Stick and Swap by using a dual lumen microcatheter

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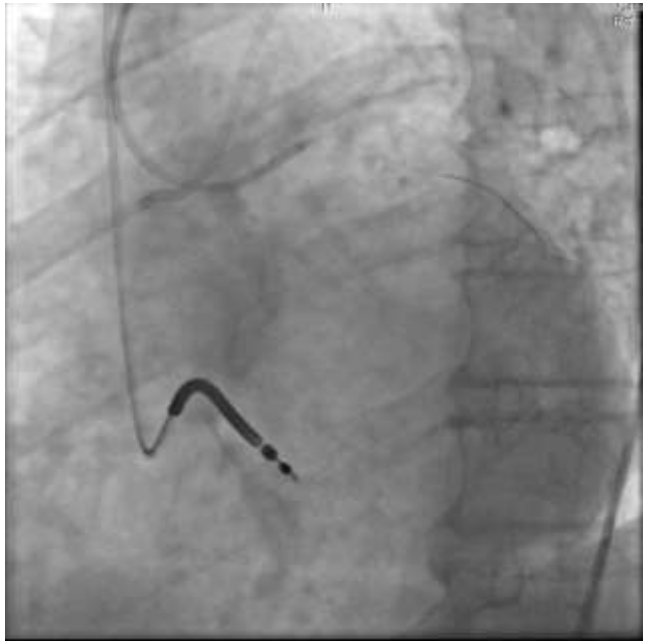
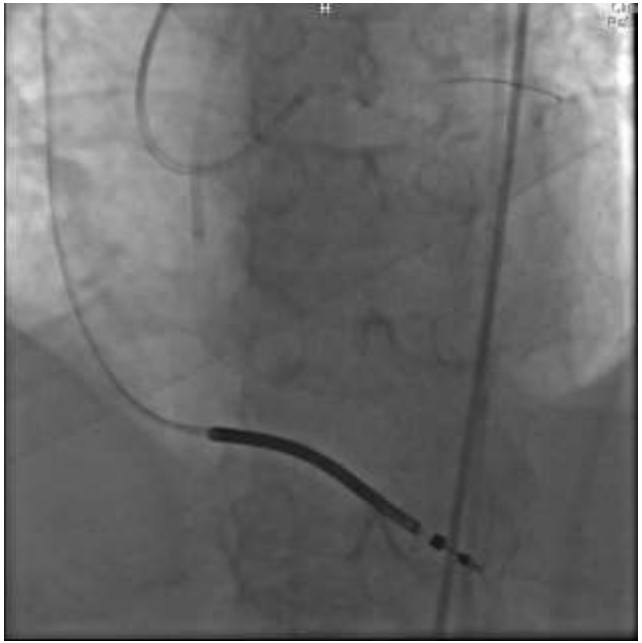
Case presentation

- 63-years old gentlman without history of heart disease
- Presented after reanimation due to ventricular fibrillation, it was defibrilated and ROSC was obtained
- The coronary angiography demonstrated a coronary 1-vessel disease with CTO of the RCA (collaterals, no ST segment elevation)
- Echocardiography showed a preserved LVEF with a posterior hypokinesia, an ategrade recanalization attempt has failed
- Patient was successfully extubated a few days later, an ICD was implanted as secondary prophylaxis and the patient was discharged
- Two months later the patient came back with chest pain CCS III despite medical therapy
- After discussion with the patient and our team a decision was taken to perform a retry of the RCA-CTO PCI

Dual Injection



LAO



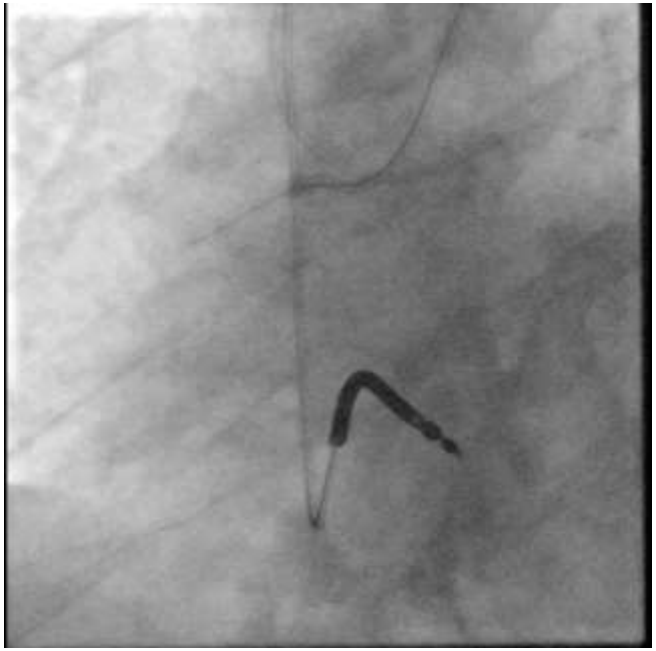
Cranial view

Plan

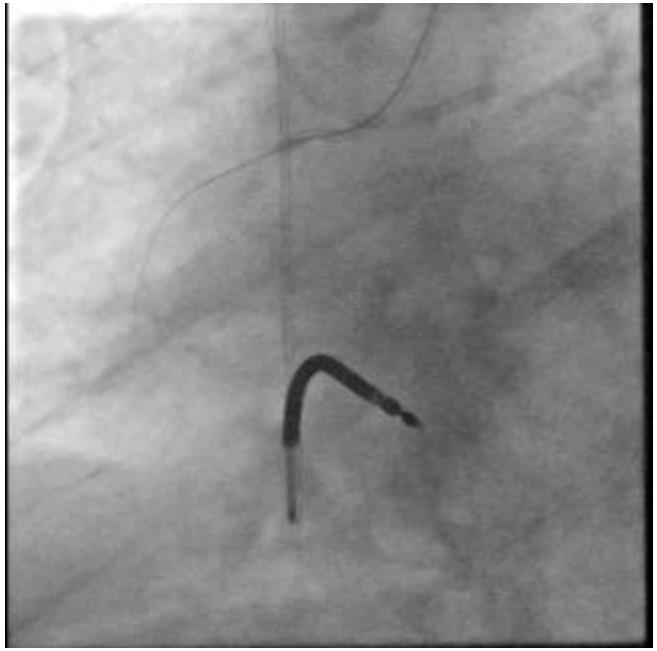
- Tapered proximal cap
- Length > 30 mm
- Distal vessel: good quality with a clear landing zone
- Collaterals: septals
- No severe calcifications
- Retry
  → J-CTO score of 2

- Strategy: dual femoral access, 6F, EBU 3,0 and AL 0,75
- Antegrade wire escalation, parallel wiring
- Retrograde approach
- Antegrade dissection reentry

Antegrade Wire Escalation

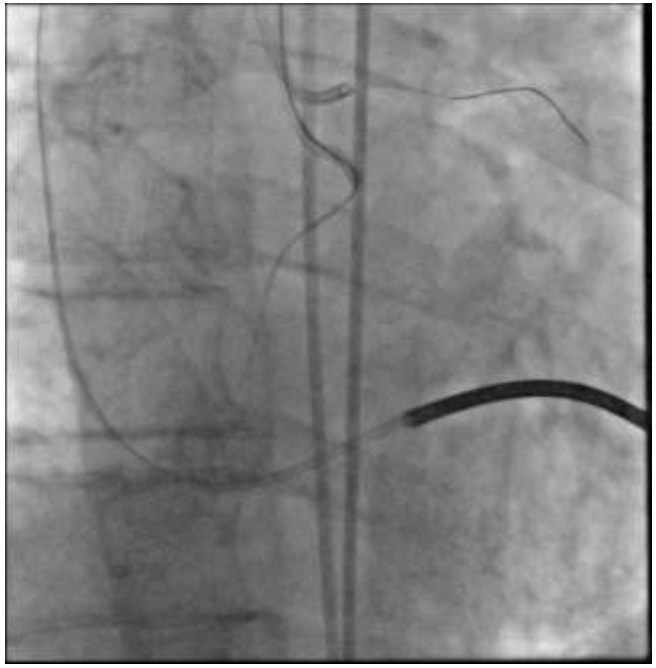


FineCross MC, Fielder XT made some progress

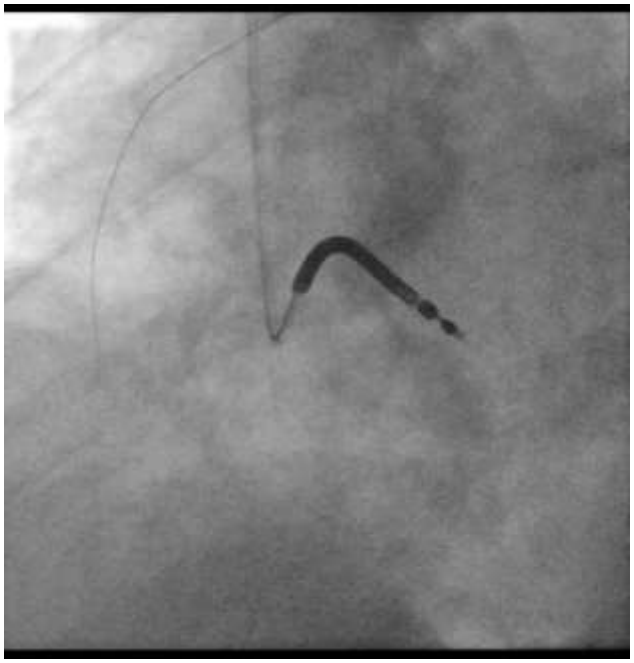


But was not in the true lumen

Escalation with Gaia III



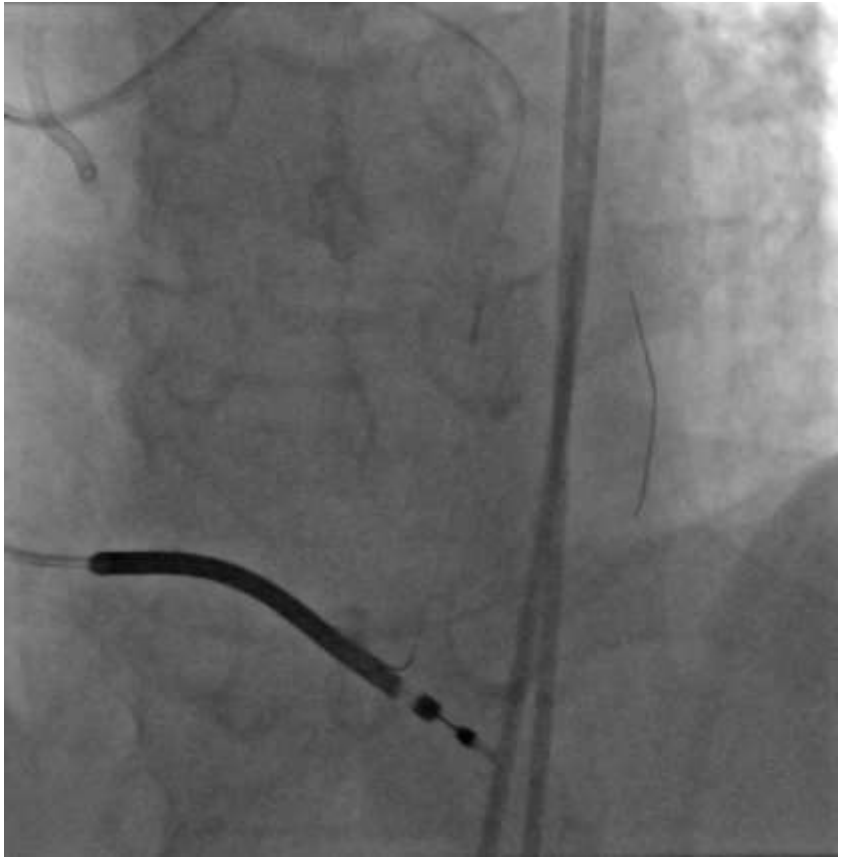
Wire still not in the true lumen



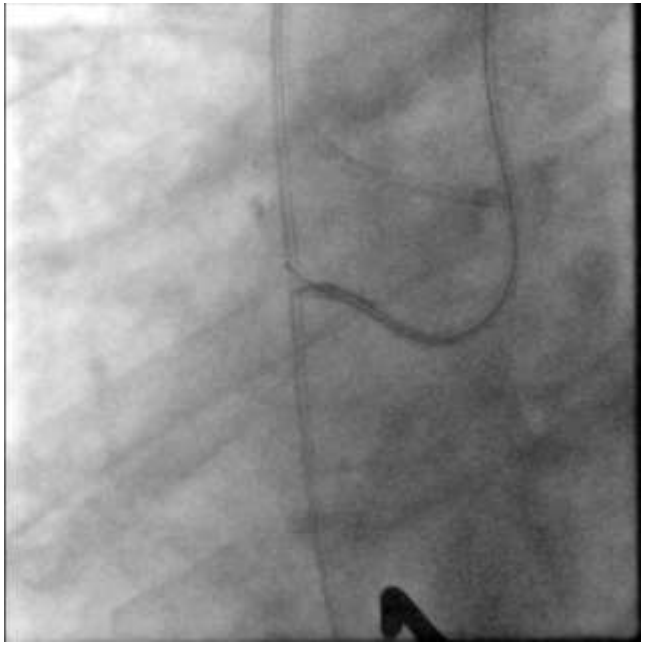
Wire didn’t dance with the vessel

Retrograde Approach

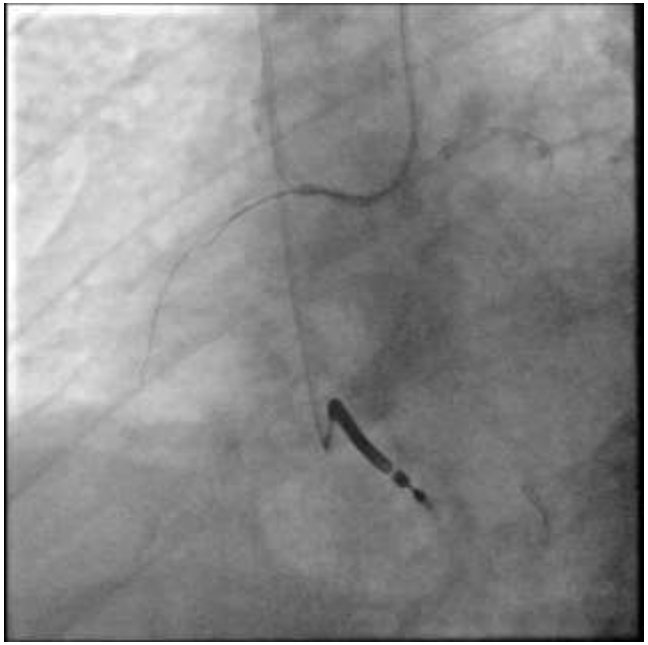
Sion Blue
Caravel microcatheter
After multiple attempts and surfing in 3 septals, the wire couldn‘t be advanced down to the PDA



Parallel Wiring failed



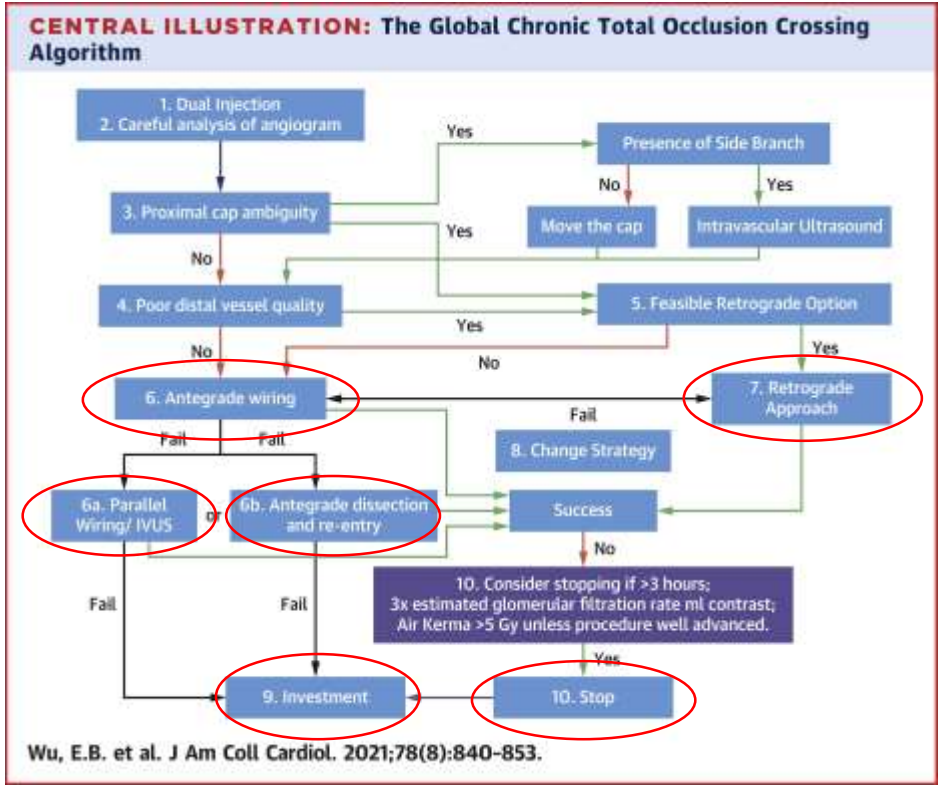
Anchoring technique for more support



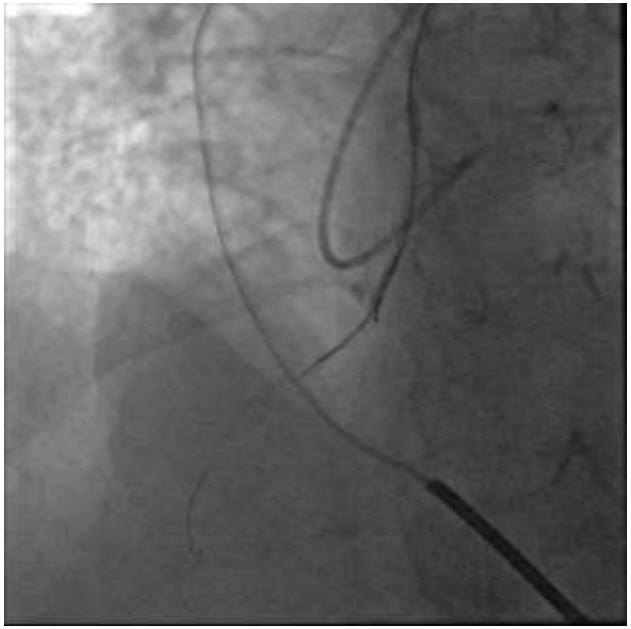
Tried a parallel wiring using Gaia III but it failed as well

What to do next?

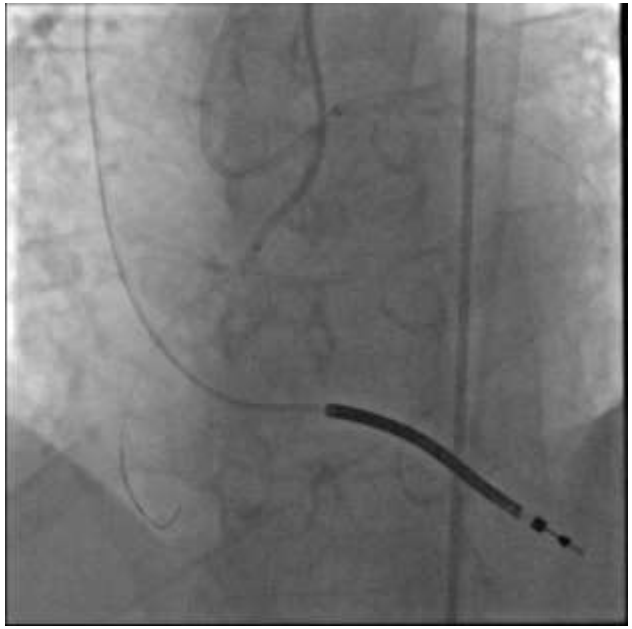
- Advance a knuckle wire and try to do reentry with Stingray balloon
- Retrograde approach was compromised due to injury of septal collaterals
- Or try a reentry using a dual lumen microcatheter
- Consider Investment procedure
- Stop



Antegrade Dissection Reentry

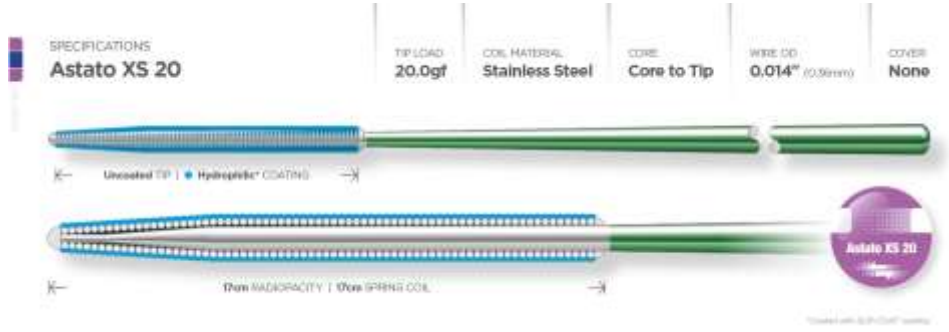


Gladius mongo wire advanced subintimally to the distal cap

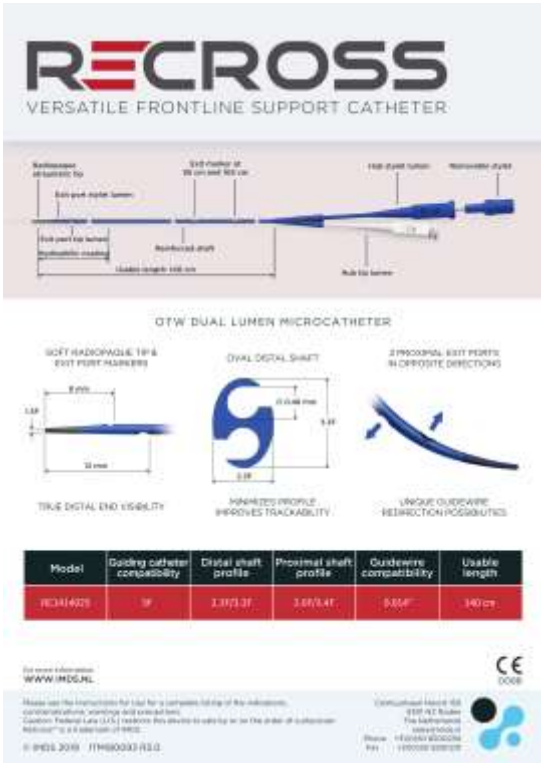


FineCross MC followed, reentry with Gaia III failed

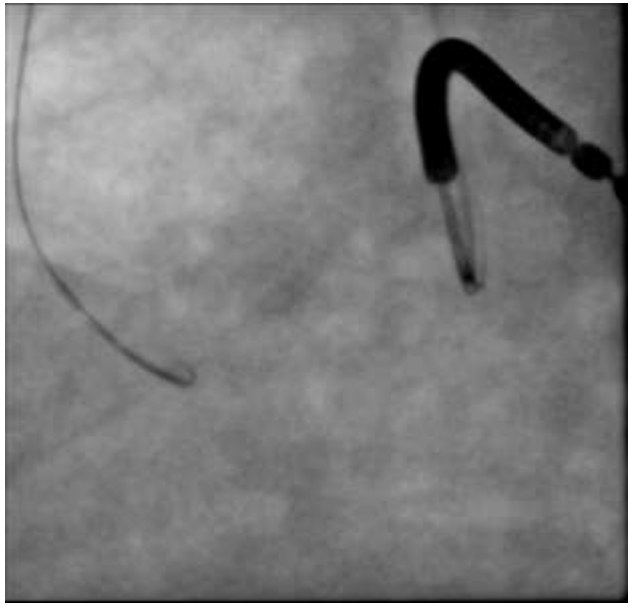
ReCross dual lumen microcatheter



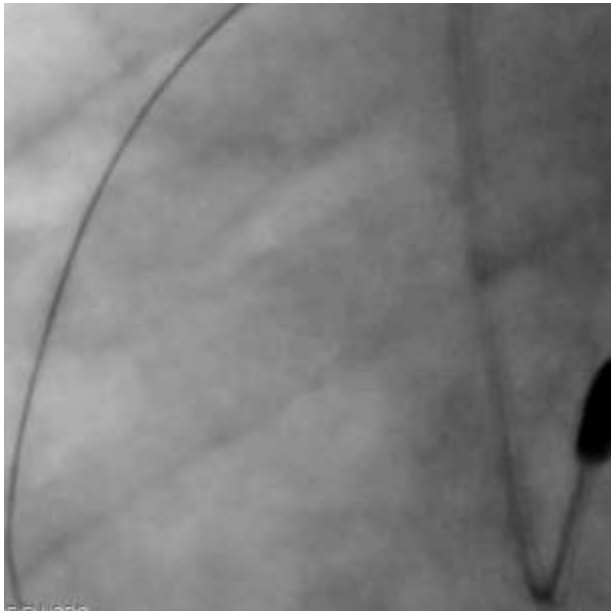
Astato XS 20 stiff wire



Reentry using the ReCross dual lumen microcatheter

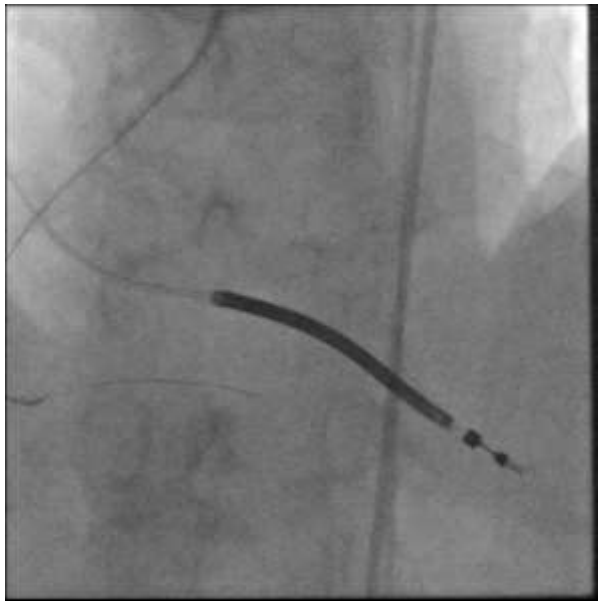


The ReCross was advanced to the distal cap through the Gladius mongo wire

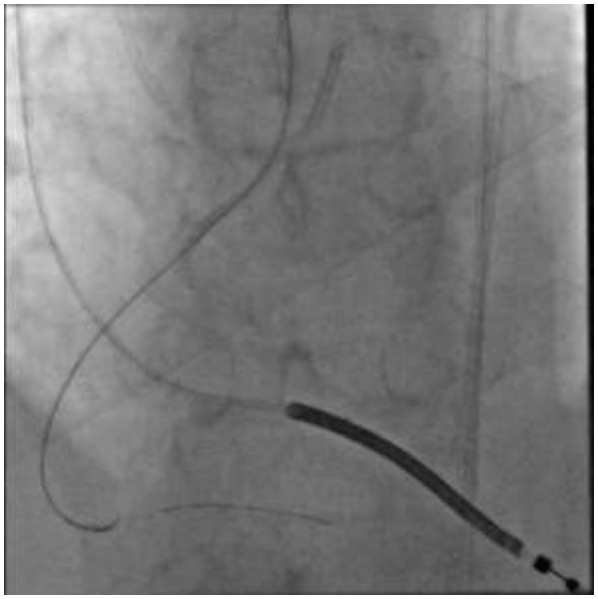


A puncture of the true lumen using Astato XS 20 wire with two bends (Stick) was performed

Pilot 200 in the true lumen (Swap)

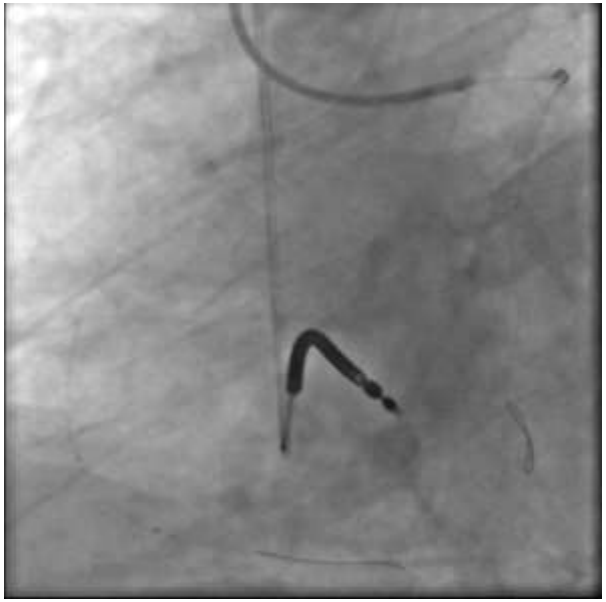


A long Pilot 200 was successfully advanced to the distal true lumen

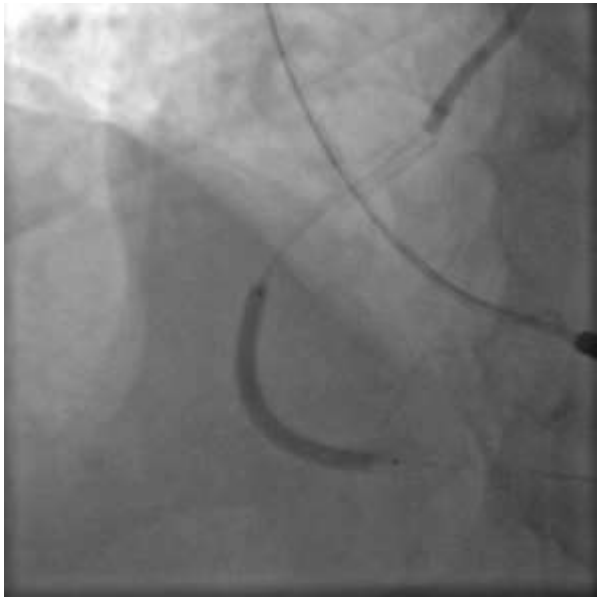


Retrograde injection confirmed that the wire was in the true lumen

Predilation and Stenting

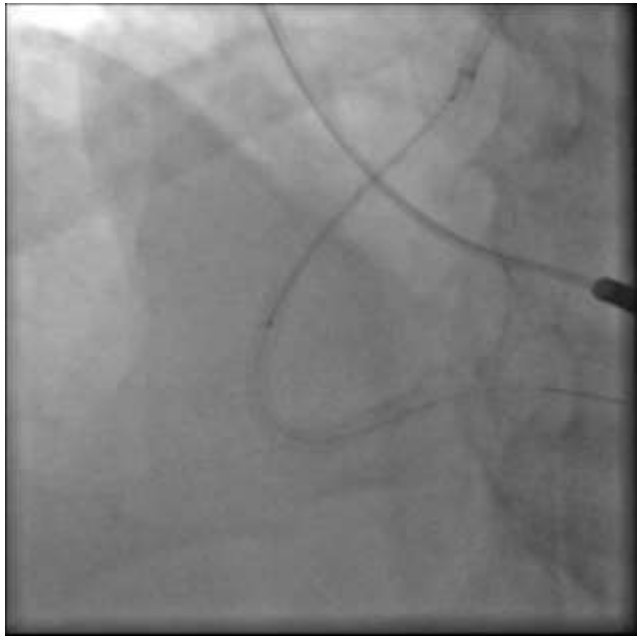


Predilation

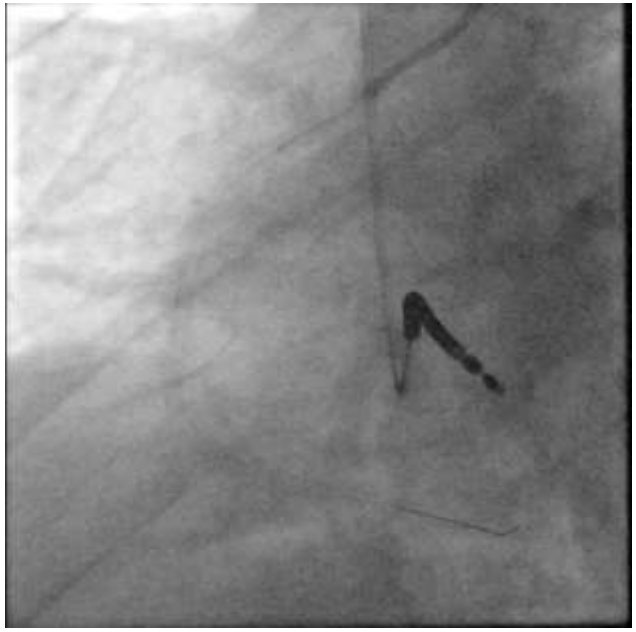


Stenting distal RCA (Synergy 2,5/48 mm)

Stenting of the mid and proximal RCA

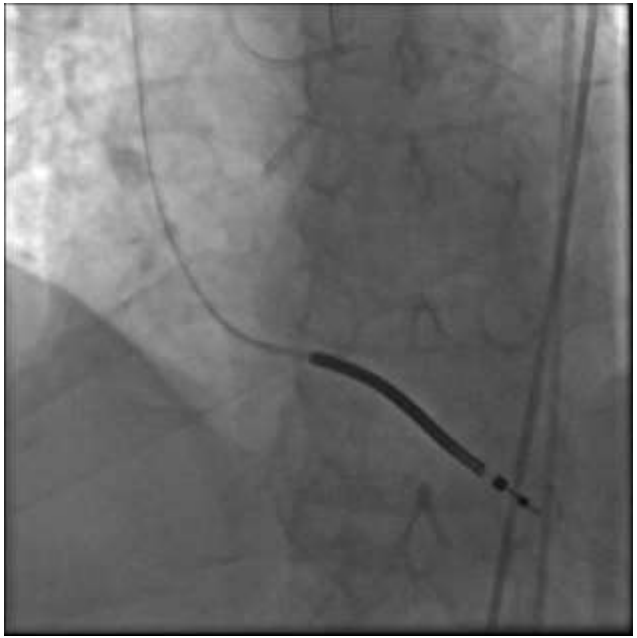


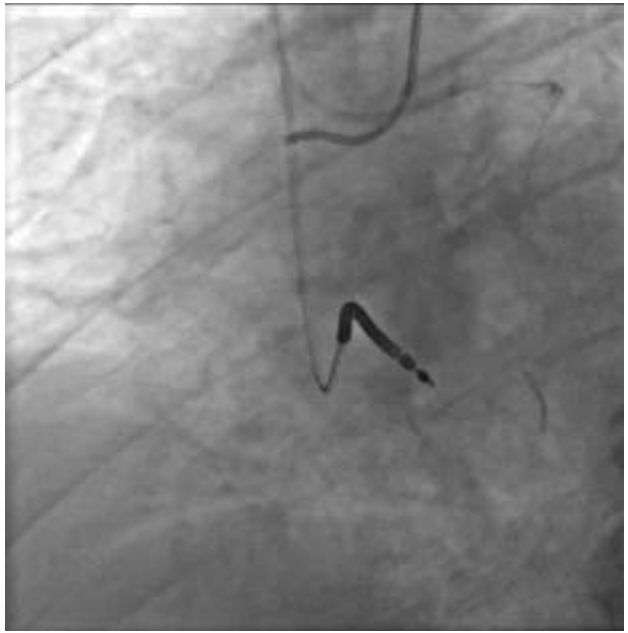
Stenting mid RCA (Coroflex 2,75/38 mm)



Stenting distal RCA (Coroflex 3,0/12 mm)

Final result





TIMI III Flow

Conlusions

- The ReCross dual lumen microcatheter is e a new tool for reentry in CTO-PCI
- ADR using a dual lumen microcatheter is an alternative option if one has no experience with the Stingray balloon or if it is not available in the cathlab
- Having a hybrid CTO crossing algorithm is very important to achieve a CTO-PCI
- Consider ADR after AWE and if no interventional collaterals
- Be able to change the strategy if the other strategy doesn’t work
- Don’t giva up

Thank you for your attention