

# IVUS guided CTO PCI

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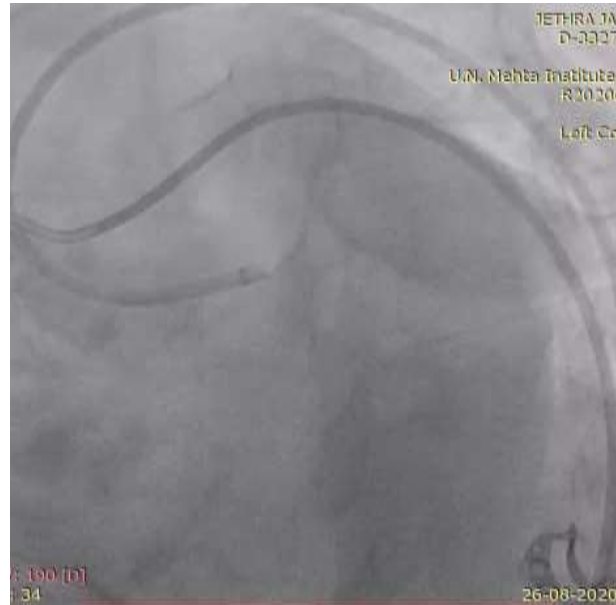
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# History

- 48-year-old male, non-diabetic, hypertensive
- H/O CSA- 1.5 years, progressed from class II to class III
- CAG 1 year back: LAD CTO
- PTCA attempted outside year ago: Unsuccessful, ambiguous proximal stump
- Presented again with worsening angina
- Normal LV Function, J-CTO Score: 3

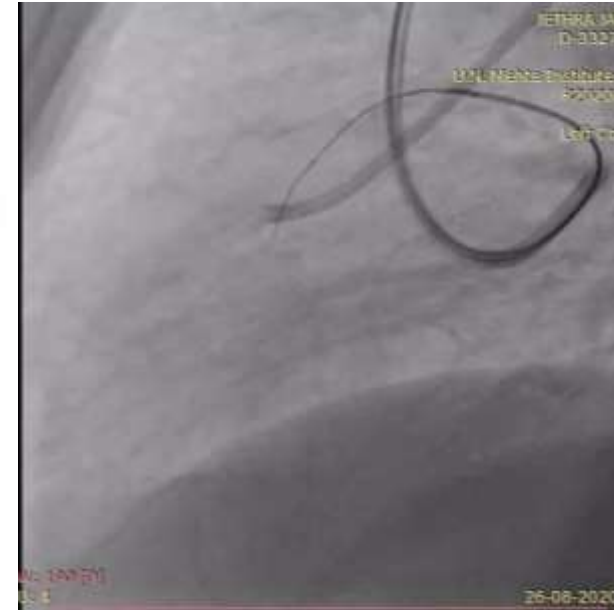
Dual injections showing proximal LAD 99 percent calcified lesion with mid LAD CTO with ambiguous proximal cap, distal vessel filling via epicardial collaterals from LCX-OM



# Procedure Plan

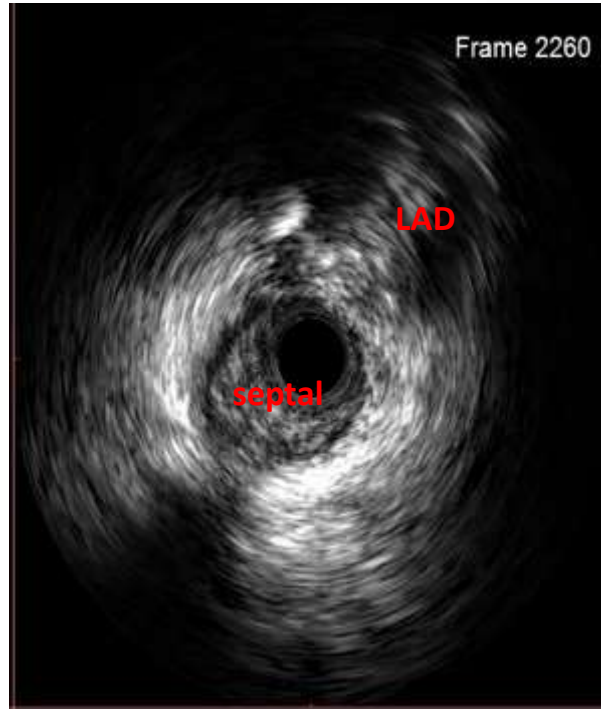
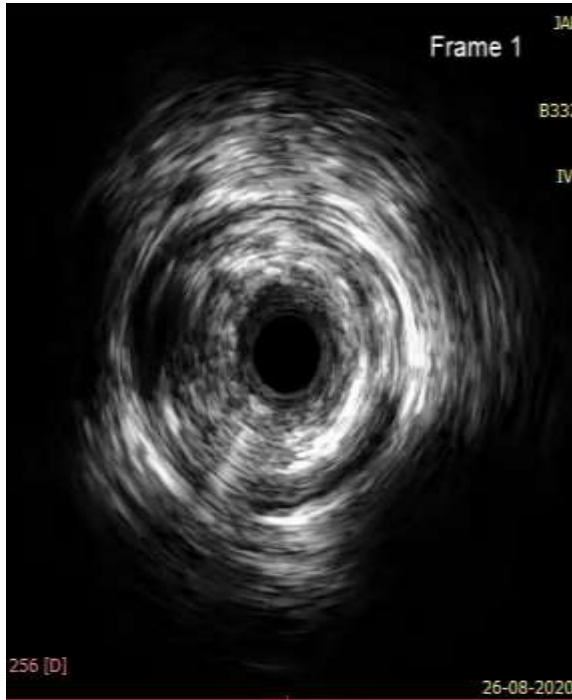
- **J CTO score 2: Long length and ambiguous proximal cap**
- **Proximal heavily calcified lesion, no good septal collaterals**
- **Antegrade approach: 7fr EBU guiding, IVUS run from septal to identify proximal cap**
- **Retrograde attempt in case of antegrade cap puncture unsuccessful**

# PTCA



Initial probing done with pilot 50 wire over finecross, wire repeatedly slid into the septals, proximal balloon dilatation done to facilitate advancement of microcatheter to lesion site, cap engagement attempted with Gaia 2<sup>nd</sup>, unsuccessful

# IVUS run from septal to LAD



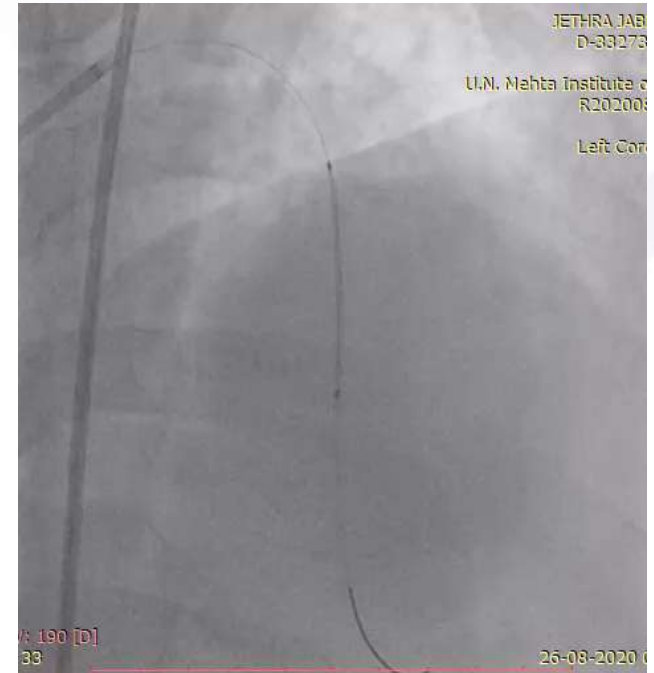
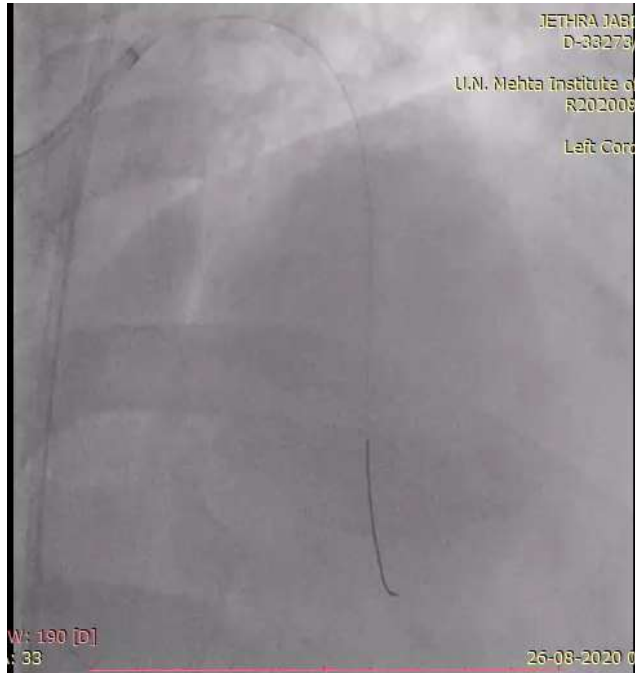
IVUS run from septal identified the site of proximal cap, cine angiogram taken at the site with IVUS catheter tip at Cap site



Cap puncture reattempted successfully at the purported site with Gaia 3<sup>rd</sup> over finecross, wire de-escalated to fielder XT, manoeuvred into distal LAD



# PTCA



Balloon dilatation and stenting done with 2.5\*38 and 3\*38 stents, ivus guided stent optimization done



# Final Result



Good end result with final TIMI 3 flow and well expanded stents

# Conclusion and take home message

- Post procedure course uneventful, discharged next day
- Doing well at 3 years follow up
- IVUS: Helpful in solving proximal cap ambiguity in selected cases
- Wire escalation and de-escalation integral part of antegrade wiring
- Final sizing and optimization with IVUS crucial for good long term outcomes

**Thank you**