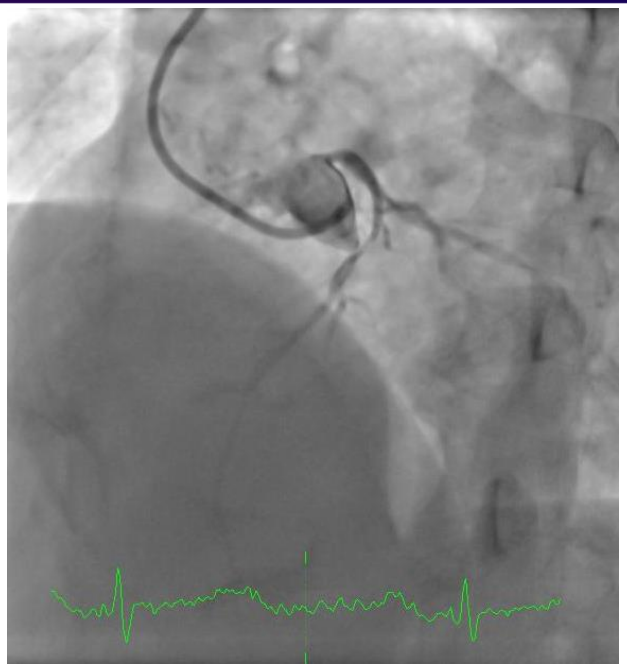


Large Diagonal-1 arising from diseased segment, LCX was normal

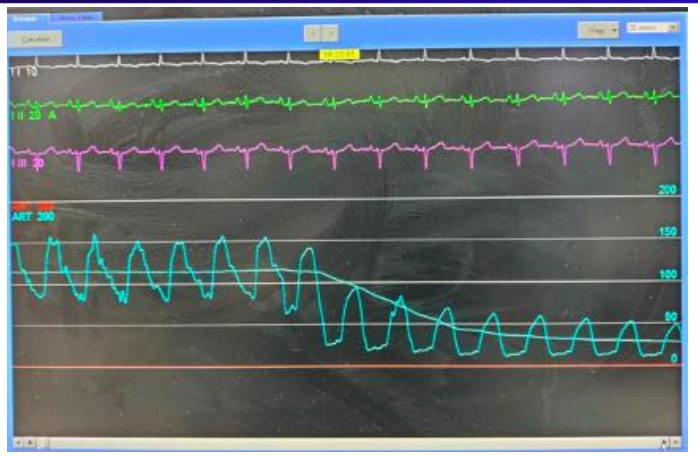
Angiography, right radial



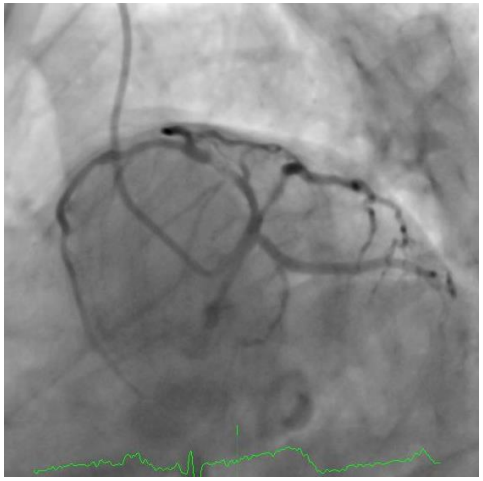
Diffuse LAD disease with 90% stenosis in mid segment



Ostial LMCA disease



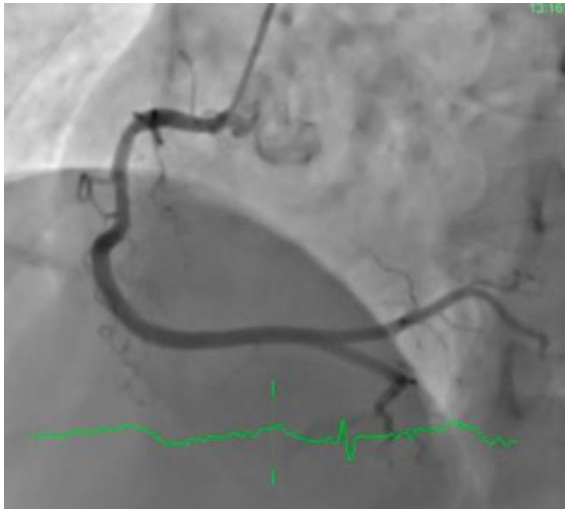
Ostial LMCA disease, pressure dampening and ventricularization while hooking with 6F guide catheter



Large Diagonal-1 arising from diseased segment, LCX was normal

Angiography Findings

- Single vessel disease with ostial LMCA disease
- LAD/D1 bifurcation
- D1 disease limited to ostium
- LAD diffuse mid-distal disease
- RT dominant circulation

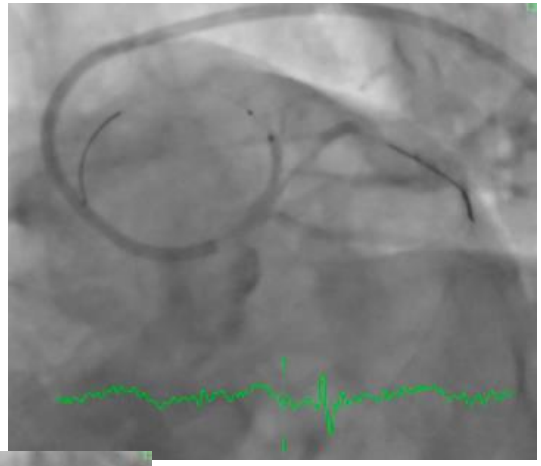


RCA was normal

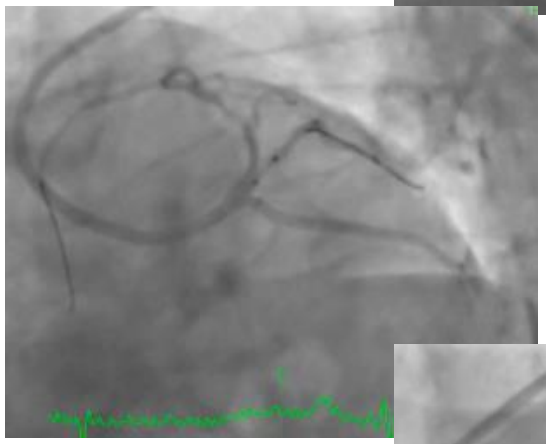
Plan Ostial LMCA to mid LAD stent- single stent- provisional cross over strategy

PLAN

- **7 F JL** femoral Approach
- wire both LAD and D1 and predilate both.
- **Ostial LMCA to mid LAD stent (3.5x48 mm)** with provisional cross over strategy across D1.
- POT with **4.5X8 mm** NC balloon
- Distal LAD lesion looked diffuse and non-critical, so planned for medical therapy

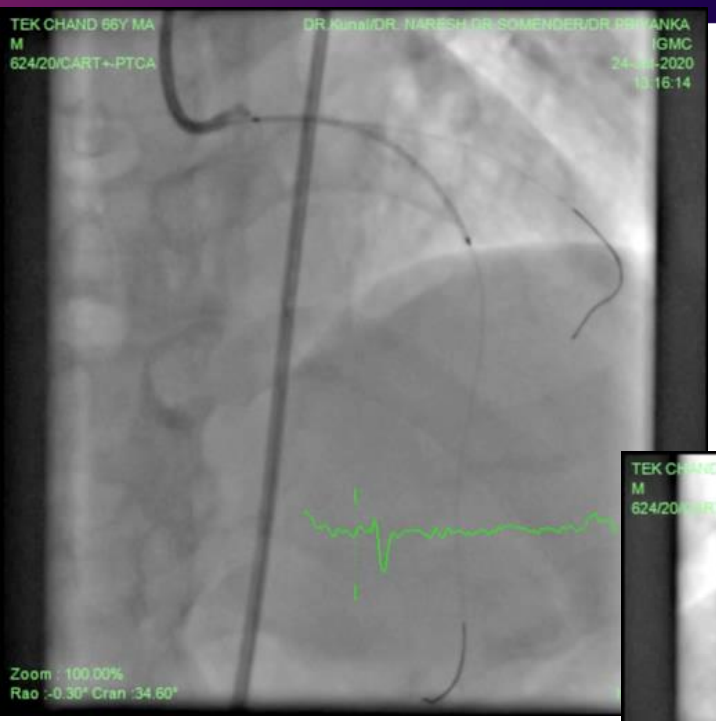


Predilation of LAD 2.5x10 mm Balloon



Predilation of Diagonal ostium with 2.5x10 mm Balloon

After predilation of diagonal-Good result

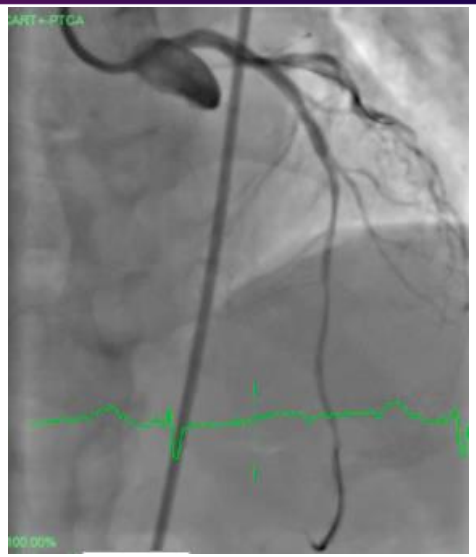


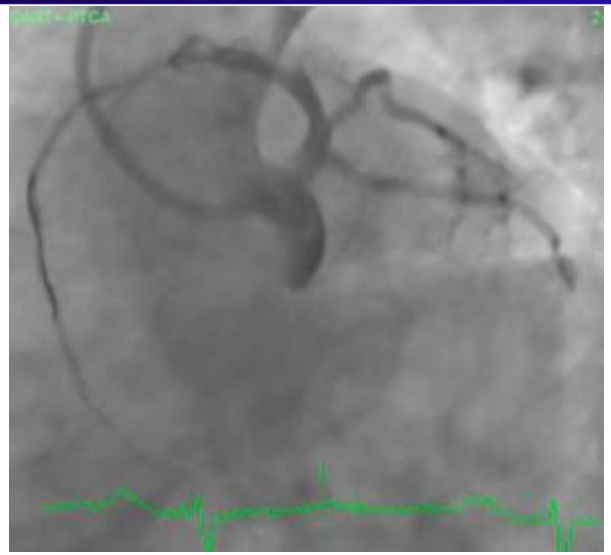
Stent 3.5x48 covering left main ostium (aiming 1-2 mm protrusion

Stent deployed and ostial faring done

POT done with 4.5x12 mm NC Balloon

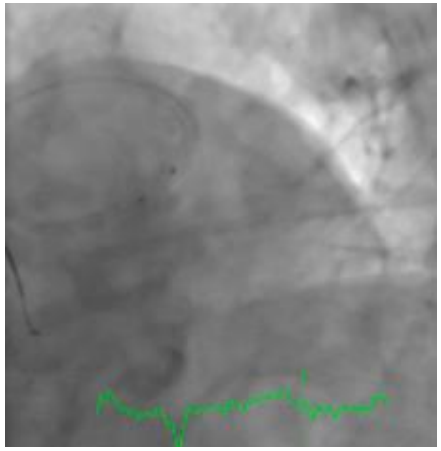
Result





Excellent result achieved across the target lesion, but now the distal LAD lesion started looking significant, so planned to fix it as well

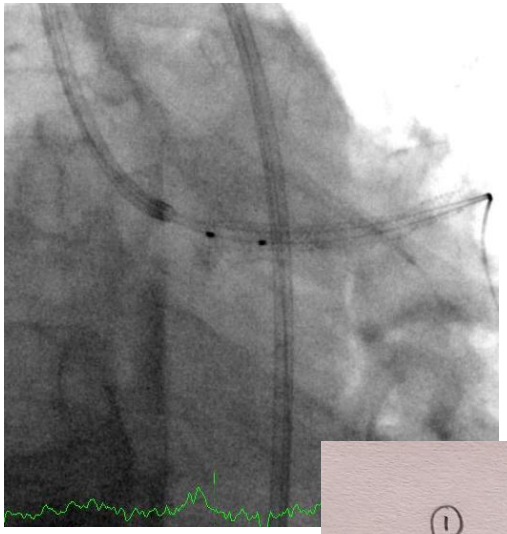
At this Moment Unfortunately the wire came out inadvertently, Faced a great difficulty in re-hooking the guide catheter, and then repassed wire easily, without realizing from where it was reentering-luminal or abluminal



Did Repeat POT with a new 4.5x8 NC balloon to negate any possible guide induced deformation, That was my biggest mistake, **and I didn't realise what mistake I was doing**

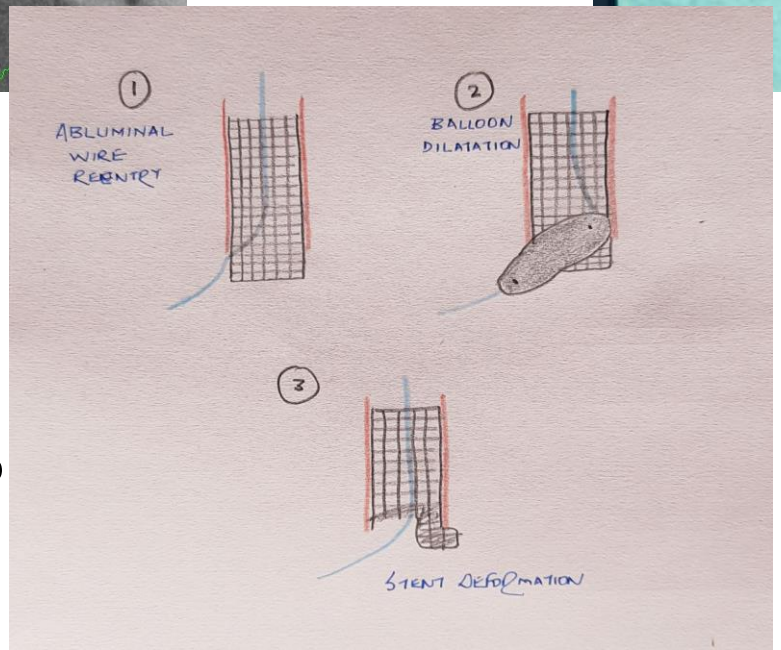
Ostial Stent Deformation

By the time I realized, It was too late ---STENT DEFORMATION



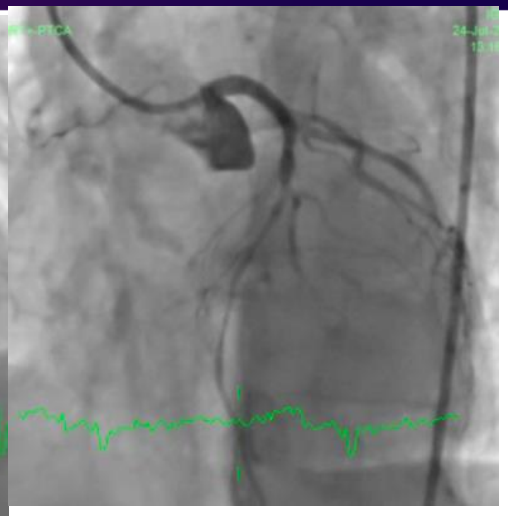
Most scary stent boost image you would ever like to see in a LMCA case

This is what had happened?

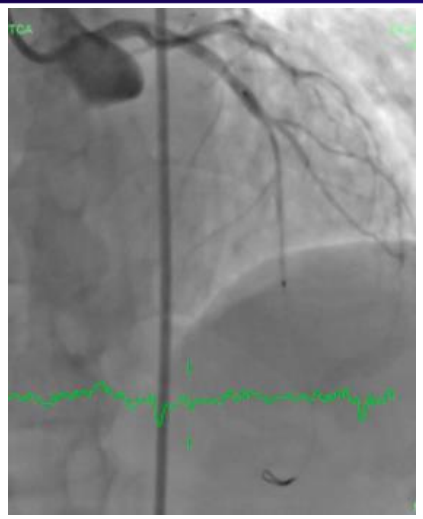


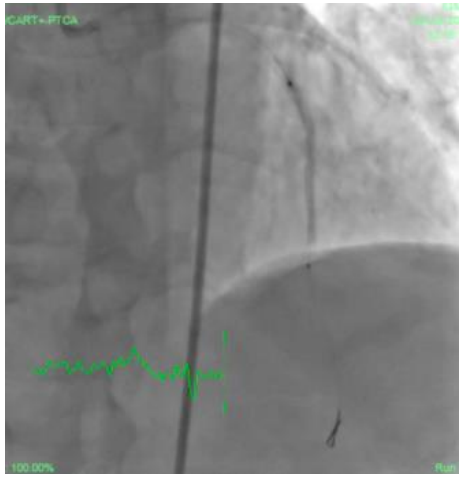
What Next?
Had to cover the uncovered ostium of LMCA with another stent,
Second needed to avoid double layer of stent across LCX

Deployed another 4x9 mm stent covering uncovered LMCA ostium



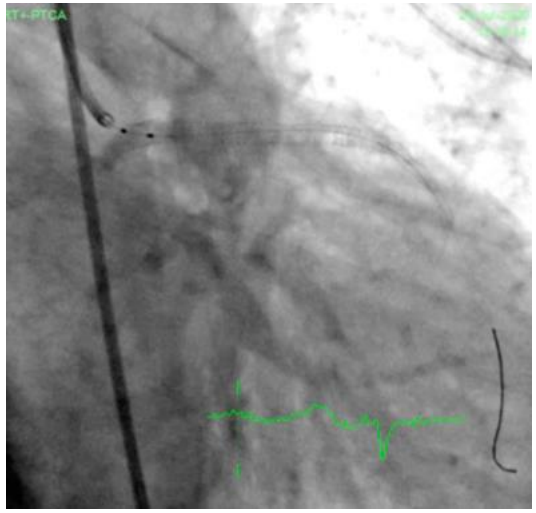
After second stent across LMCA ostium





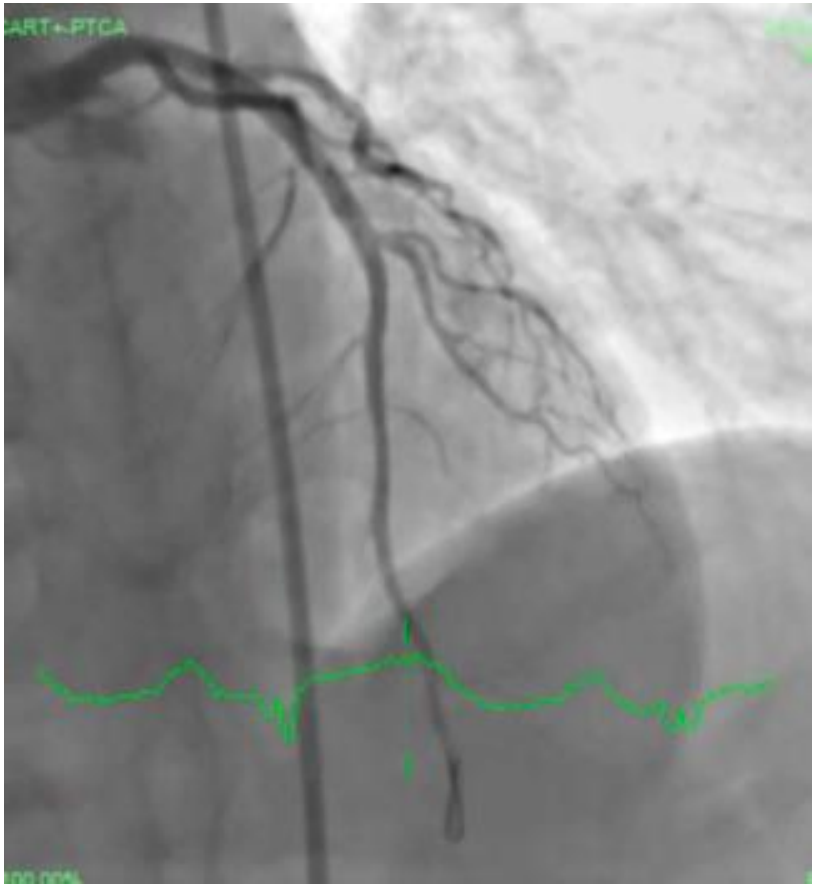
2.5x48 stent across distal LAD lesion

Mid-distal post dilation



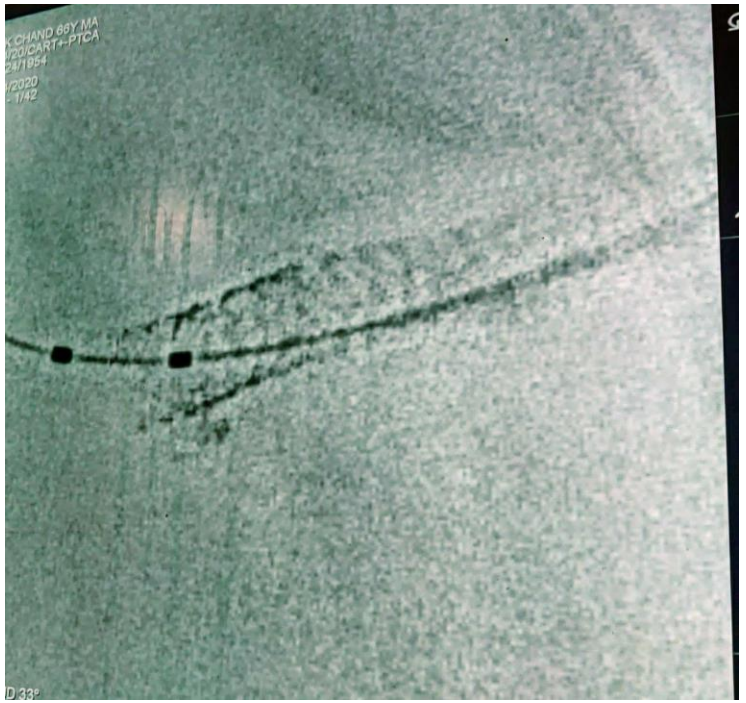
Repeat POT 4.5X8 NC Balloon

Excellent Final Result



- Deformed Ostial stent

- After repeat stenting across deformed segment



- Completed 10 months of follow up, Doing well so far
- Asymptomatic, and On Prasugrel plus Aspirin combination
- Lets hope he does well for long!!!

Take Home message

- Never loose the main branch wire during PCI
- When doing ostial LMCA stenting , take care of all distal lesions first.
- After ostial LMCA stenting, do flare/POT, and come out, keep guide re-engagements/ hardware passage to minimal.
- If wire is somehow lost during ostial LMCA PCI, always re-enter with a looped wire, and if oxford-balloon doesn’t pass easily, suspect abluminal entry
- Use stent boost/ preferably imaging to confirm the luminal reentry