

IPS/CTO LIVE 2012

Challenging Case Competition with Lunch VI

January 7, 2012

Retrograde wiring into outside of stent provided successful antegrade wiring in PCI for tortuous in-stent occlusion

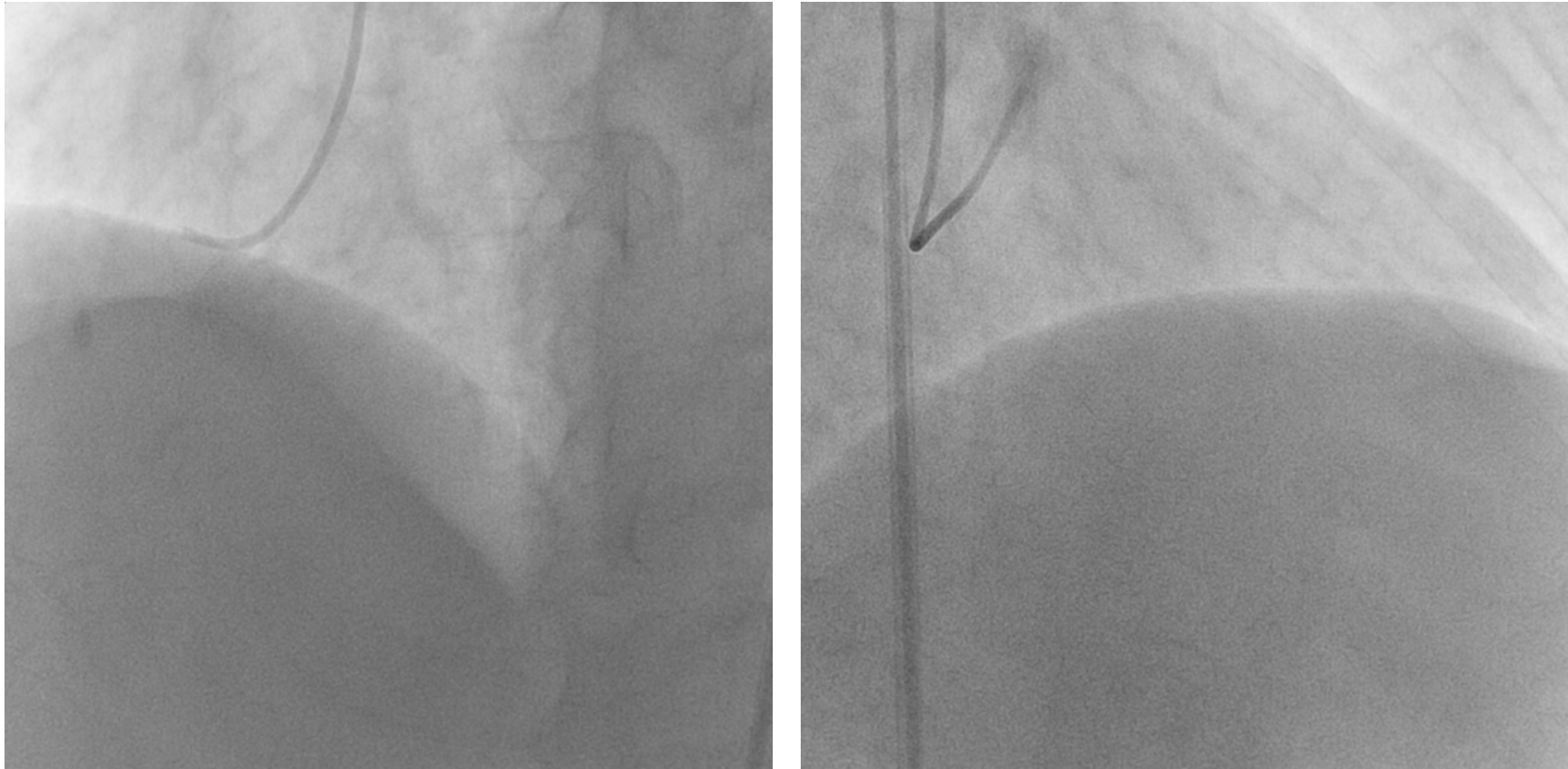
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Case presentation

- 55y/o Male
- Clinical diagnosis: oMI
- Clinical course
 - 2011 Jan PCI was underwent due to AMI
2 Endeavor stents were implanted for RCA
 - 2011 Aug Scheduled CAG was performed.
CAG showed in-stent occlusion.
PCI for ISR was attempted
- Coronary risk factor: Hypertension, Dyslipidemia

Baseline CAG@AMI



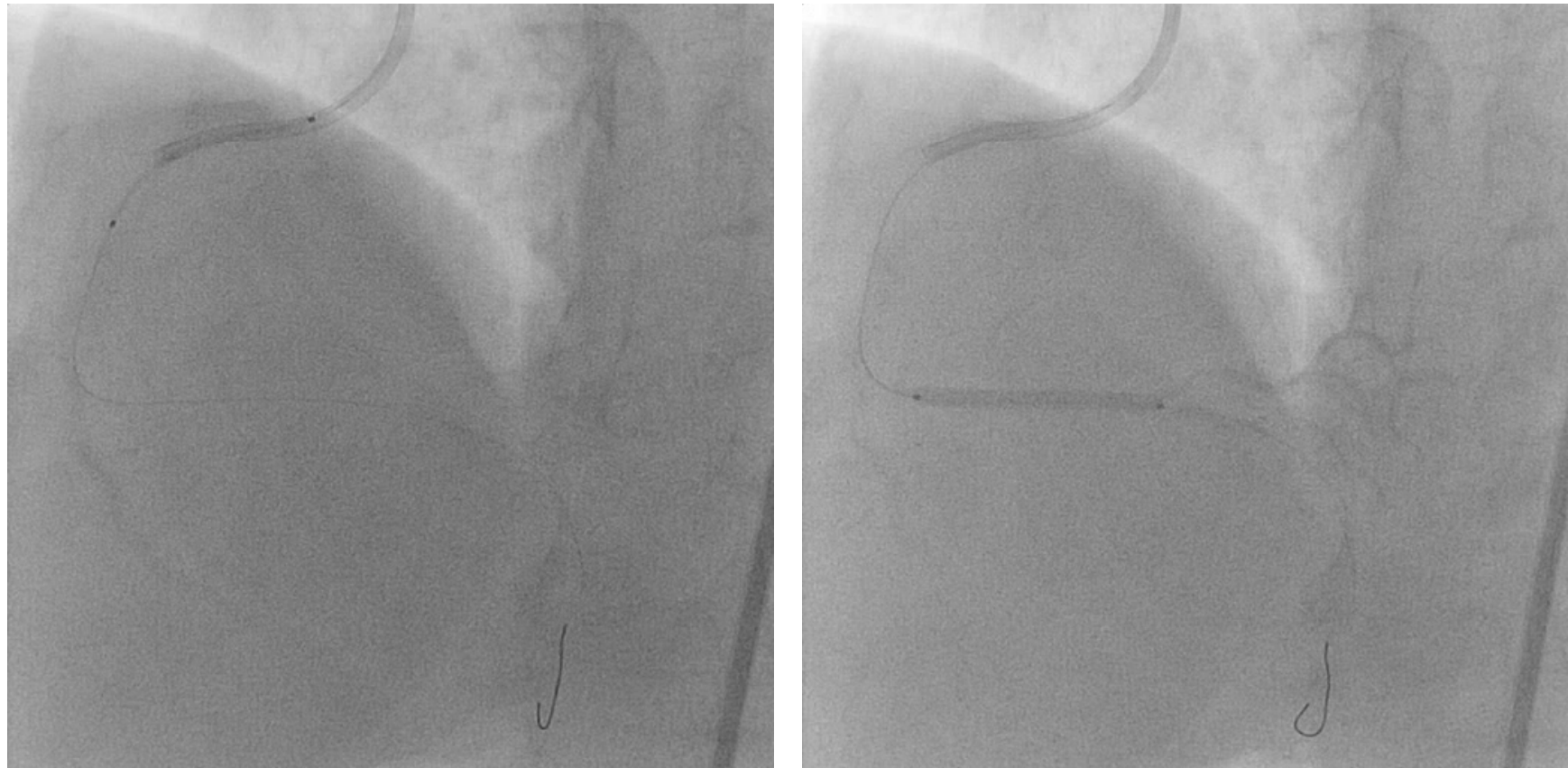
Baseline CAG showed occlusion at RCA. LCA had no significant stenosis

Aspiration therapy @ AMI



Aspiration with ThrombusterIII was performed. After aspiration, CAG showed residual stenosis at mid RCA and distal RCA.

Stenting at distal site of RCA



A Endeavor 3.0*30mm was implanted at distal RCA.

Stenting at proximal site of RCA



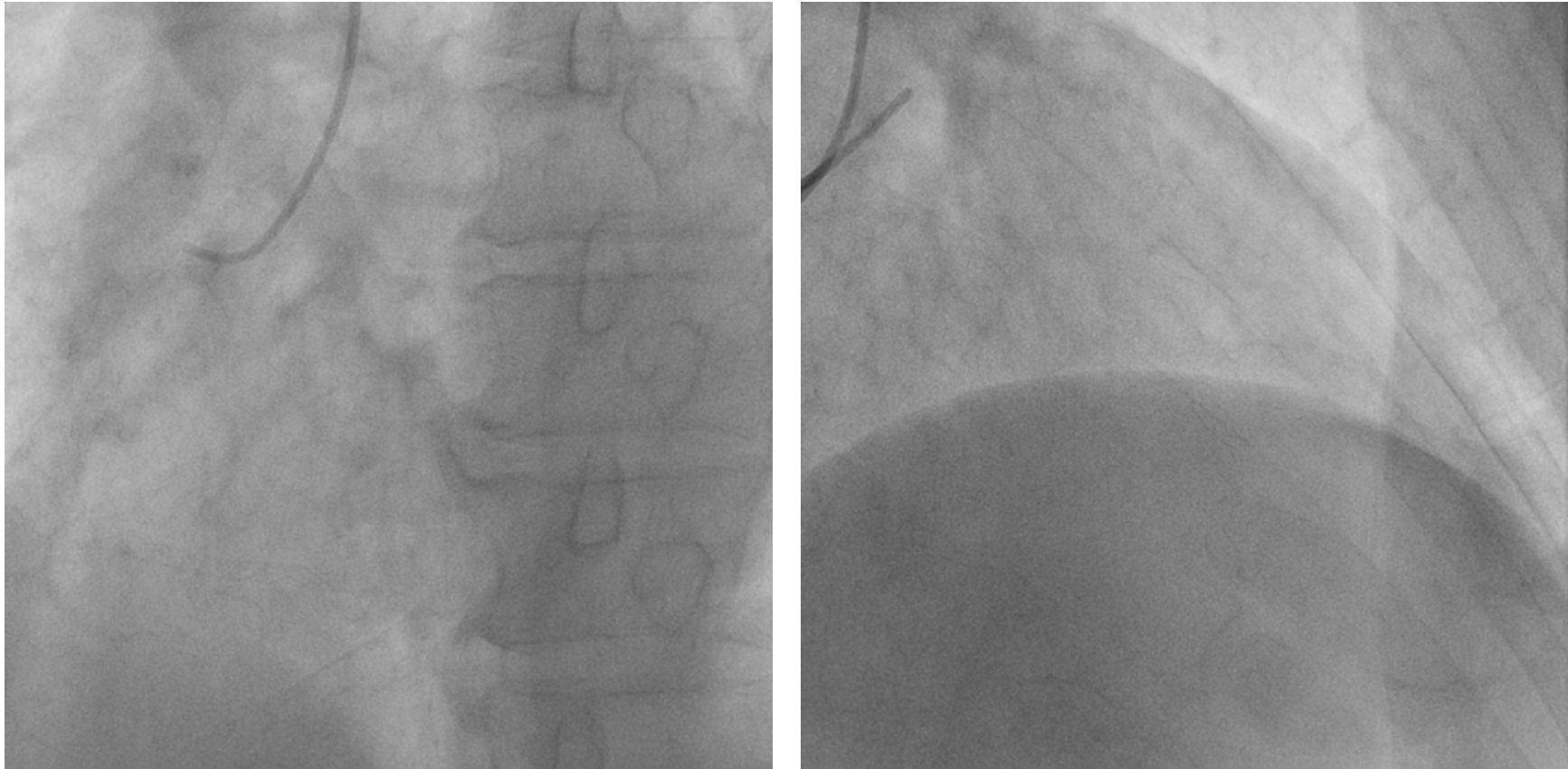
Another Endeavor 3.0*30mm was implanted at mid RCA.

Final CAG @ AMI

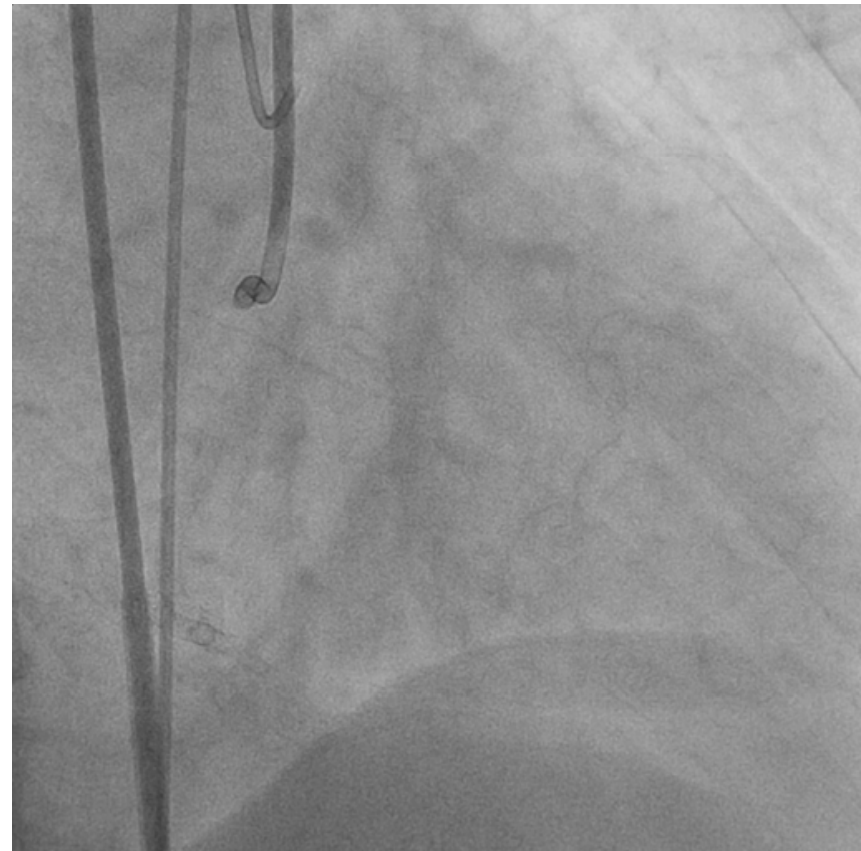
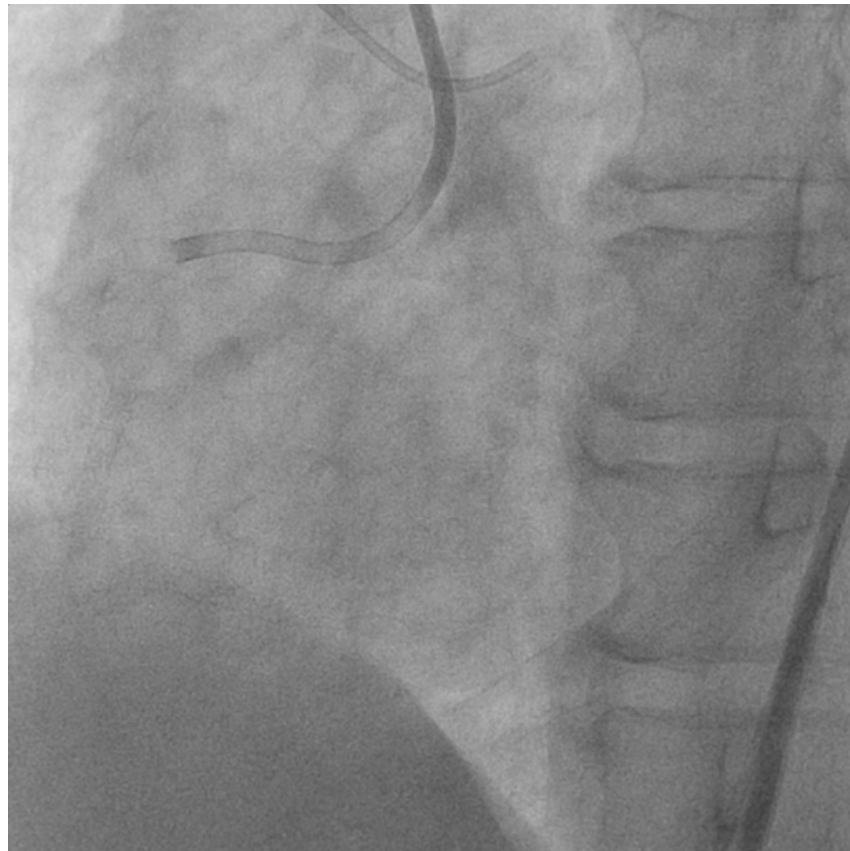


Final CAG showed good coronary recanalization. There was a gap between 2 stents. However additional stenting did not be performed because CAG and IVUS showed no residual stenosis.

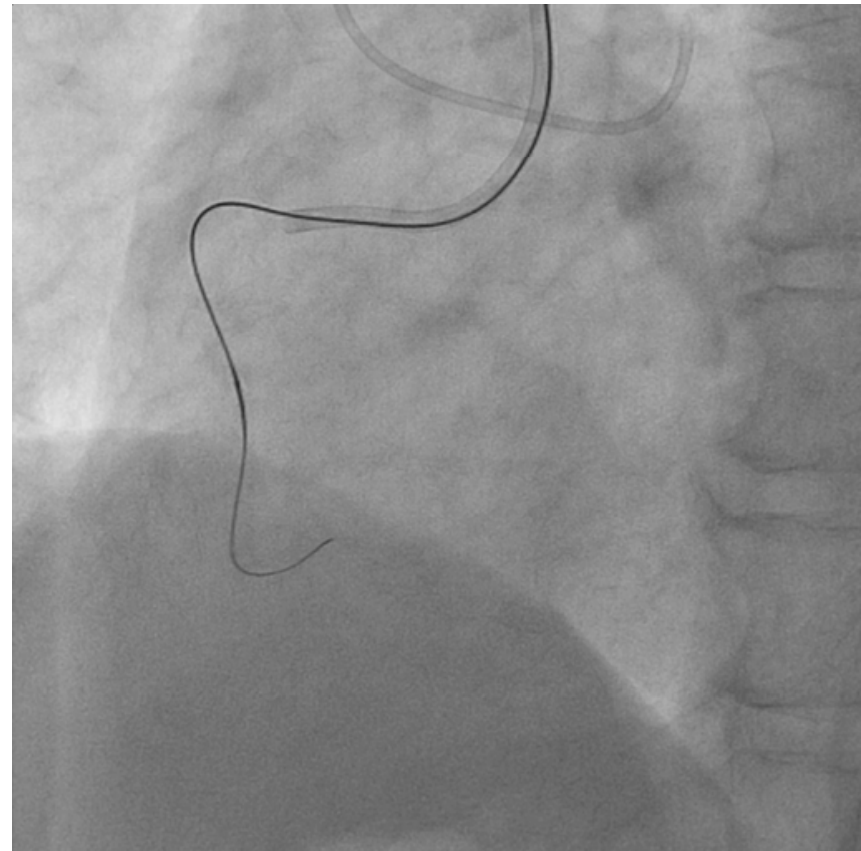
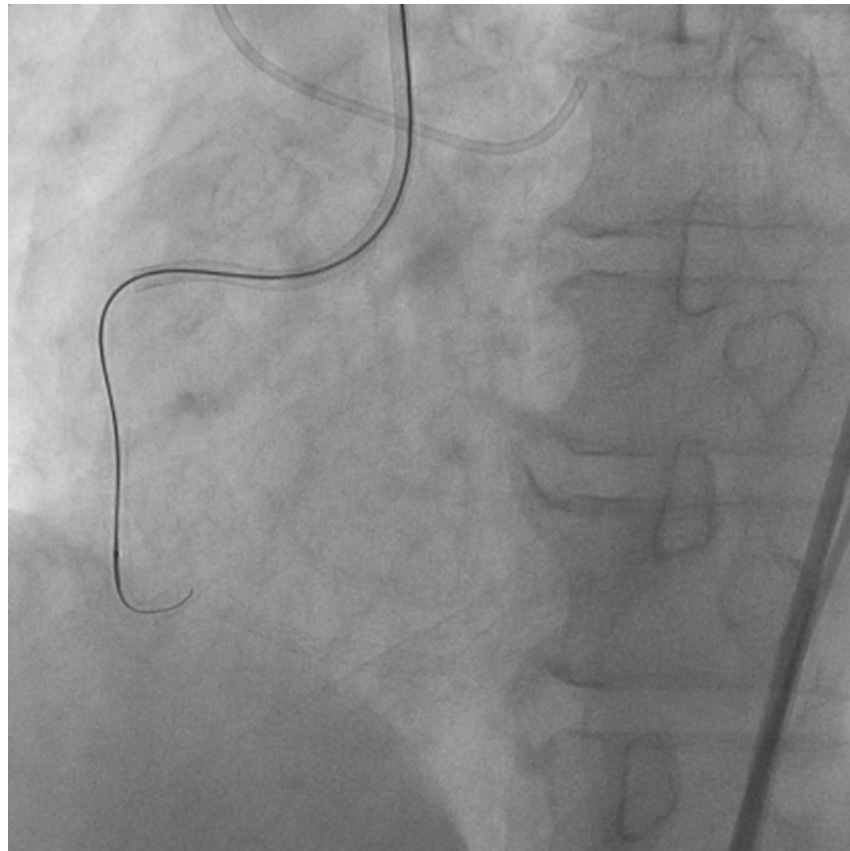
Follow up CAG



Scheduled follow up CAG showed in-stent restenosis at proximal stent site and in stent occlusion at the distal stent. LAD gave collateral flow to distal RCA through septal branch.



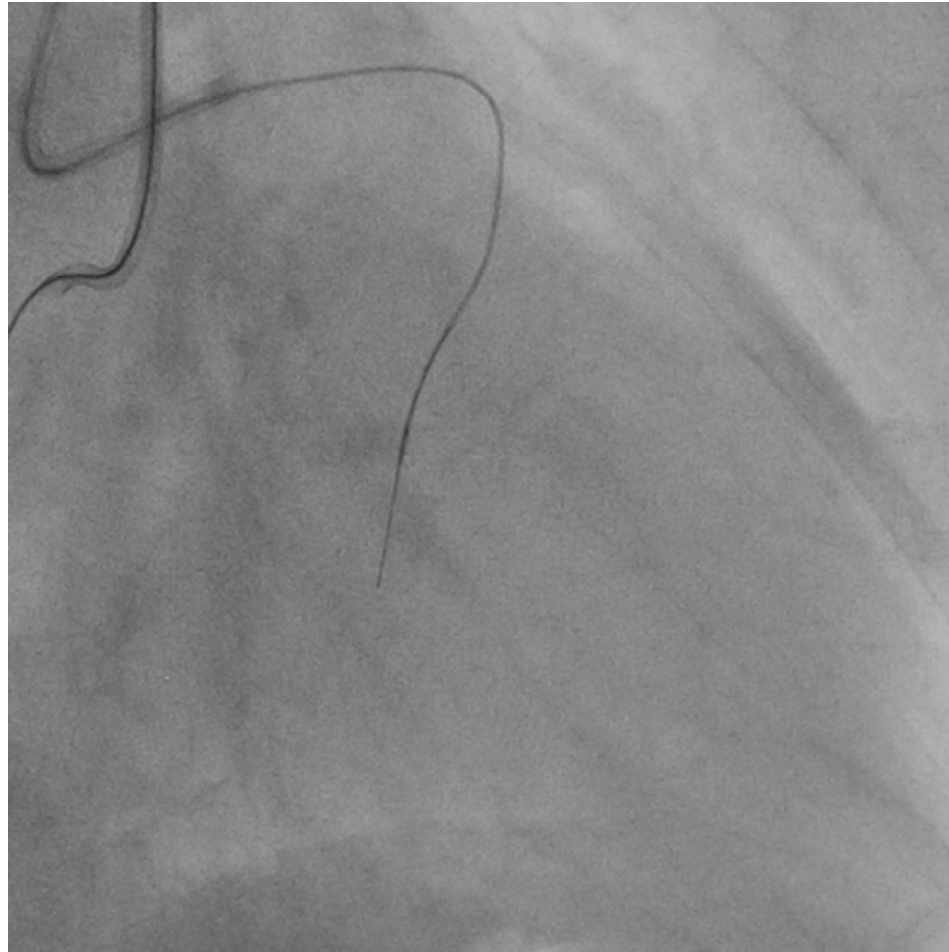
A 8Fr Sheath was inserted into right femoral artery and a 5Fr Sheath was inserted into left femoral artery. RCA was engaged with a 8Fr AL1 and LCA was engaged with a 5Fr diagnostic catheter.



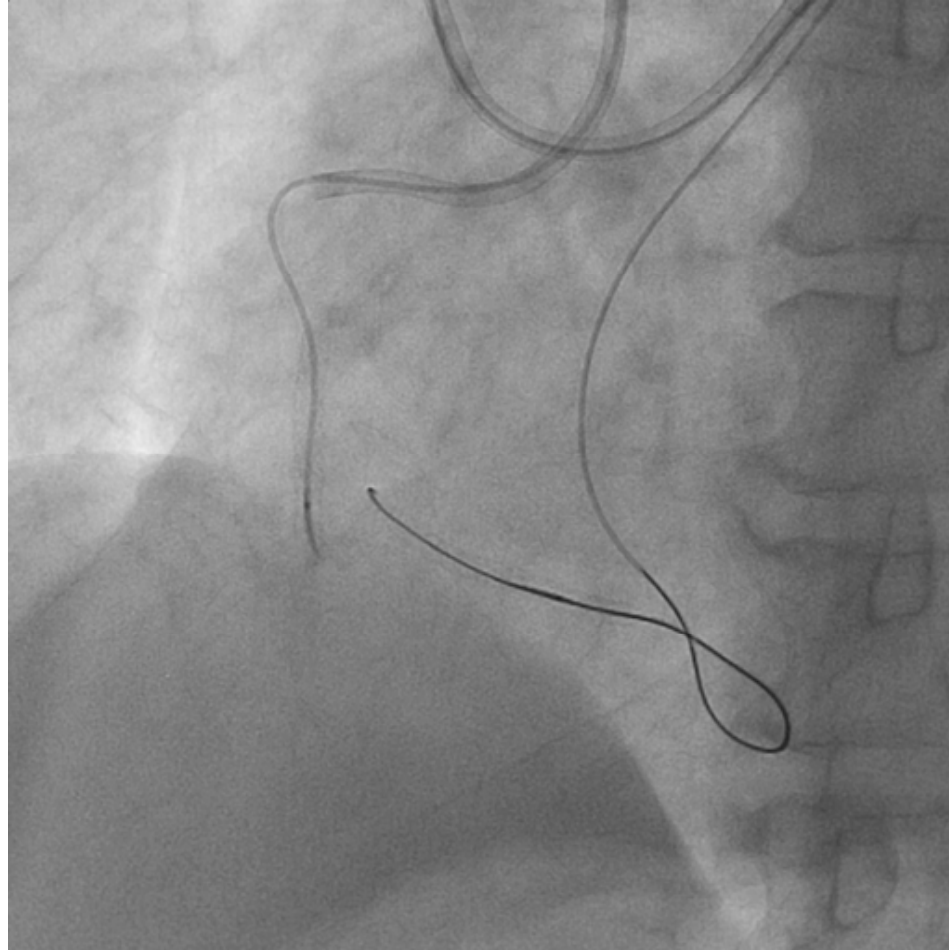
Fielder FC could not be advanced into CTO because of bend between 2 stents. After wiring with Fielder FC, Fielder XT and ULTIMATEBros3 were used. However these wires also could not be advanced same as Fielder FC. And then strategy was changed to retrograde approach.

Expected effects of retrograde approach in this case

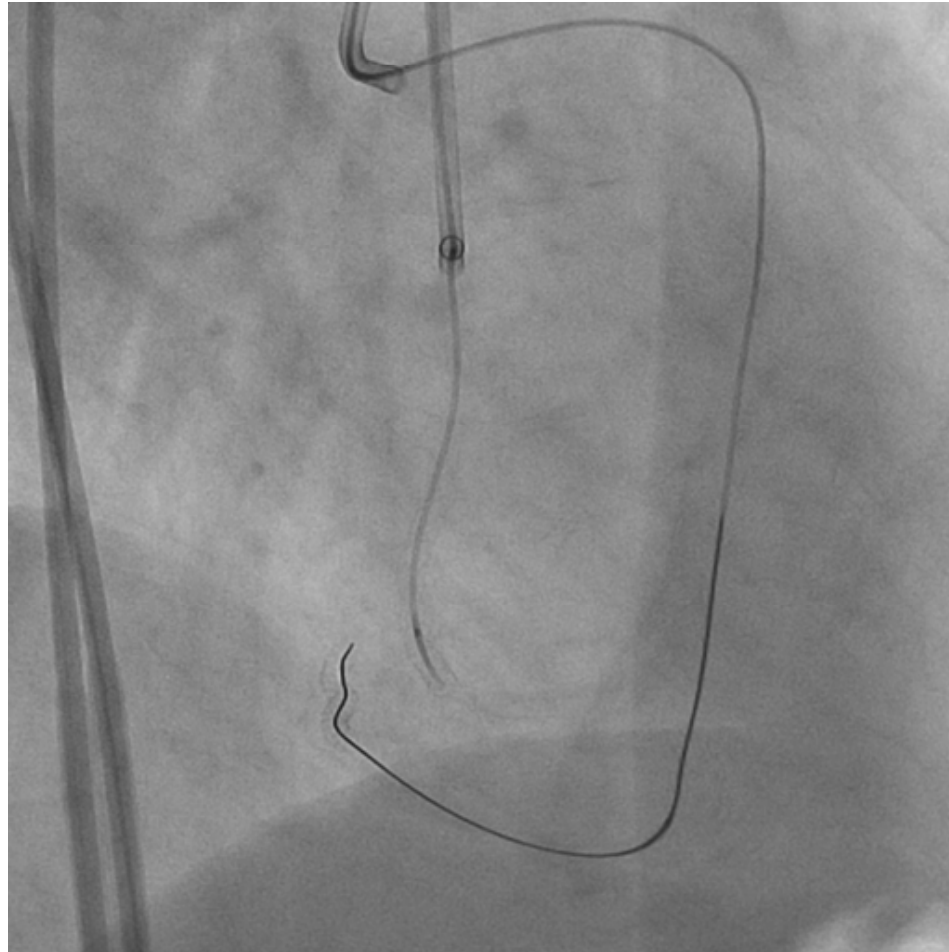
- Retrograde wire may be able to cross this lesion
- Even if retrograde wire could not be advanced into the true lumen, retrograde wire may be able to change vessel tortuosity.



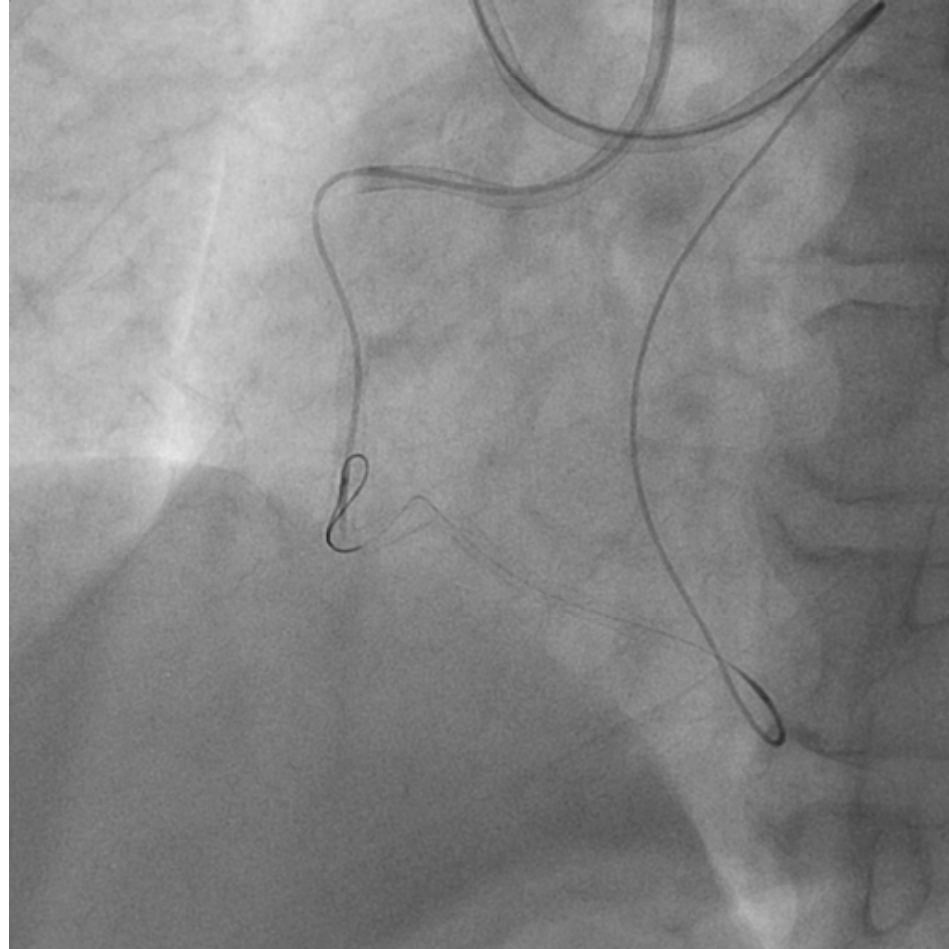
A 5Fr sheath was exchanged for a 8Fr Sheath and LCA was engaged with a 8Fr VL3.5. Fielder XT with Corsair150cm could be advanced into distal RCA through a septal branch via LAD.



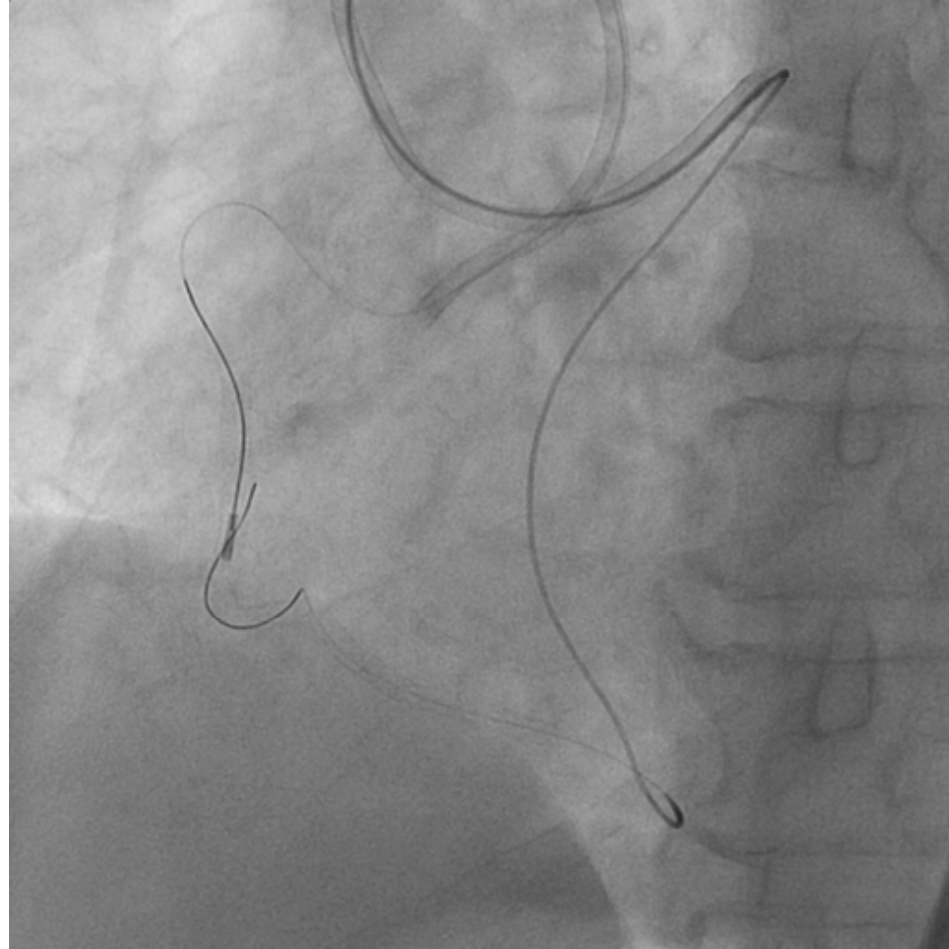
However Fielder FC could not be advanced into CTO. Then, Miracle6g was used. Miracle6g could be advanced into CTO and reached the proximal site of CTO.



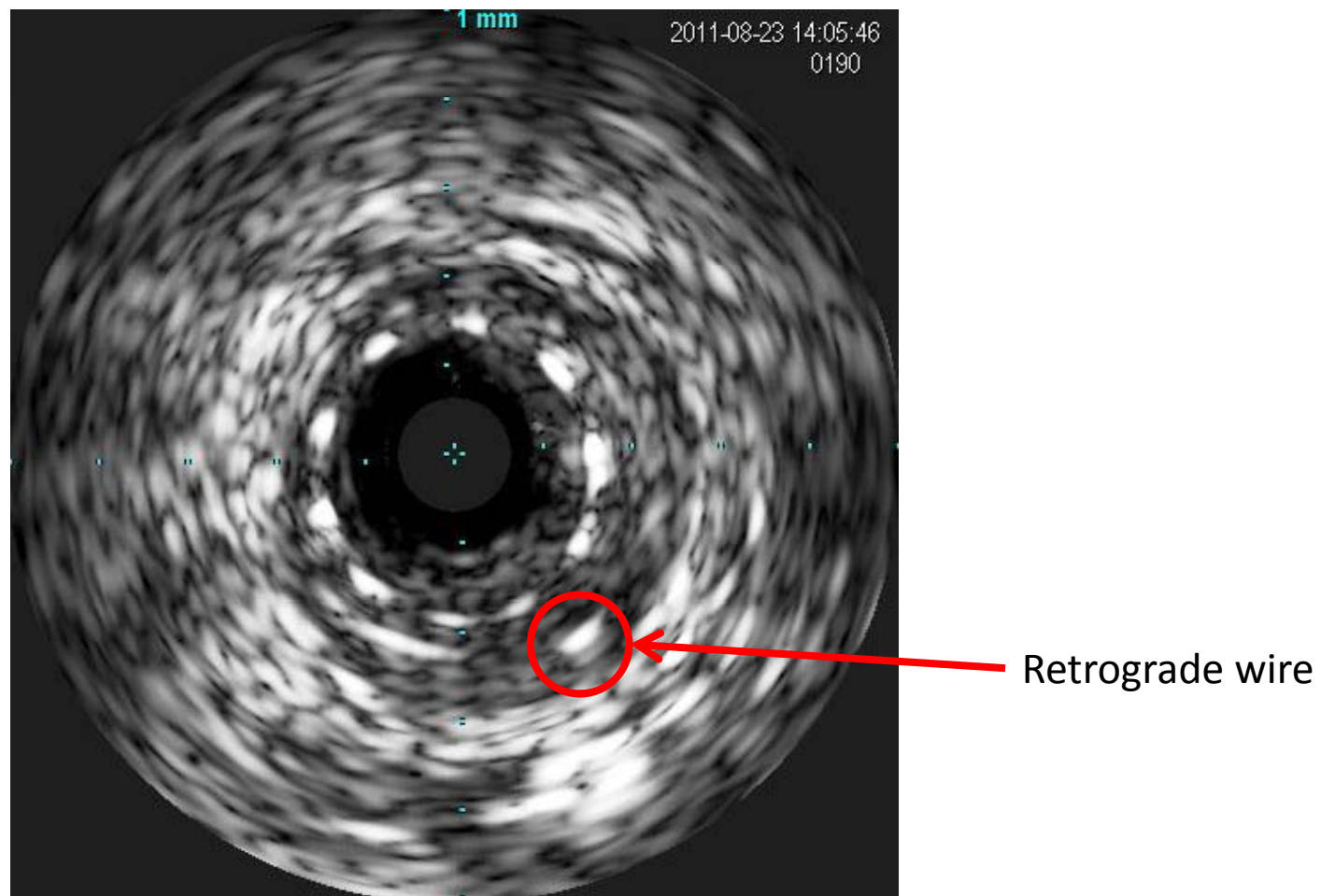
RAO view during bidirectional wiring showed a large gap between the distal edge of the proximal stent and the proximal edge of the distal stent. The gap made wiring difficult.



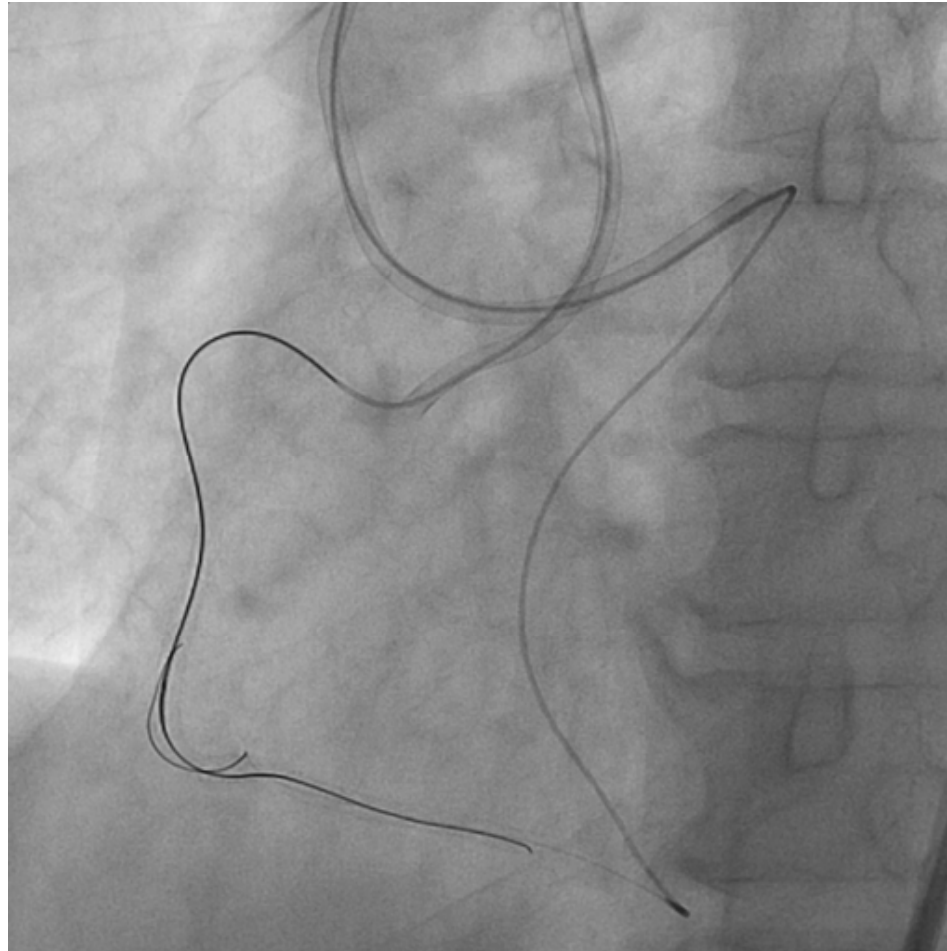
After that, Fielder FC was used again because Miracle6g could not pass the tortuous site. Fielder FC could pass the tortuous site and could be advanced at the proximal stent site.



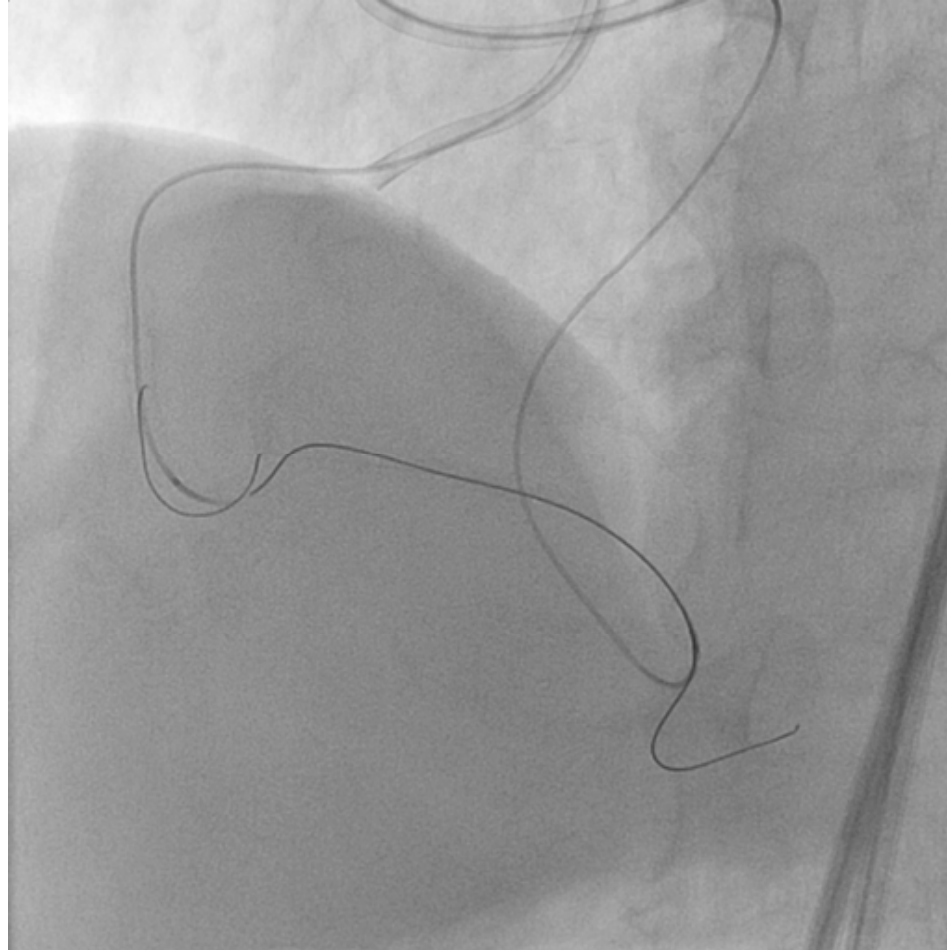
And then IVUS was performed to confirm the position of retrograde guide wire.



IVUS showed Fielder FC from retrograde was outside of proximal stent.

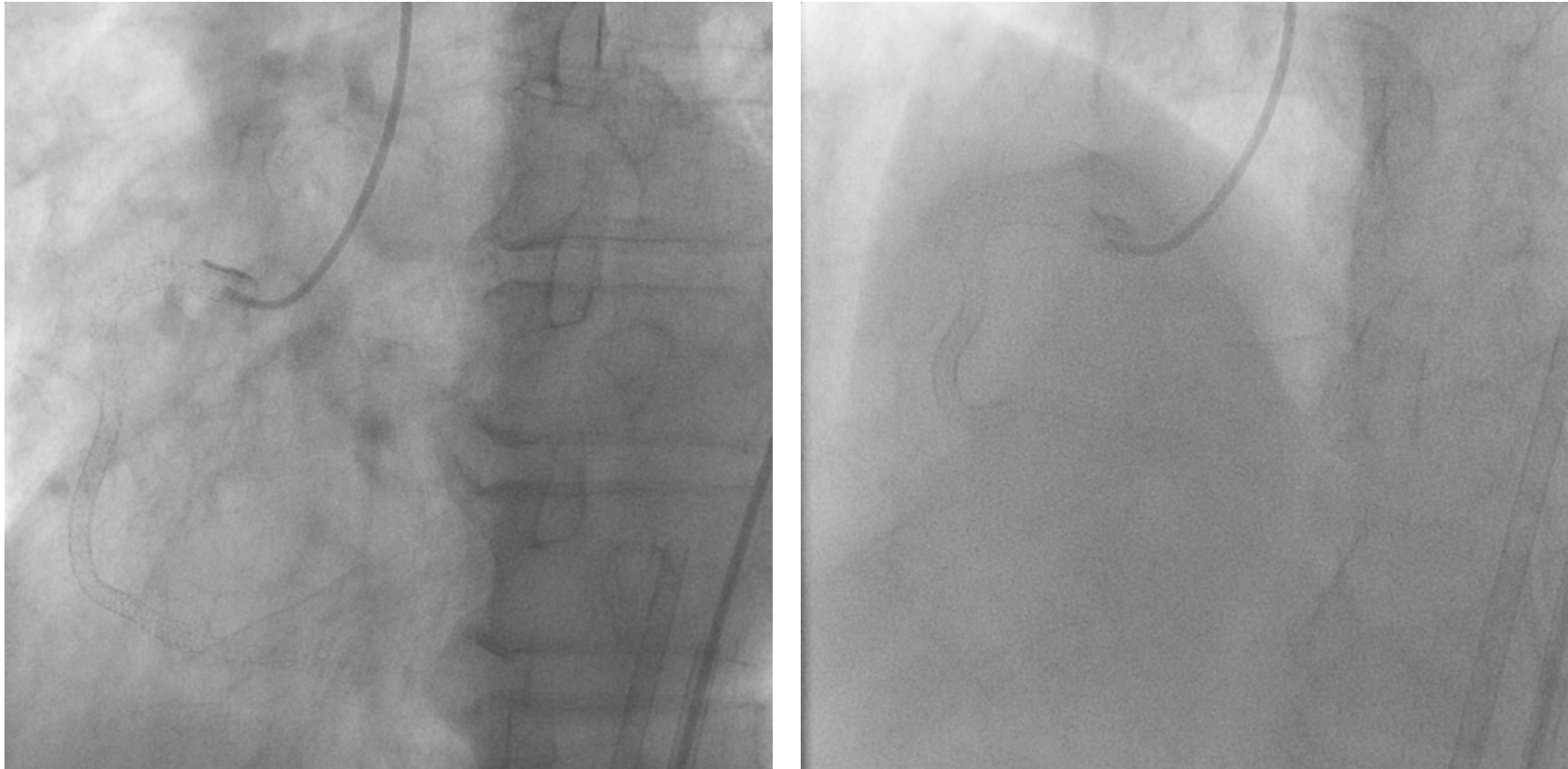


However retrograde wire made vessel tortuousness mild. After advancement of retrograde wire Miracle3g from antegrade side could pass the CTO.



Antegrade wire could be advanced deeply

Final CAG



After successful wiring, 3 Promus stents(3.0*28, 3.0*38, 3.0*28mm) was implanted following ballooning. Final CAG showed successful recanalization of RCA CTO.

Summary

- A 55 year-old man received PCI due to In-stent occlusion at mid RCA.
- At first, PCI was started with antegrade approach. However guide wires could not be advanced into CTO because of vessel tortuousness.
- And then, our strategy changed to retrograde approach. Retrograde wire was advanced into outside of stent. However retrograde wire made tortuous lesion stretch. After advancement of retrograde wire, UltimateBros3 from antegrade side could pass the CTO lesion easily.
- In this case, retrograde wiring into outside of stent provided successful antegrade wiring in tortuous in-stent occlusion.