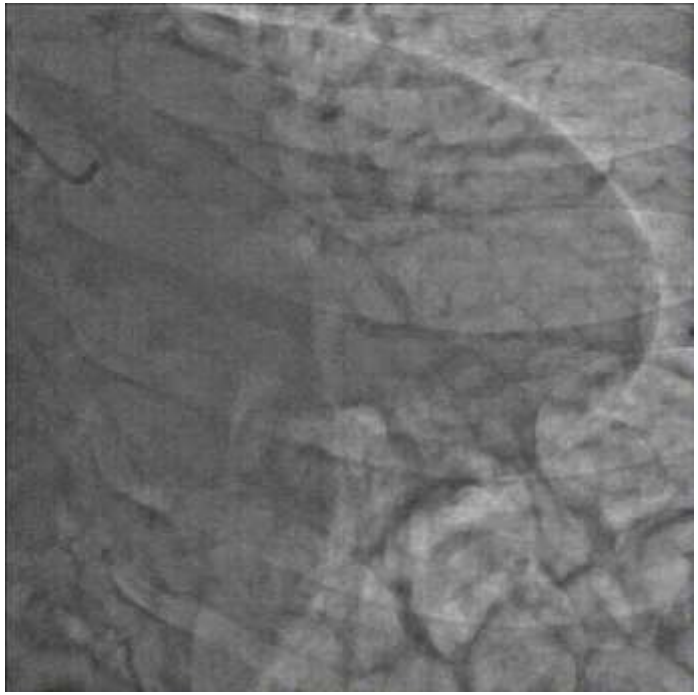
Navigating the Maze!!!

- How to manage Long epicardial collateral with loops with Short microcatheter!!

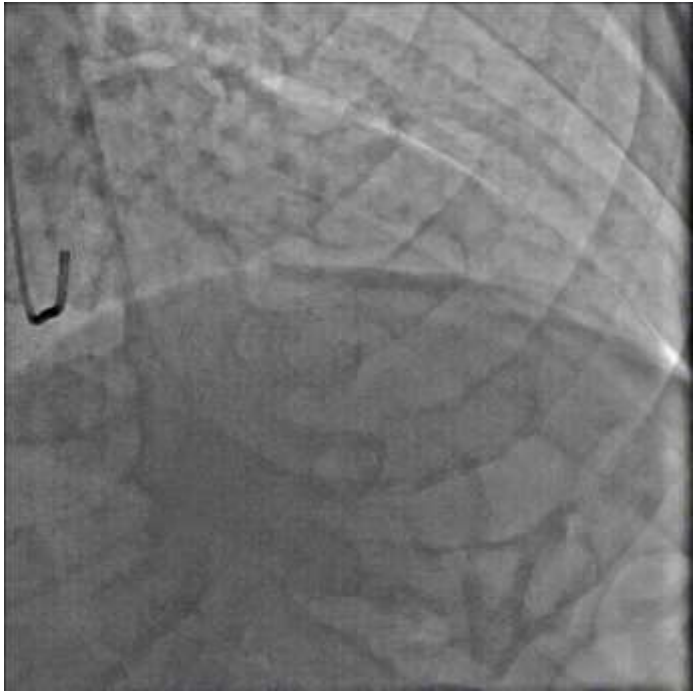
Case presentation :

- 78 Y old male patient.
- HTN, DM2, Smoker, DL.
- Hospitalized for decompensated heart failure few times within the last 2 months.
- TTE : Dilated LV with reduced LVEF at 30 % and severe hypokinesia of the inferior wall.
- CMR : Dilated LV with reduced LEVF at 27%, and infero-lateral non transmural gadolinium enhancement.

Coronarography :



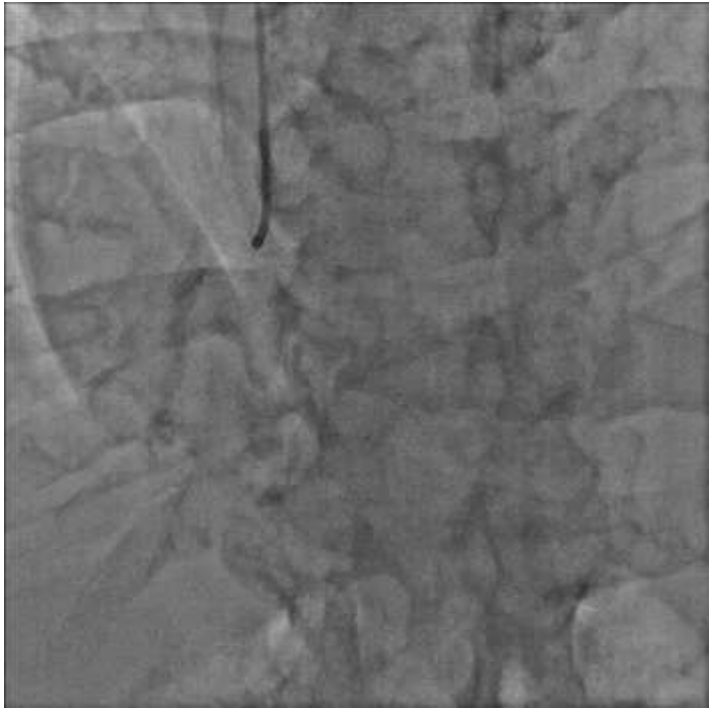
Mild lesion on the Lcx



Moderate lesion on the Mid-LAD

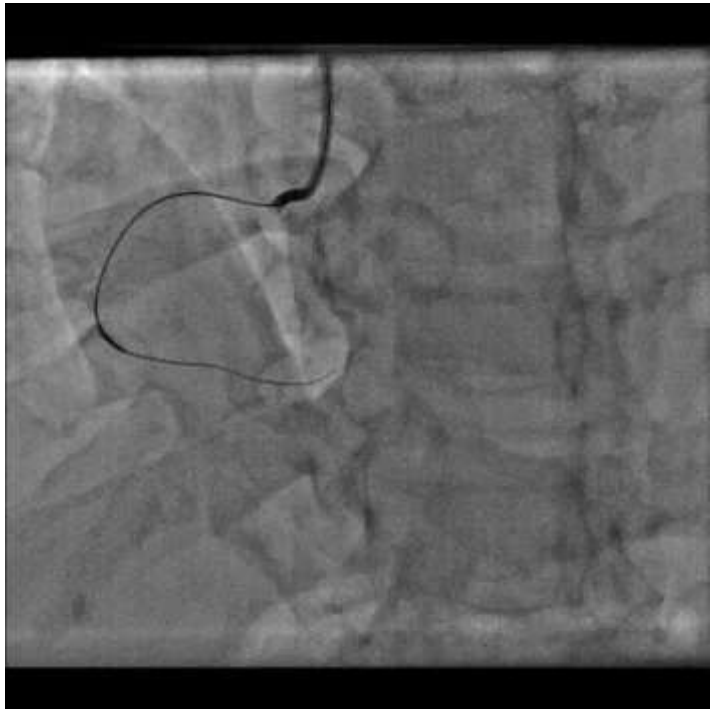
Coronarography :

RCA CTO with homolateral et controlateral collaterals

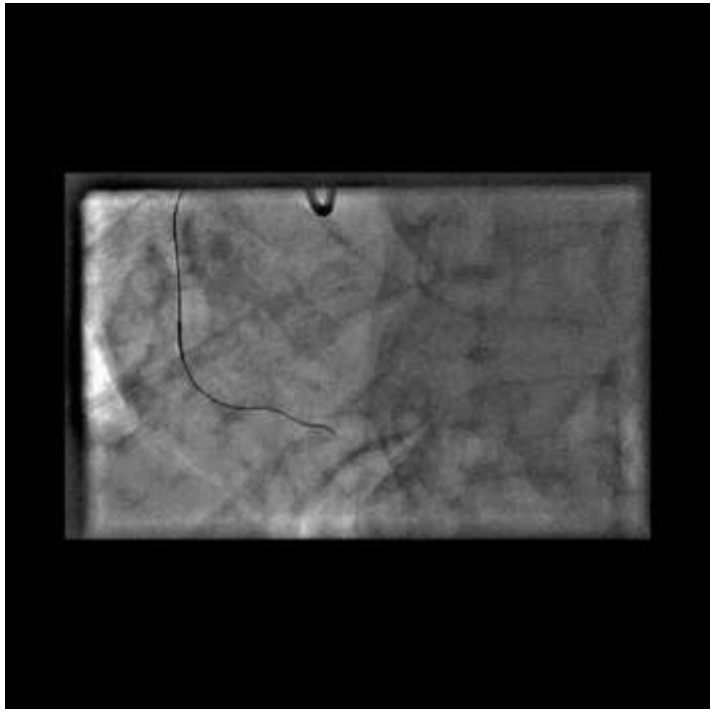


RCA CTO with homolateral et controlateral collaterals

Ad Hoc Trial of the CTO by antegrade approach :

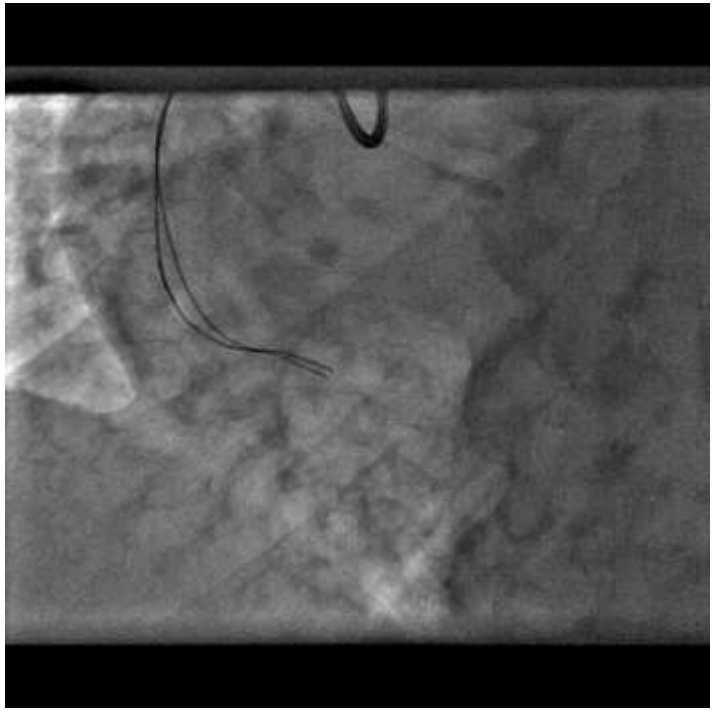


Antegrade Wire escalation starting with Gaia 2 and Turnpike MC

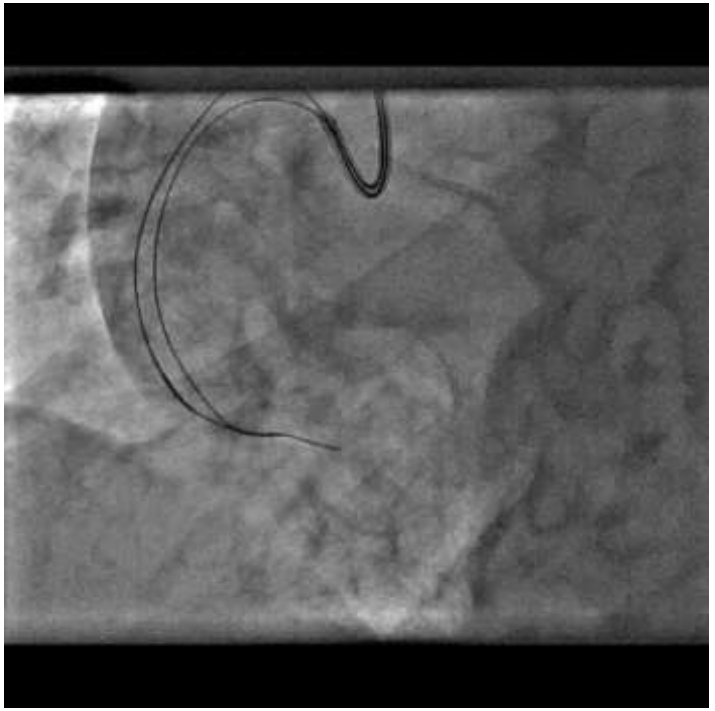


Gaia 2 in small branches or outside the architecture

Ad Hoc trial of the CTO antegrade :

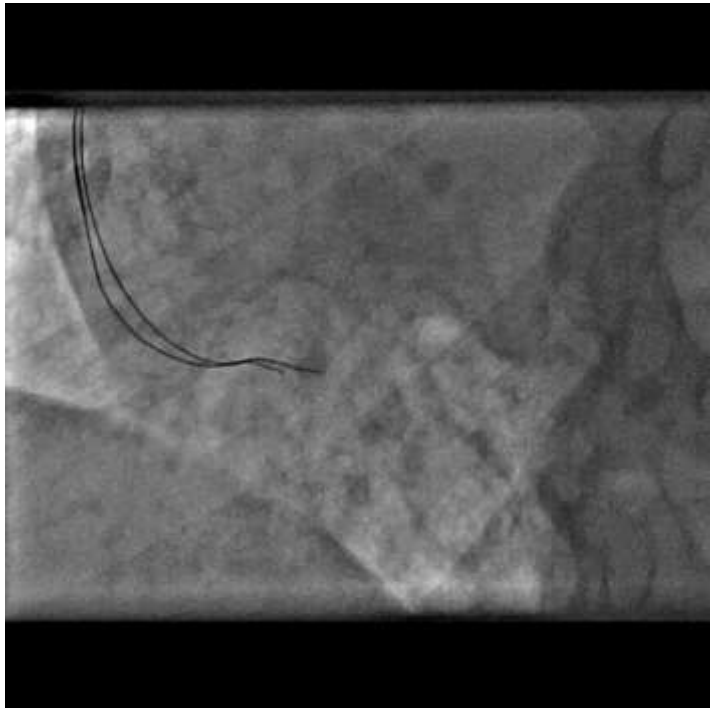


Escalation to Gaia 3 with Parallel Wire technique



Gaia 3 in the Subintimal space

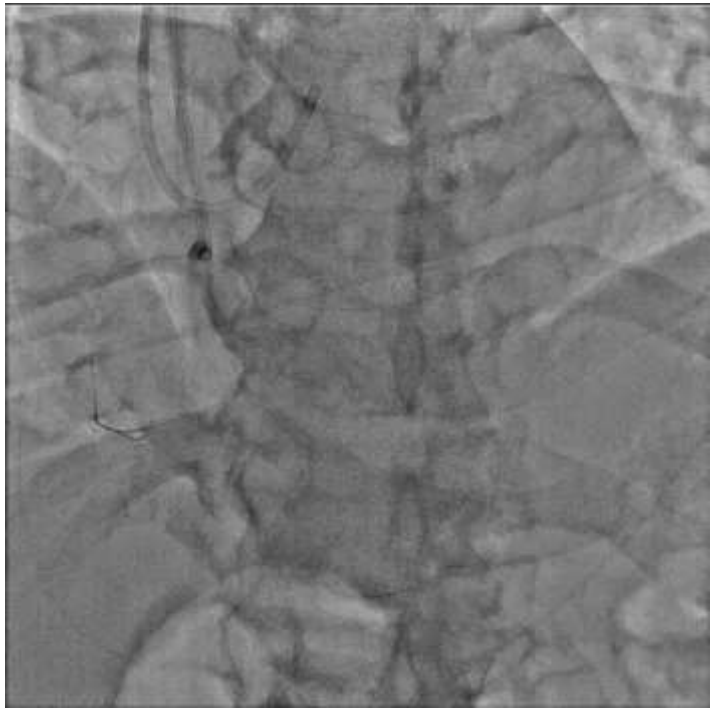
Ad Hoc trial of the CTO antegrade :



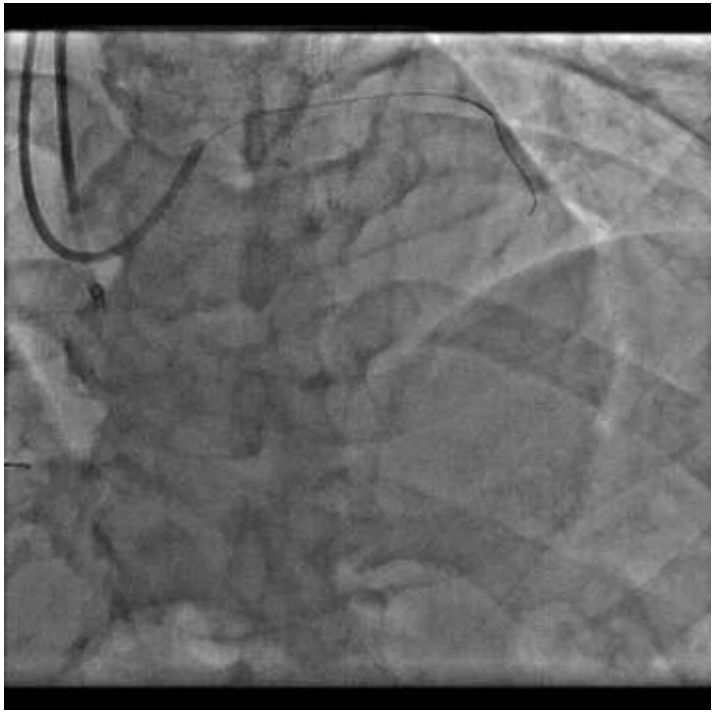
Escalation to Hornet 14, always subintimal

Stop the procedure and retry in better conditions with maybe ADR or Retrograde approaches.

2nd Trial with dual injection :

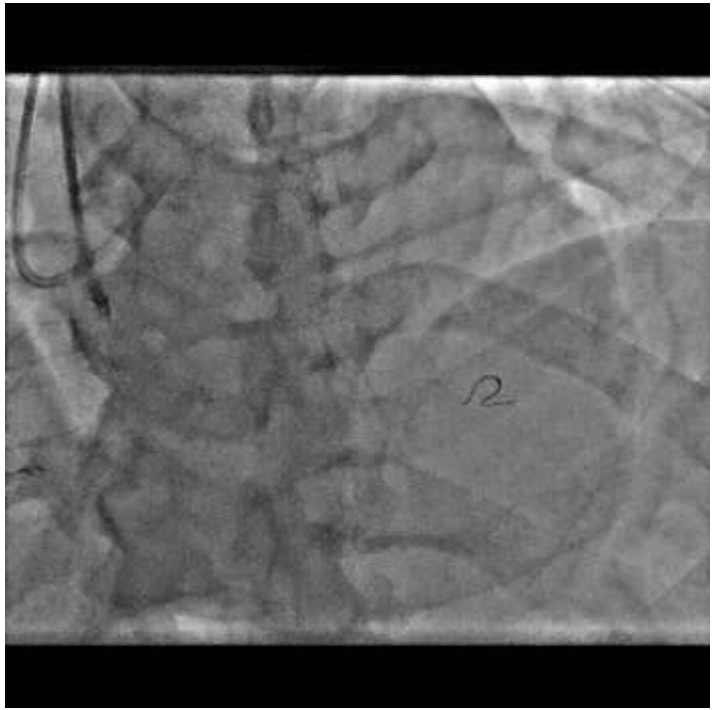


Dual injection shows short CTO lesion but unable to cross with antegrade approach

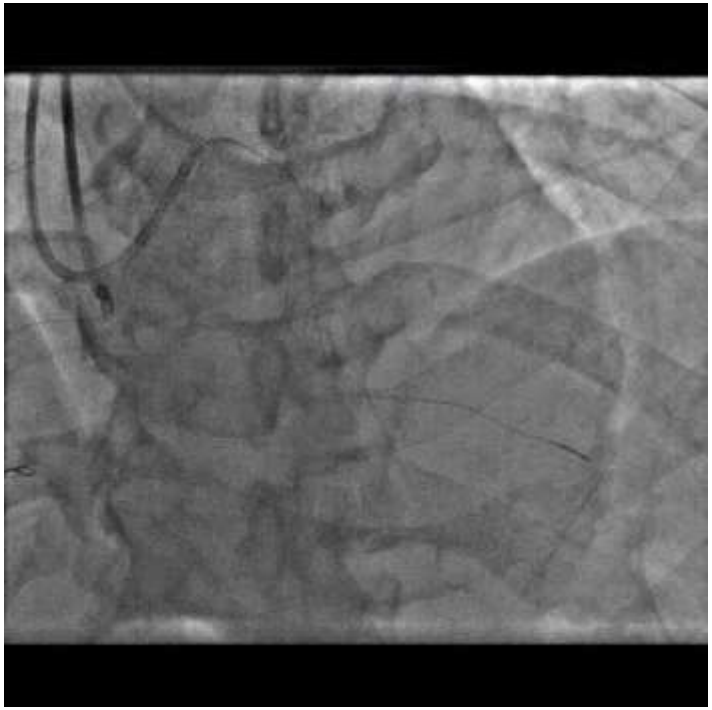


Dual injection shows an important RCA branches and very good epicardial collaterals from the diagonal to the PDA

Retrograde approach via the epicardial collateral:

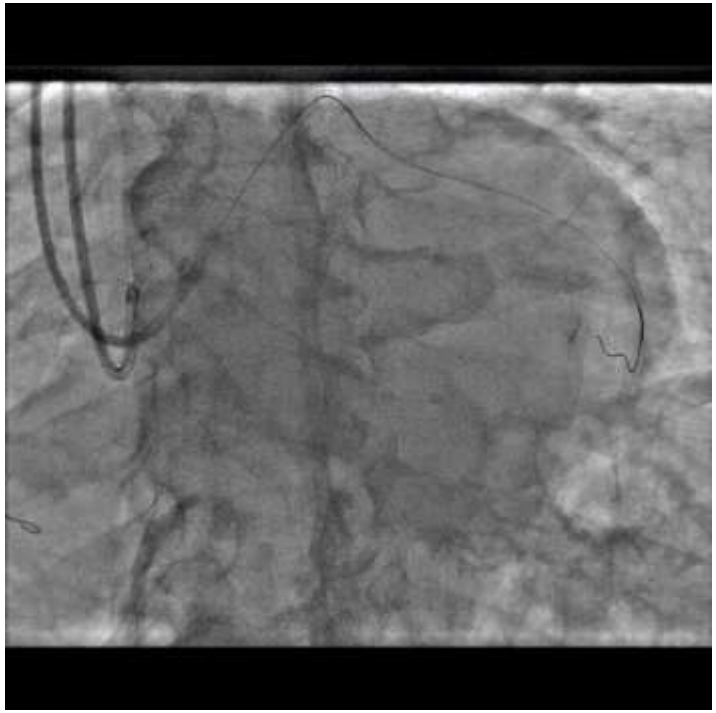


Unlooping the first loop using Sion Black wire and Turnpike LP 150 cm

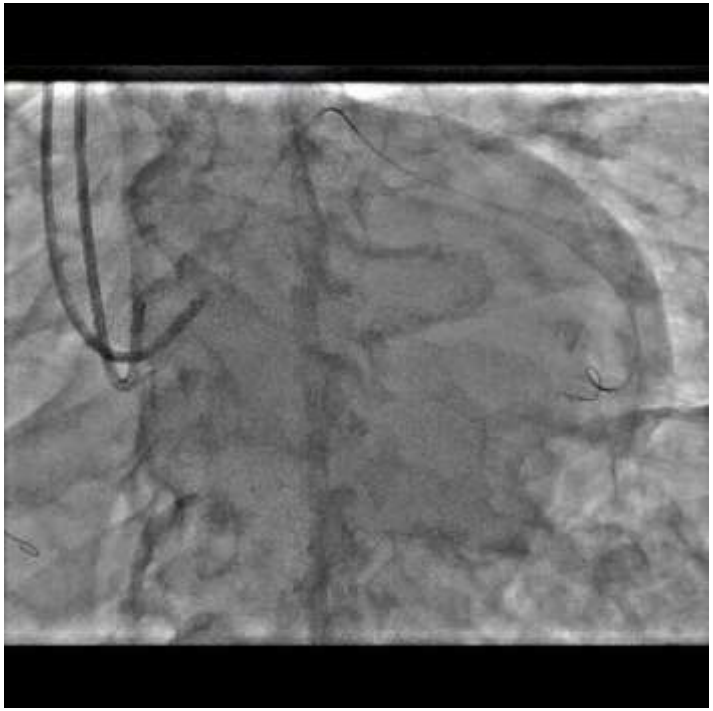


Microcatheter Tip Injection shows more Loops

Retrograde approach via the epicardial collateral:



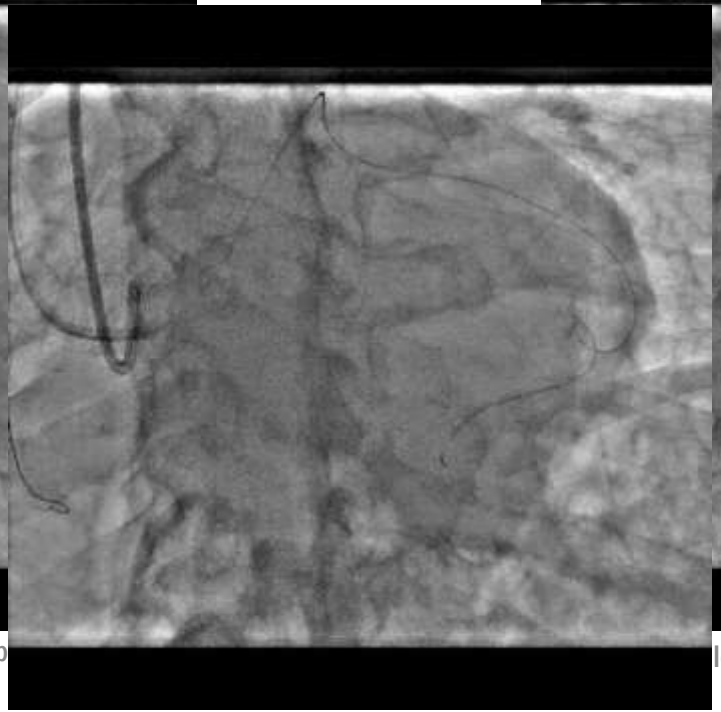
Injection before trial of unlooping by Sion Black



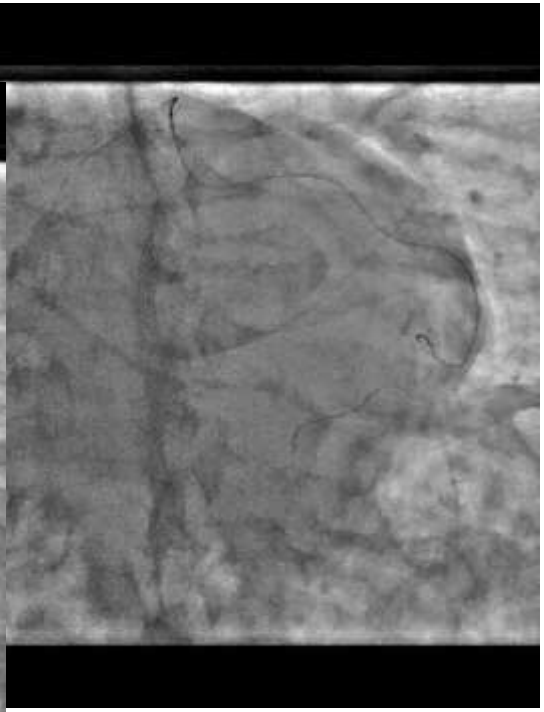
Failure to Unloop the second loop with the Sion Black

Retrograde approach via the epicardial collateral:

Tip Injection in the Turnpike LP before the Loop loop

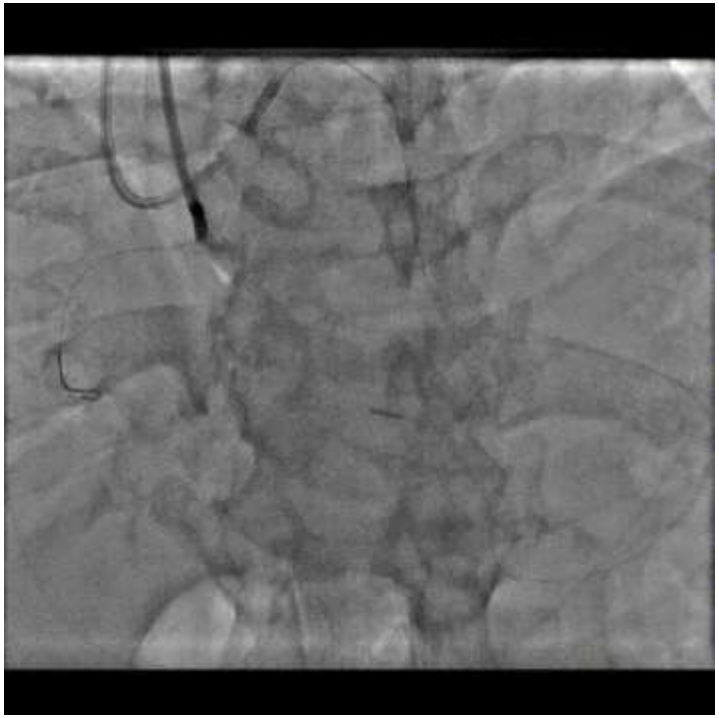


Unlooping by advancing the Turnpike LP on the Suoh 03



loop with a SUOH 03

Retrograde approach via the epicardial collateral:



Dual injection with Tip injection from the Retrograde MC

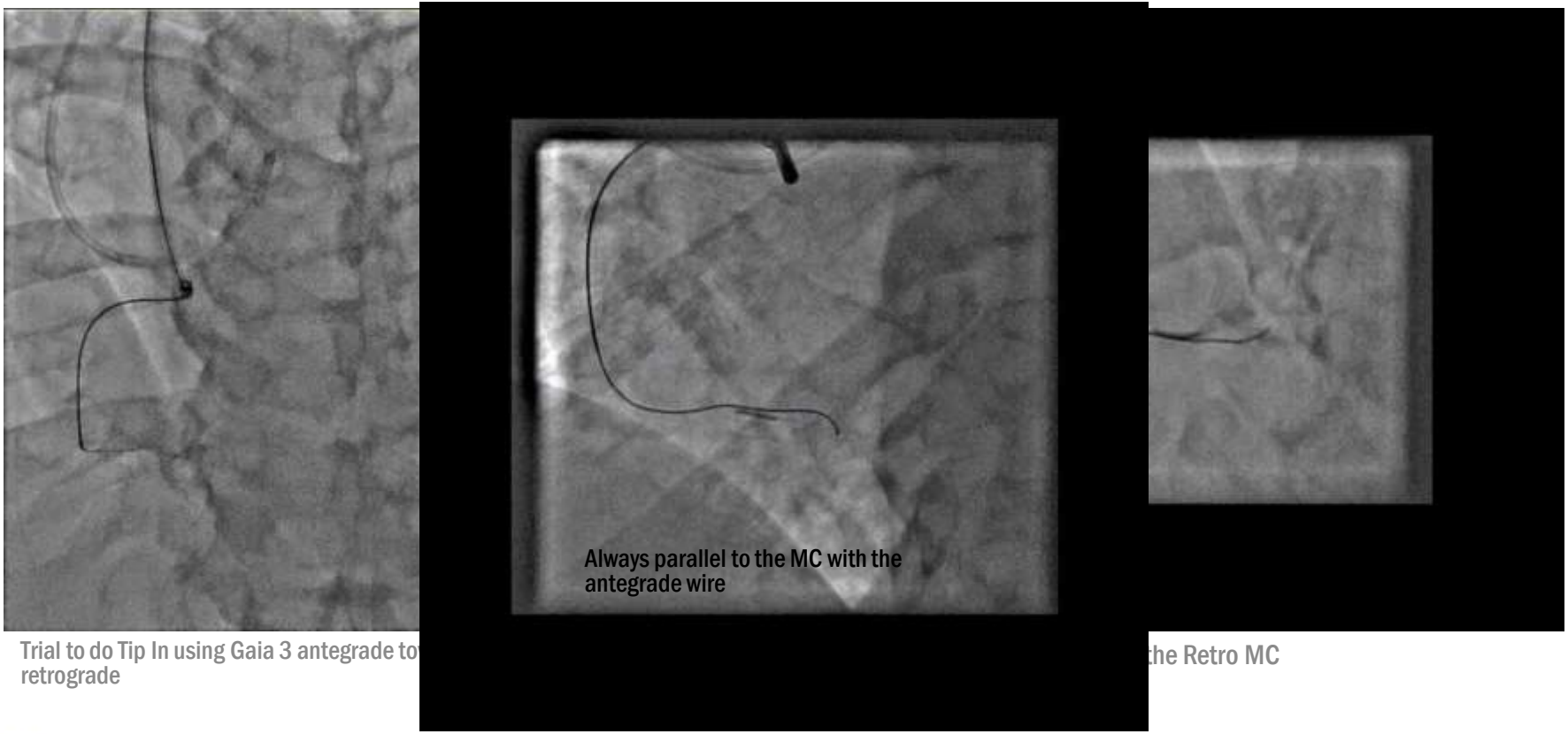
Gaia 3 Retrograde Does not cross the lesion

Retrograde approach via the epicardial collateral:

Crossing the lesion with Confianza Pro 12

Unable to navigate with the Confianza across the RCA and no more length in the MC to cross the lesion

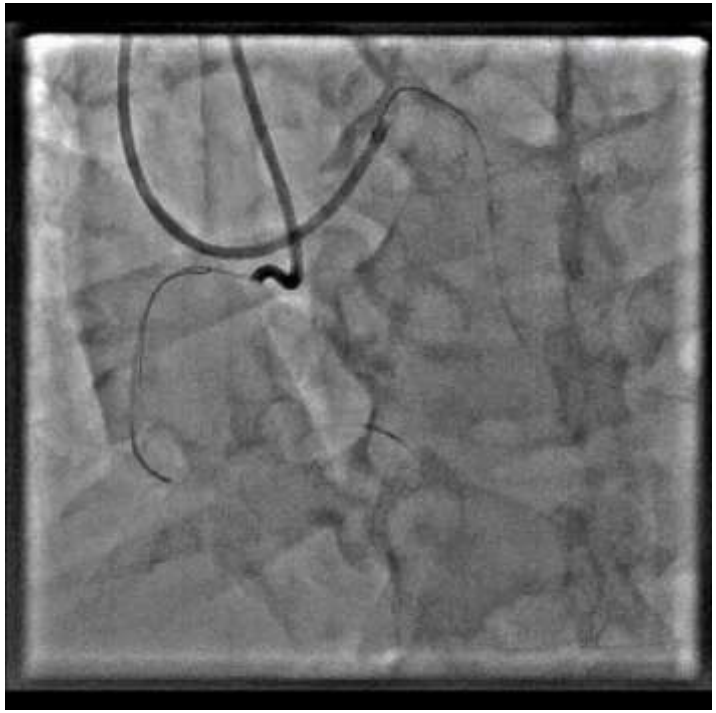
Retrograde approach via the epicardial collateral:



Trial to do Tip In using Gaia 3 antegrade to
retrograde

the Retro MC

Retrograde approach via the epicardial collateral:

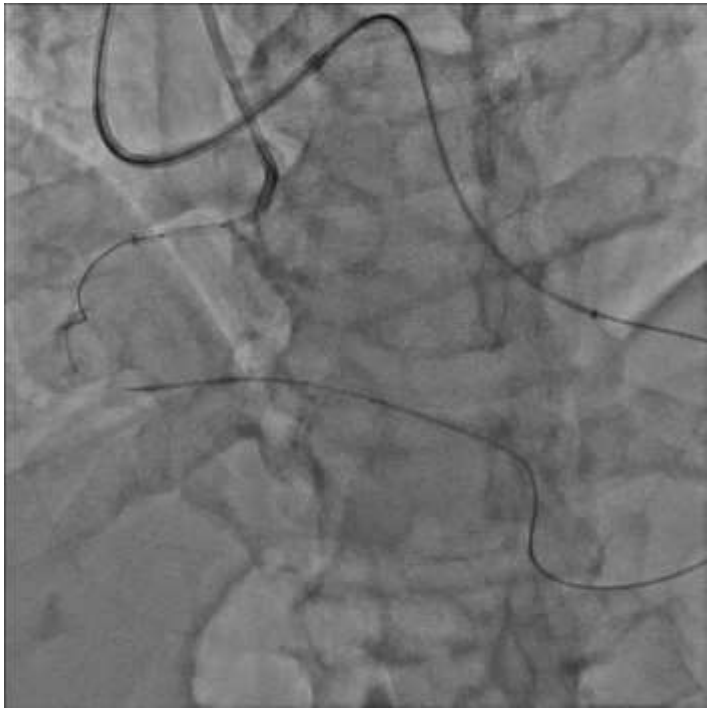


After creating multiple channels with the Confianza Pro, a Gladius Ex succeed to navigate across the lesion and get to the proximale RCA

Advancing Guiding extension catheter antegrade and Tip In with the Gladius Ex Retrograde

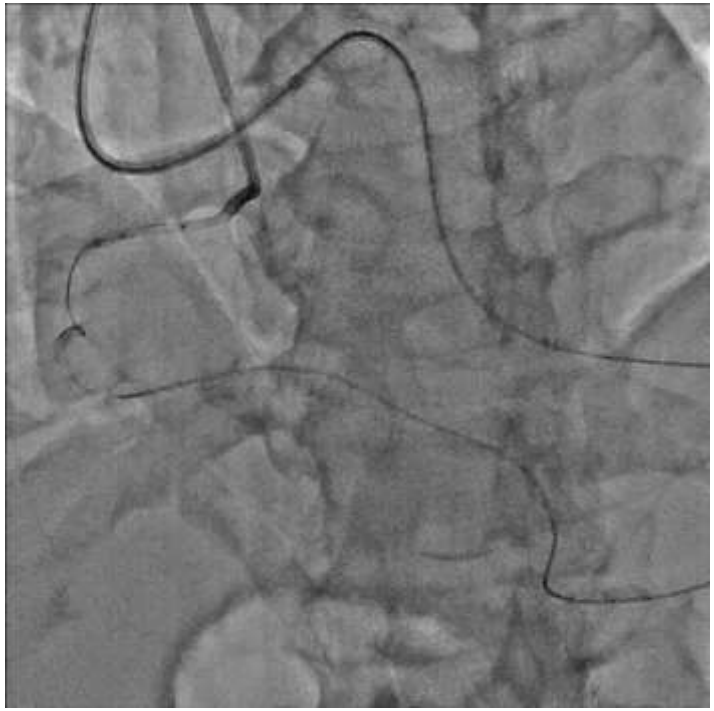
Retrograde approach via the epicardial collateral:

Anchoring the Rterograde Wire with a Balloon of 2,5 mm advanced antegrade

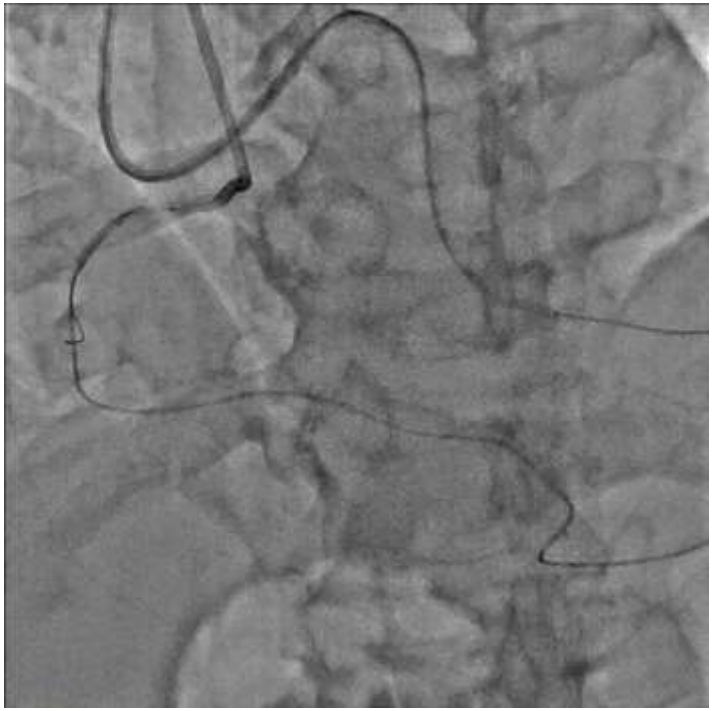


Optimization of the support by advancing a Guiding Extension catheter retrograde into the Diagonal artery toward the epicardic collateral and a new MC with more support CORSAIR Pro, but failure to advance the MC retrograde across the lesion

Retrograde approach via the epicardial collateral:

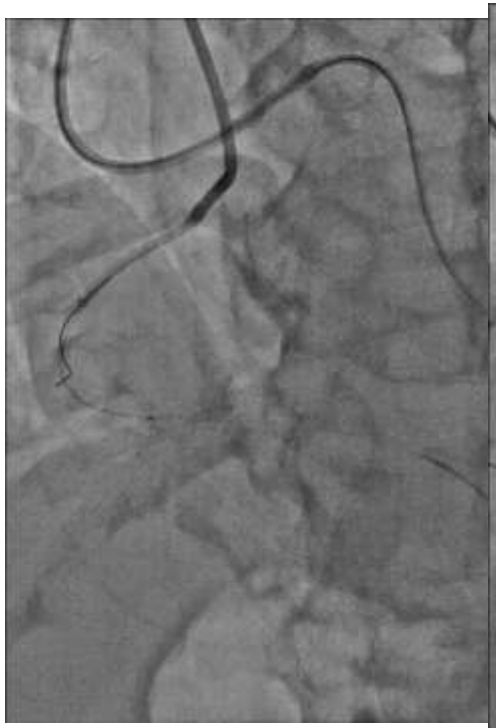


Removing of the Y connector at the Guiding catheter to have 4-5 cm more length and anti clockwise rotation of the Corsair Pro, then success to cross the lesion

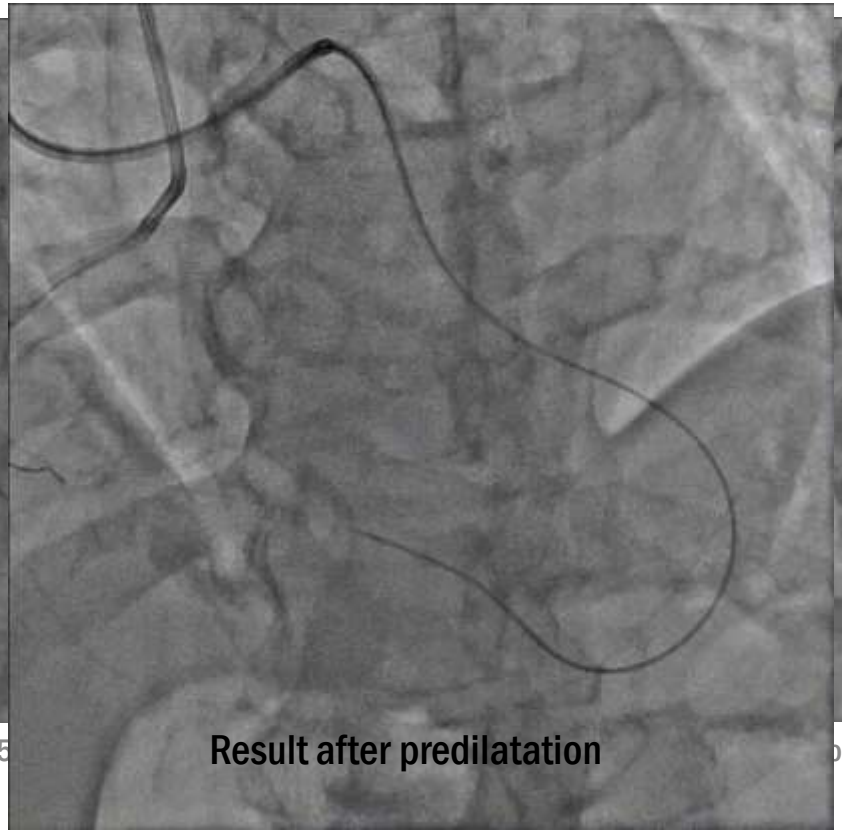


Advancing the Corsair Pro into the Guidezilla and externalization with RG3 300 cm

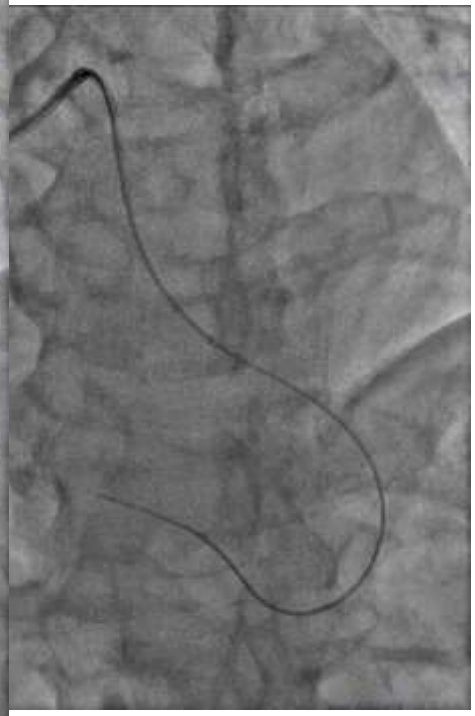
Retrograde approach via the epicardial collateral:



Prediltataion with compliant balloon 1x5

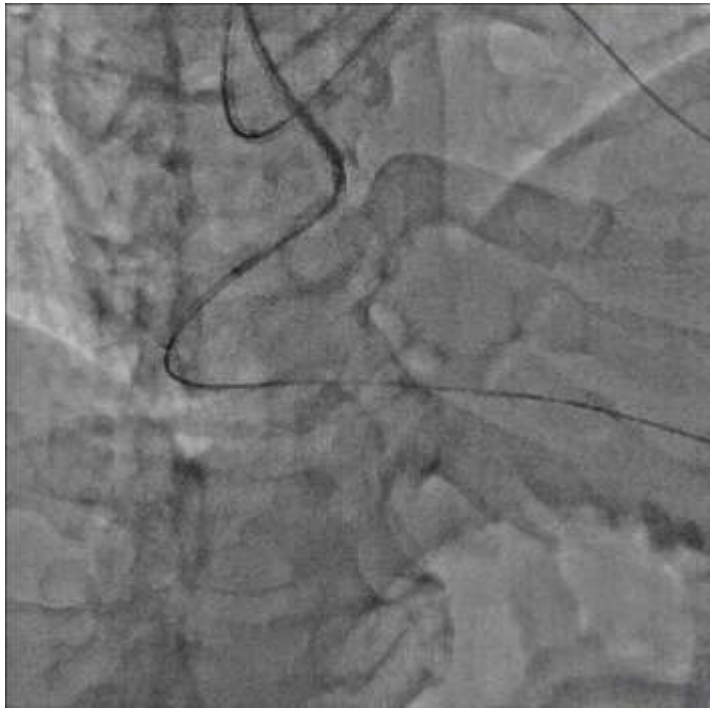


Result after predilatation



ompliant balloon 2x12 mm

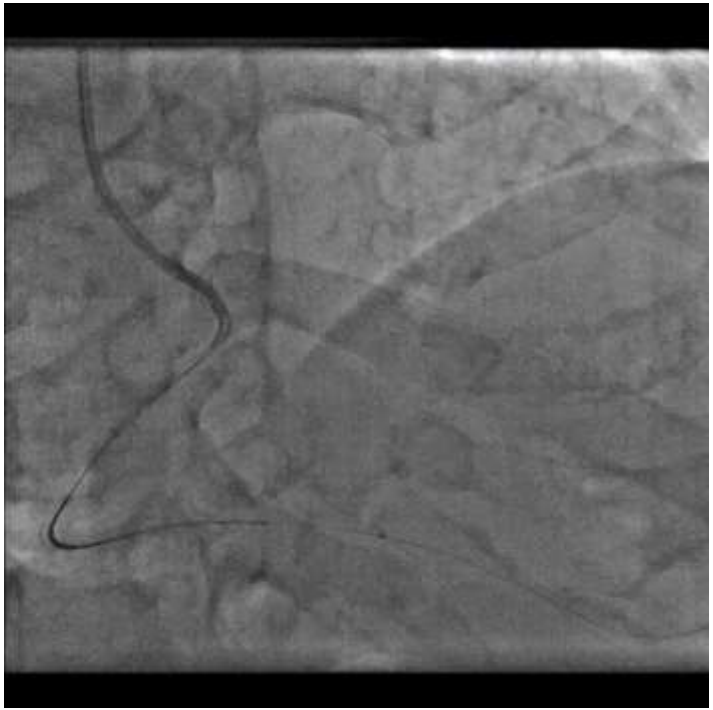
Retrograde approach via the epicardial collateral:



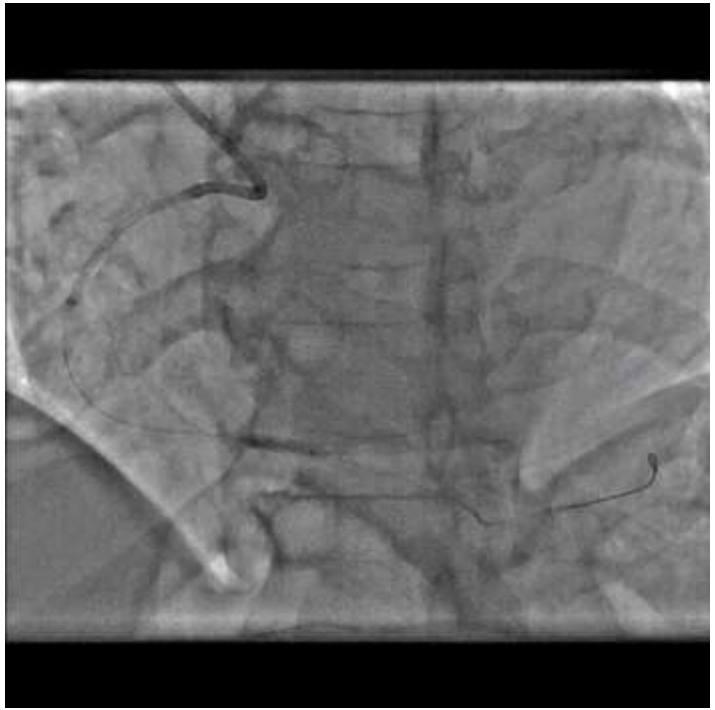
Dual protection of the epicardial trajectory with 2 MC antegrade and retrograde and retrieval of the retrograde wire

Advancing a workhorse wire in the antegrade MC and controle of the epicardial collateral by retrograde injection

IVUS and Angioplasty :

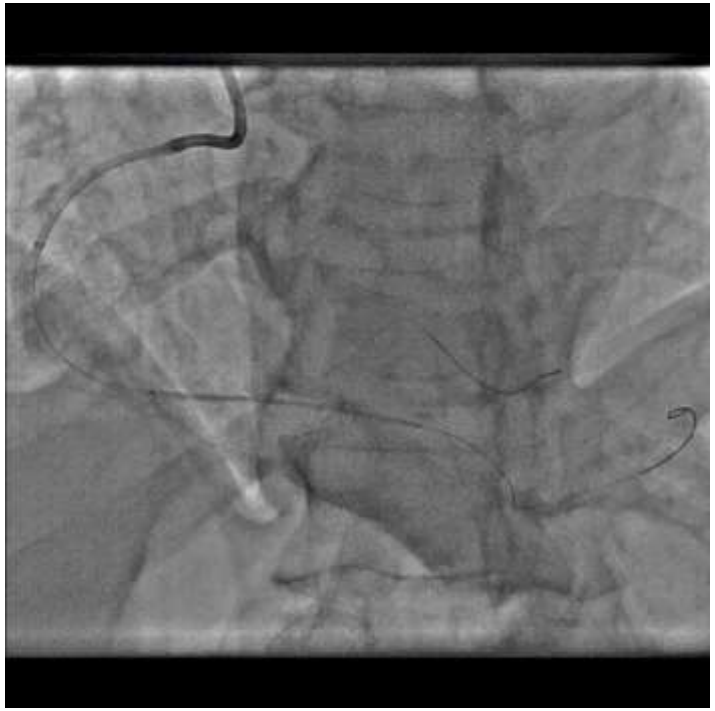


IVUS control

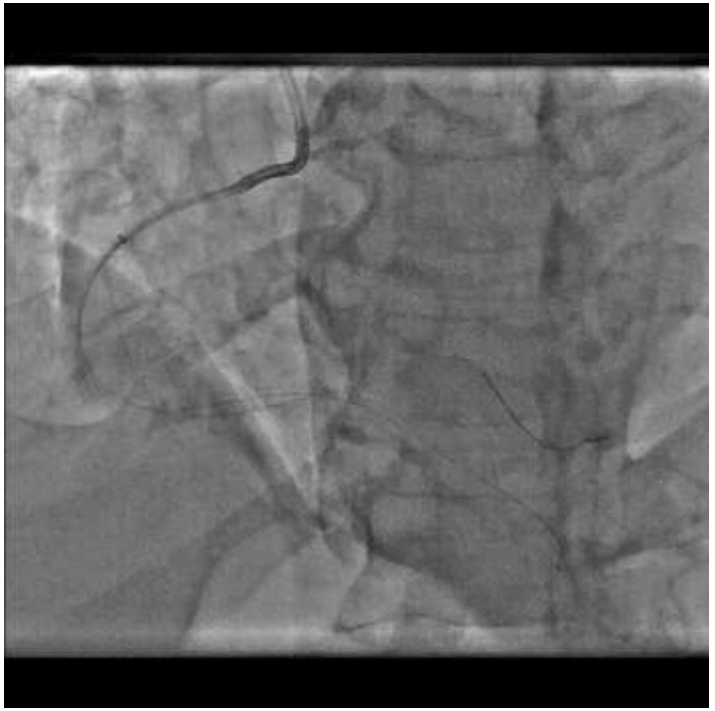


Predilatation of all the segments according to the IVUS measurements

IVUS and Angioplasty :

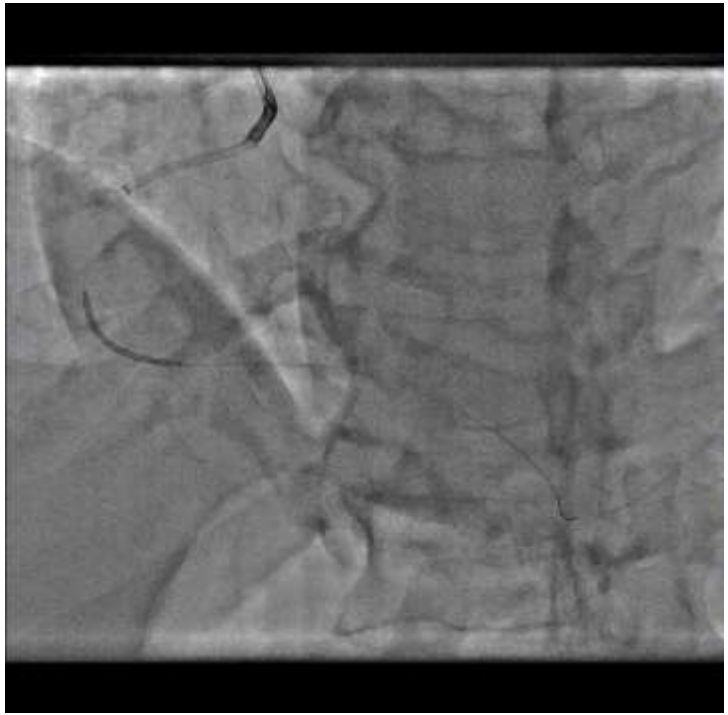


Wiring the PLA and stenting the distal RCA toward the PDA with DES 3,5x48 mm according to the IVUS measurements

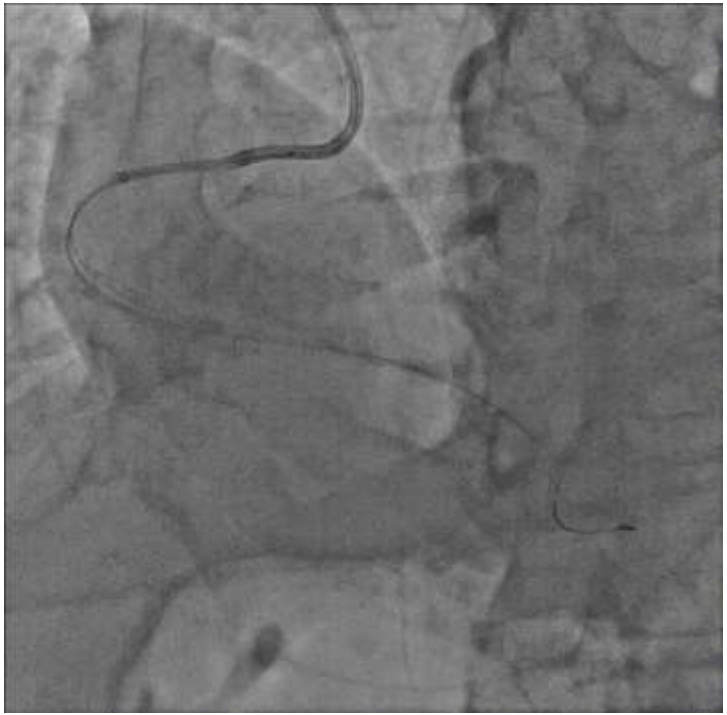


Control post stenting and competitive flow in the distal PDA

IVUS and Angioplasty :

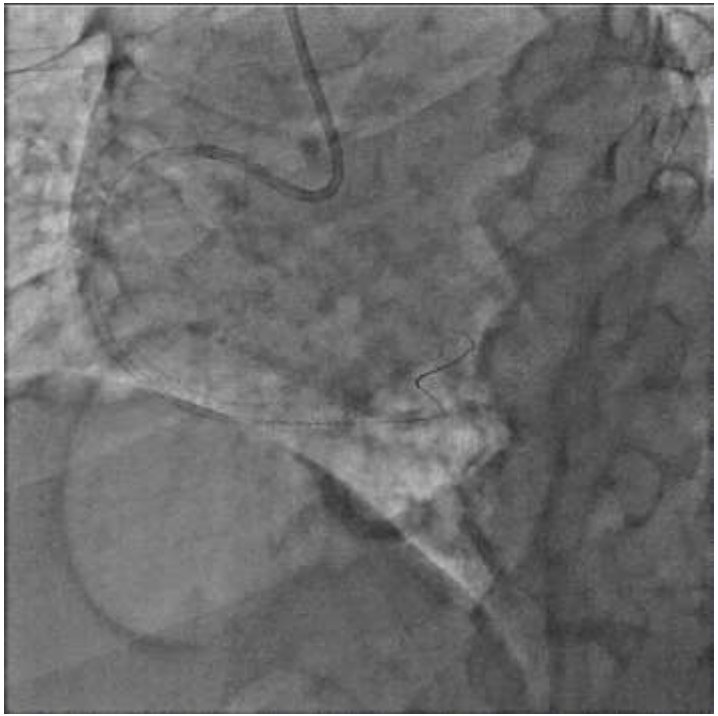


Stenting the Mid RCA



Final IVUS control

Final Result :



Final Angiographic Result

THANK YOU