

Fail, Invest to make the  
second time a charm!

**Patient demographics :**

**56 YO male**

**CV risk Factors :**

Hypercholesterolemia  
Previous smoker

**Presentation :**

Heart failure chronic compensated on GDMT.  
Ischemic heart disease referred for  
revascularisation.

**Workout :**

**LVEF =25%**

MRI : Viability RCA territory. LAD ? *LVEF 18%*.

MR important

Serum Creatinine : 92  $\mu\text{mol/L}$

Hb : 14.2g/dl

# Angiogram

| RCA CTO       | Characteristics             |
|---------------|-----------------------------|
| Lesion length | Long                        |
| Proximal Cap  | ambiguous                   |
| Collaterals   | Ipsilateral epicardial      |
| Distal Vessel | Bifurcation minimal disease |

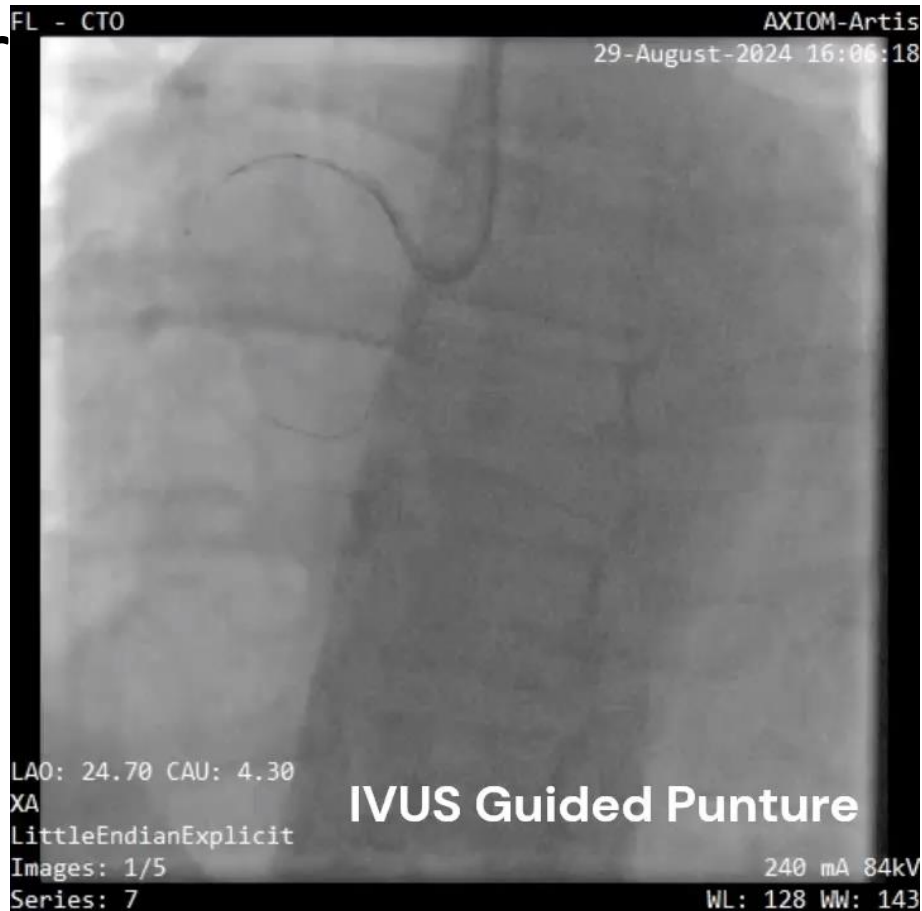
Strategy :

1. Try antegrade puncture (IVUS)
2. Retrograde



# First attempt = Failure

- IVUS Guided Puncture with Gaia next 3
- Single Radial Eucath Sheathless
- De-escalation to Gladius EX
- Progression but in LALA land.
- Retrograde from the same guide using Caravel and Sion Black.
- Able to knuckle UP
- Side base : able to knuckle down
- Antegrade and retrograde not in the same plan
- 3 Hours no progress → Investment
- Schedule a second attempt

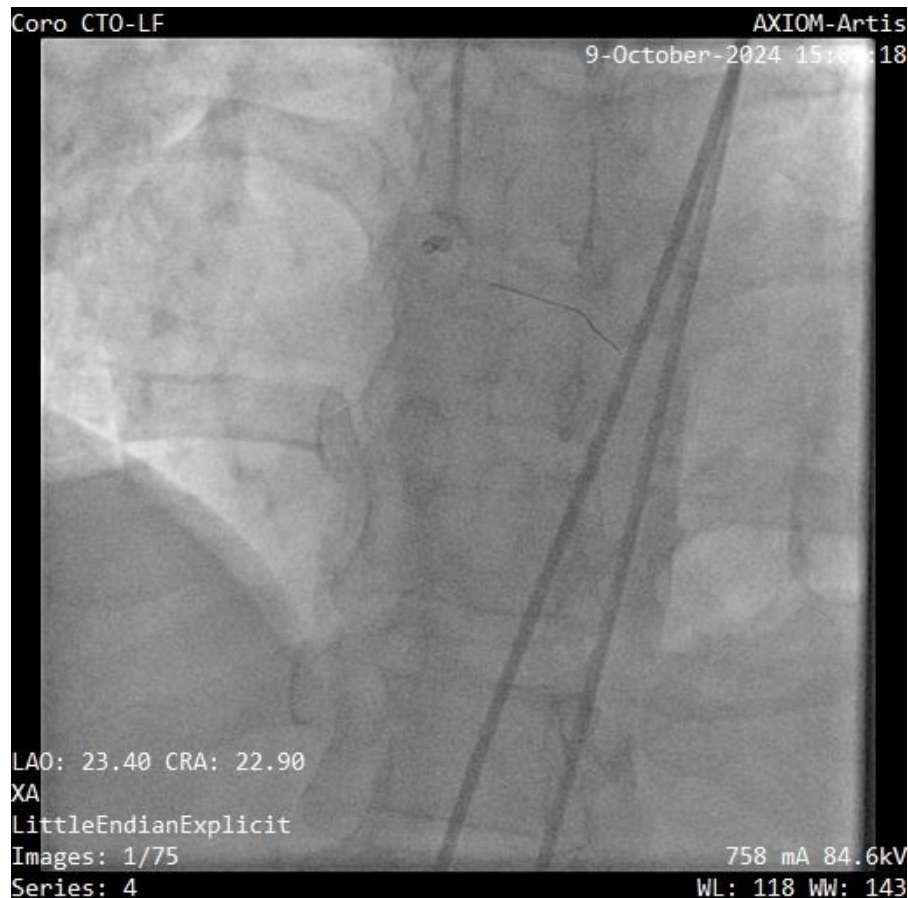


# After 6 weeks !

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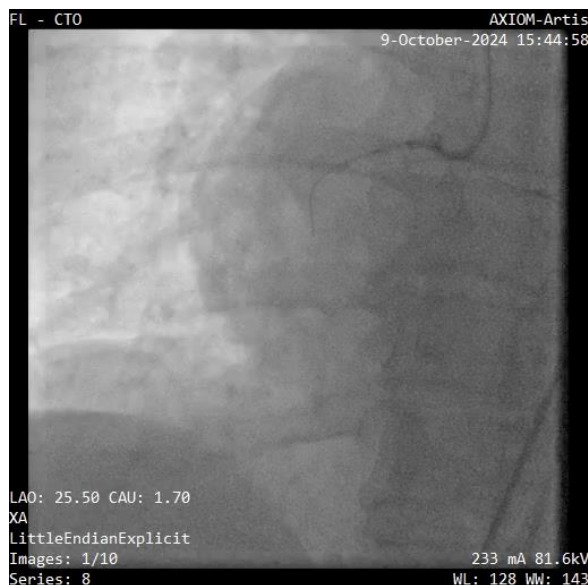
Strategy :

1. Retrograde
2. Stand By : support if needed



# No more ambiguous cap but !

Enhance Support Guide extension and  
puncture with Gaia next 3

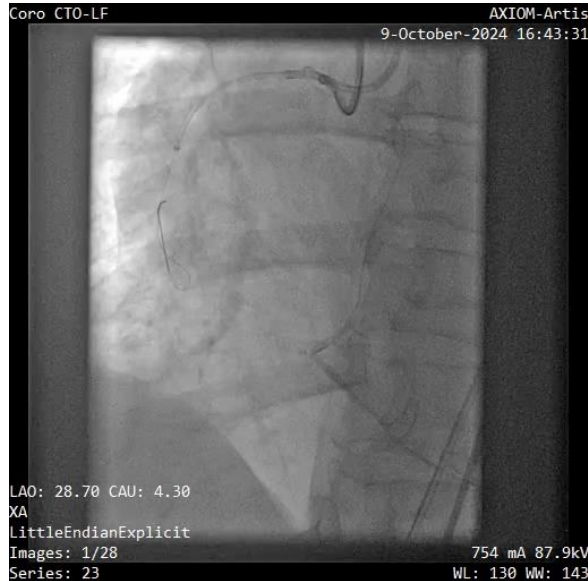


Then able to send a knuckle down

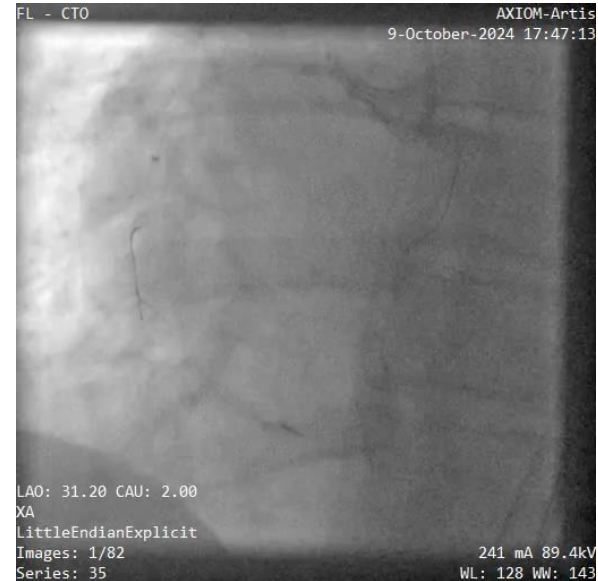


# Retrograde at the right position this time but with a lot of struggle

From a second 7Fr Amplatz with an anchoring balloon Caravel at the distal cap



Knucle Up after scratch with a CP 12 and retrograde Carlino



# Externalization and solving the bifurcation

**GE facilitated Reverse CART successful after multiple Balloon inflations**



**After ballooning the whole segment, we were lucky**





# Final !

## After three DES



## Wait and re check for the LAD



# What I learnt from this case

- Fail fast, switch quick : lost too much time antegrade first attempt.
- Live IVUS proximal cap puncture needs a learning curve
- Investment helped in this case keeping the proximal cap ambiguity solved for the second attempt.
- Long CTO's are challenging and usually need advanced retrograde techniques.
- Are mechanical hemodynamic support mandatory for these case ?