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In-Stent CTO with implantation of subimtimal Stent: Angiographic follow-up

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Male, 59 yo

09/2019: exertional Angina (CCS III); depressed LV-Function (EF 35%)
inferior wall hypokinesia and viable myocardium (cardiac MRI)

07/2019: PTCA/Stenting LMCA/VG>OM; VG>RCA (occl); LIMA>LAD>Diag (open); NSTEMI
01/2016: CABG (LIMA>LAD>Diag , VG>OM, VG>RCA)
09/2015: PTCA (DCB) RCA-ISR, PTCA/Stenting uLMCA/ISR-LAD, PTCA (DCB) ISR-Diag
03/2015: PTCA (DCB) RCA-ISR
08/2014: PTCA (DCB)/Stenting LAD/Diag; PTCA (Cut-DCB) ISR-RCA
07/2011: PTCA (Cut-DCB) ISR-RCA
2007: PTCA/Stenting LAD (NSTEMI)
2005: PTCA/Stenting RCA (NSTEMI)

PAD Rutherford Class III
05/2018: PTA (DCB) left SFA
11/2016: PTA (DCB) Stenting (DCS) left Iliac and SFA
03/2015: PTA left CFA
01/2012: PTA/Stenting (DCS) right SFA-CFA

RF: hypertension; hypercholesterinaemia; former smoker;
Heterozygote Lp(a)-Gen (C5673A>G) mutation

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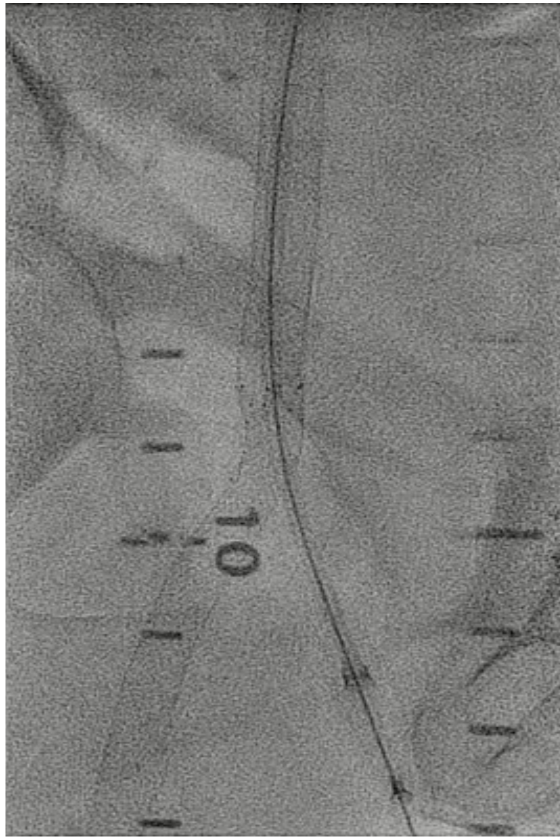

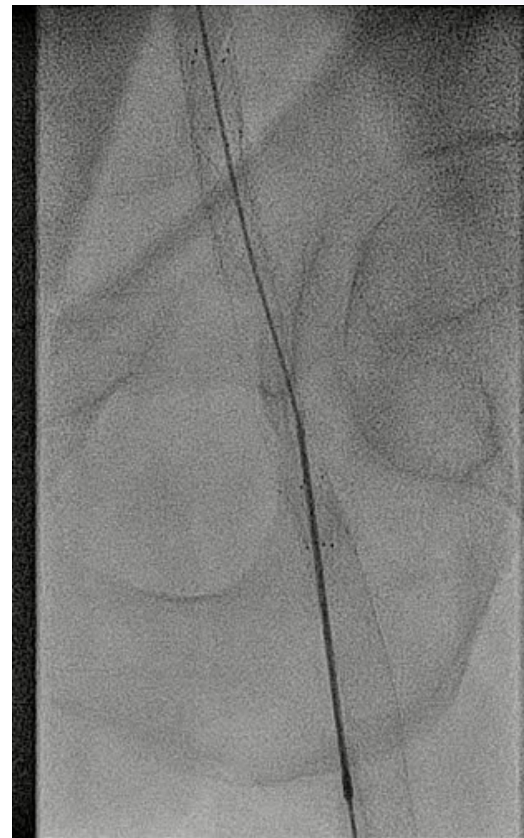

Occlusion of the Right radial artery and Bilateral Stent in the iliac and common femoral arteries: The puncture of a self-expandable stent is safe and occluded with manual compression. In this case, 2 slander 6-7 Fr are used.

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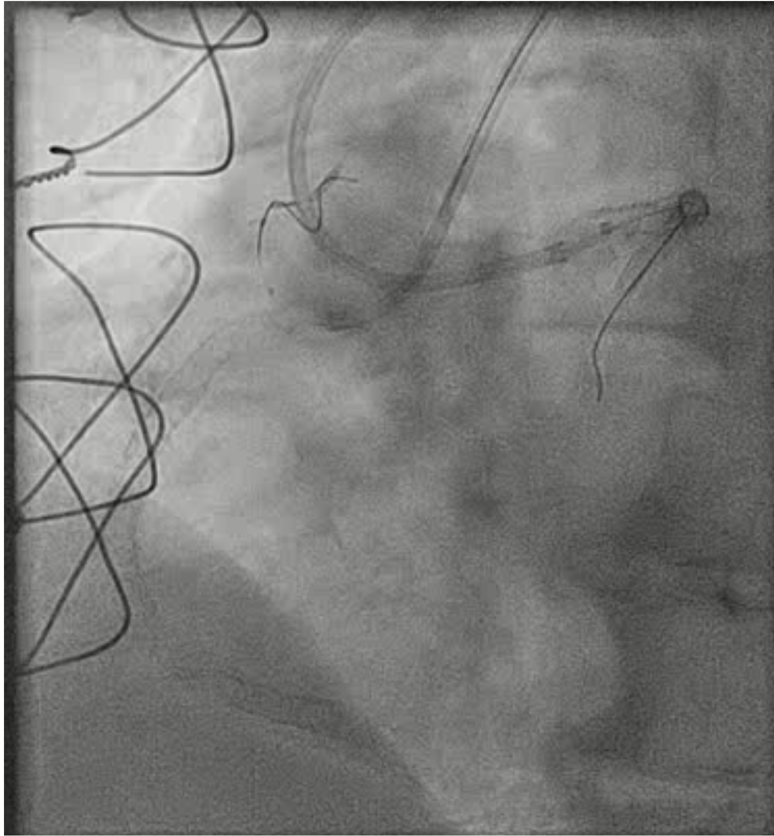

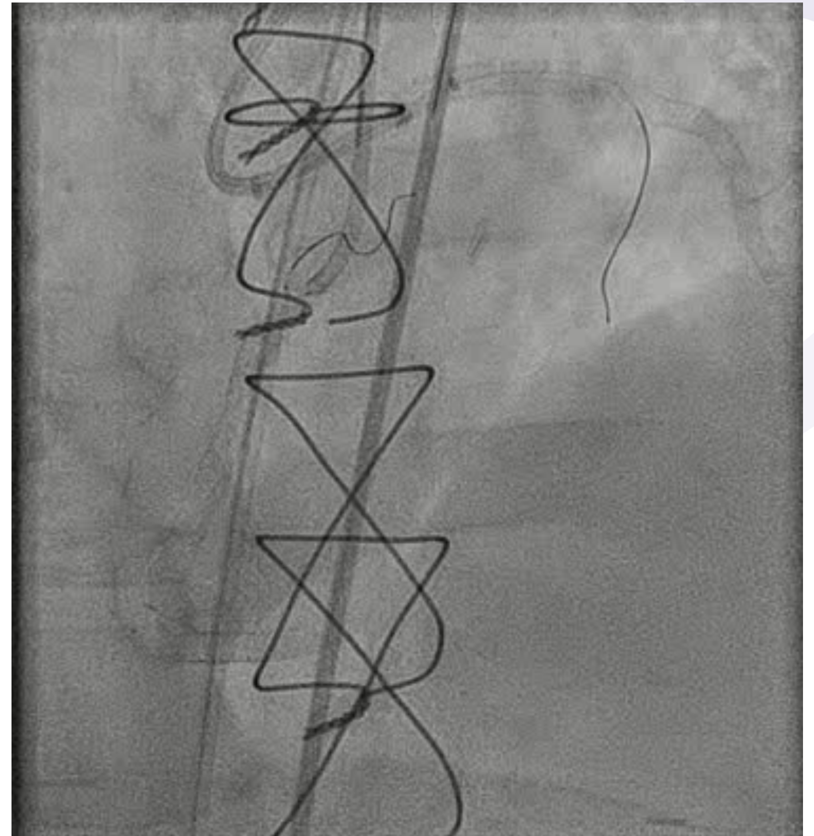

Basic angiography showed a long in-stent reocclusion of the right coronary artery with interventional collateral from LAD that is also stented and occluded.

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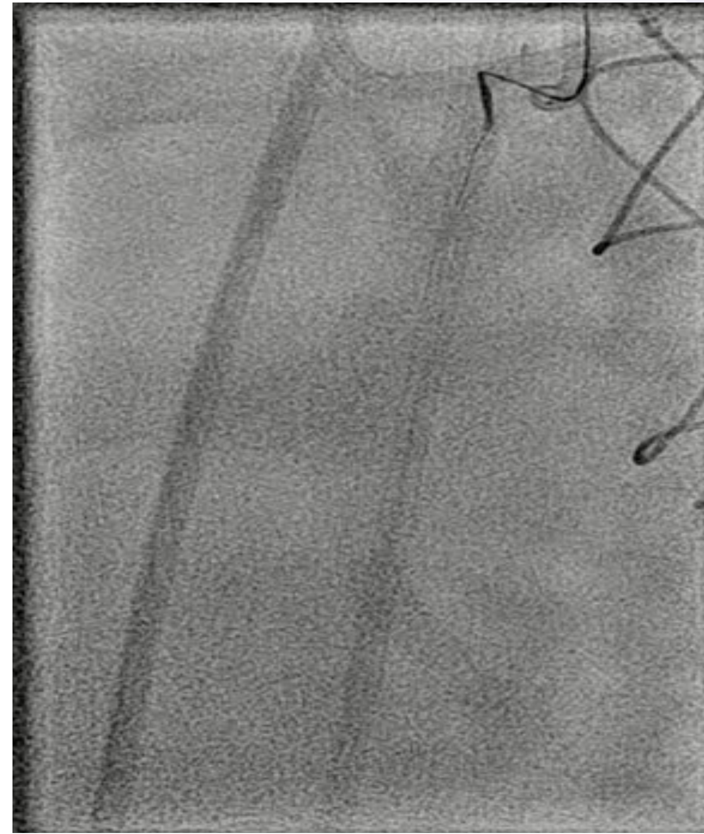
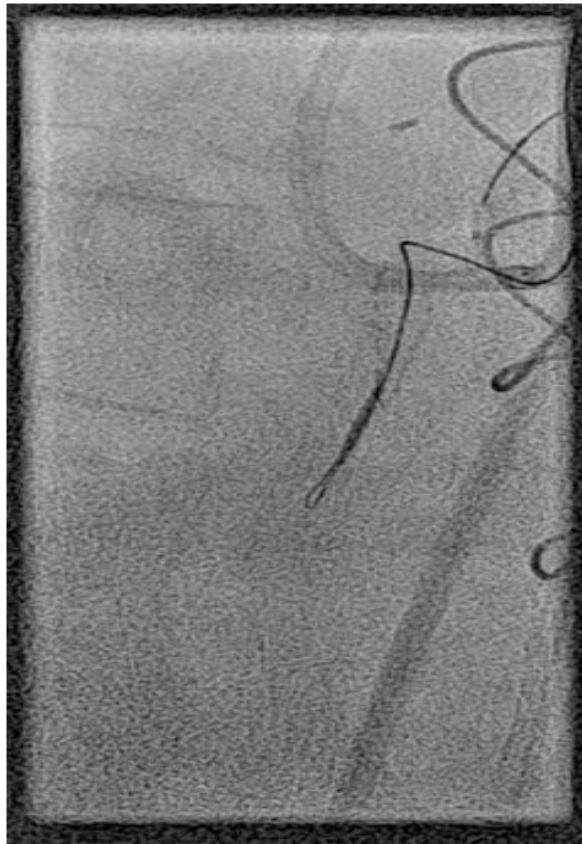
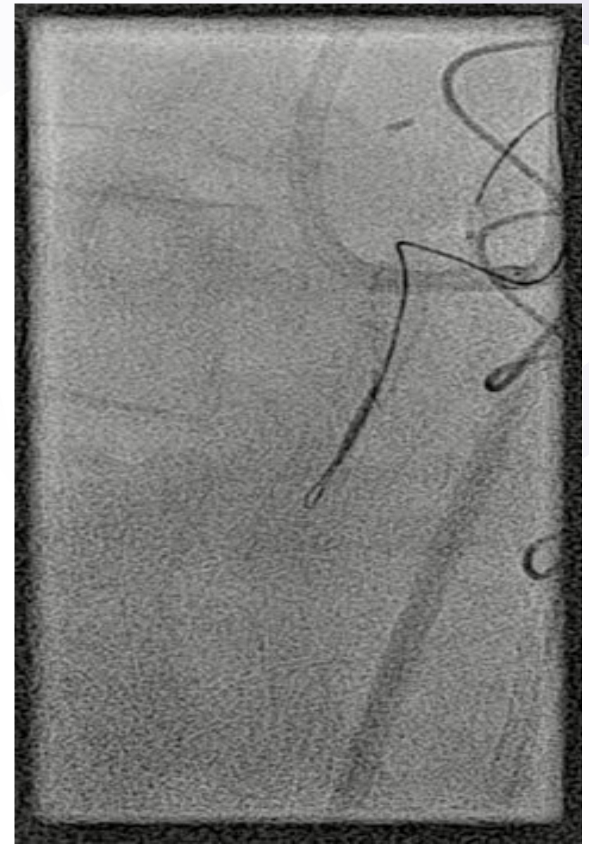


The proximal cap was resistant so different wires were used to cross among them Gaia 3, CP12; Pilot 200, Filder XT-A, and the anchoring balloon technique helped to push a Tunpike-Lp used antegradely

The middle part of CTO was less resistant nevertheless was impossible to stay in the vessel/Stent architecture, so a Filder XT is used here in knuckle- wire technique

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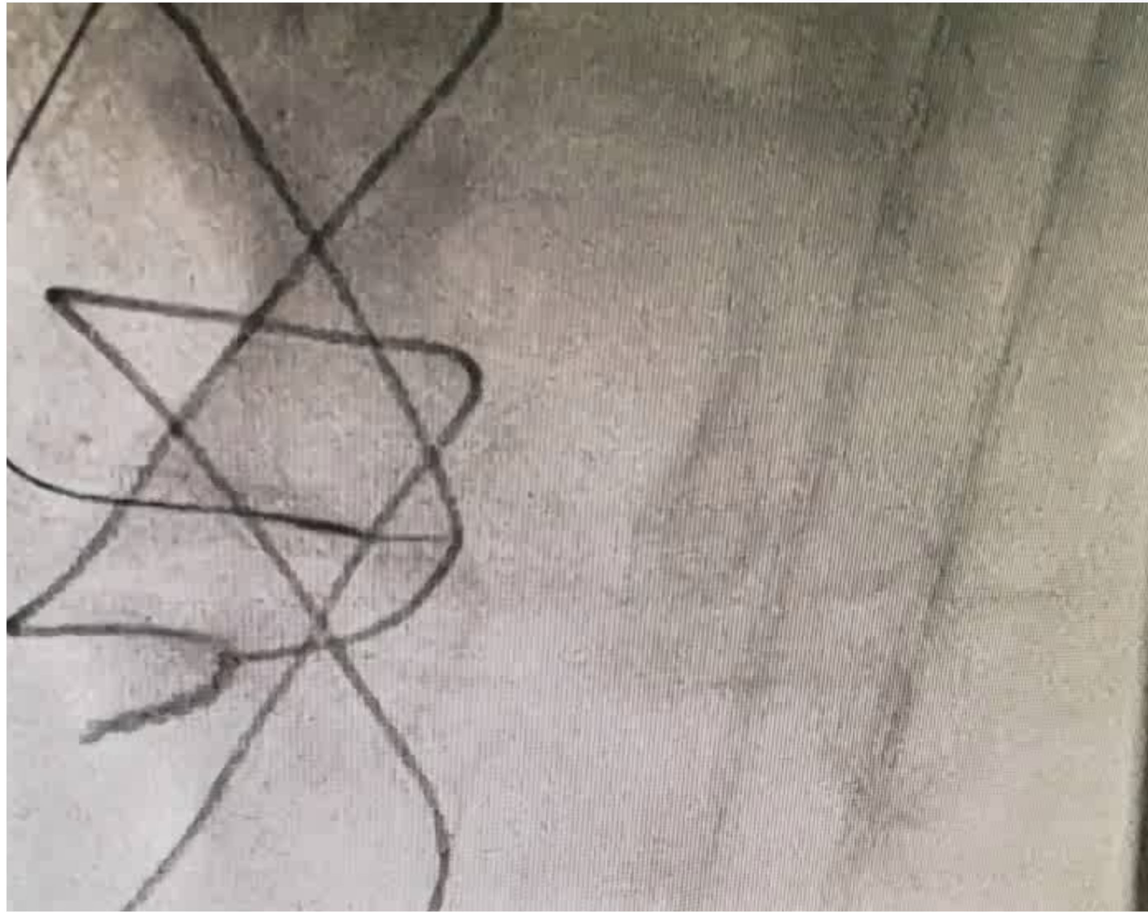

The distal cap was easily crossed with Gaia 3

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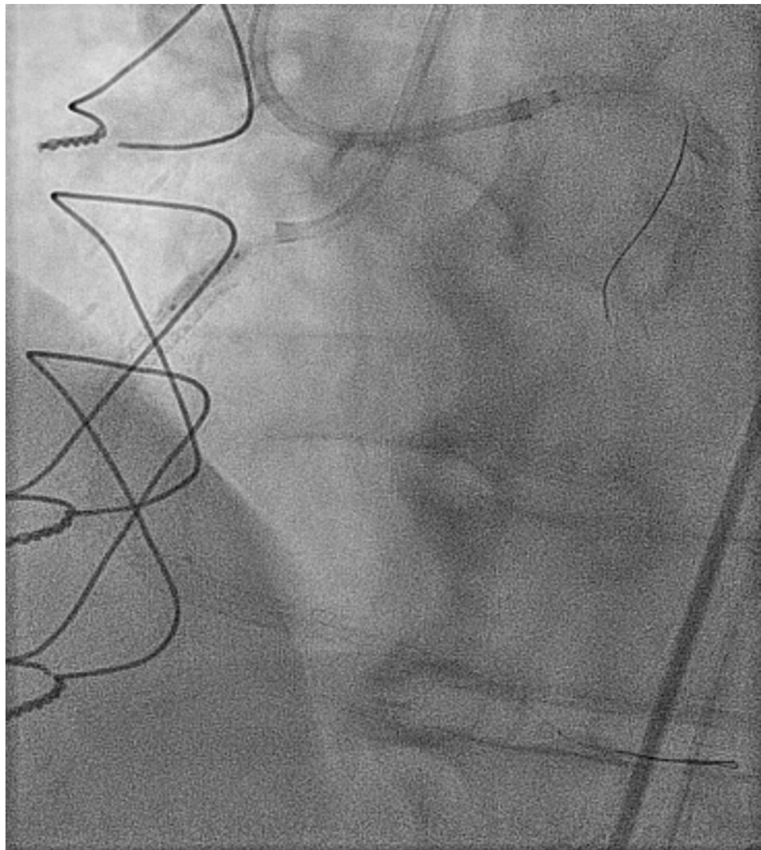

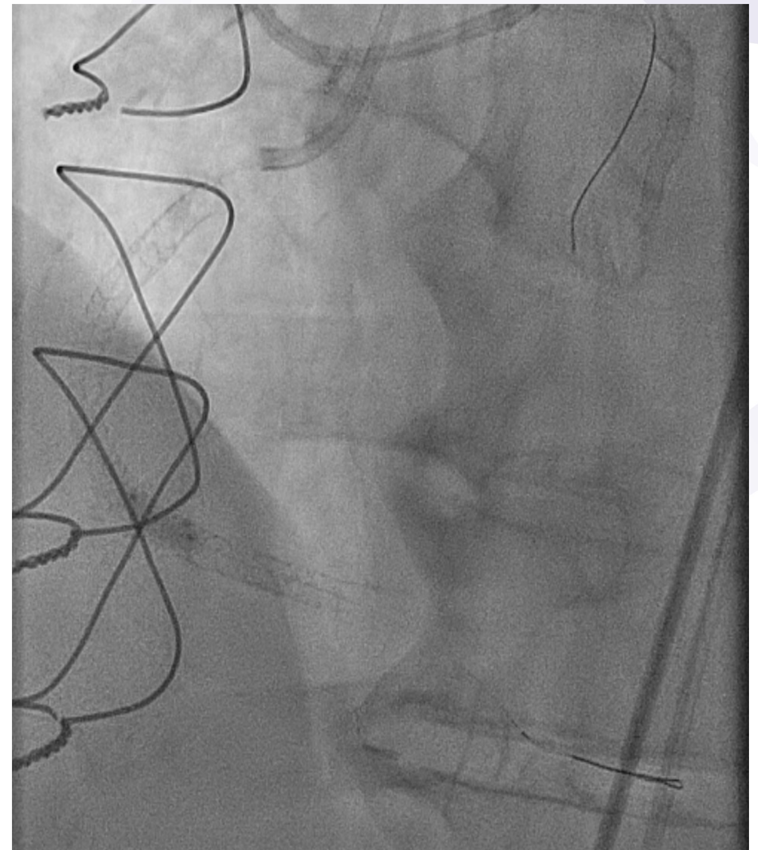

The entire length of the lesion was dilated with different high-pressure balloon among them also OPN-NC until 40 atm. and…

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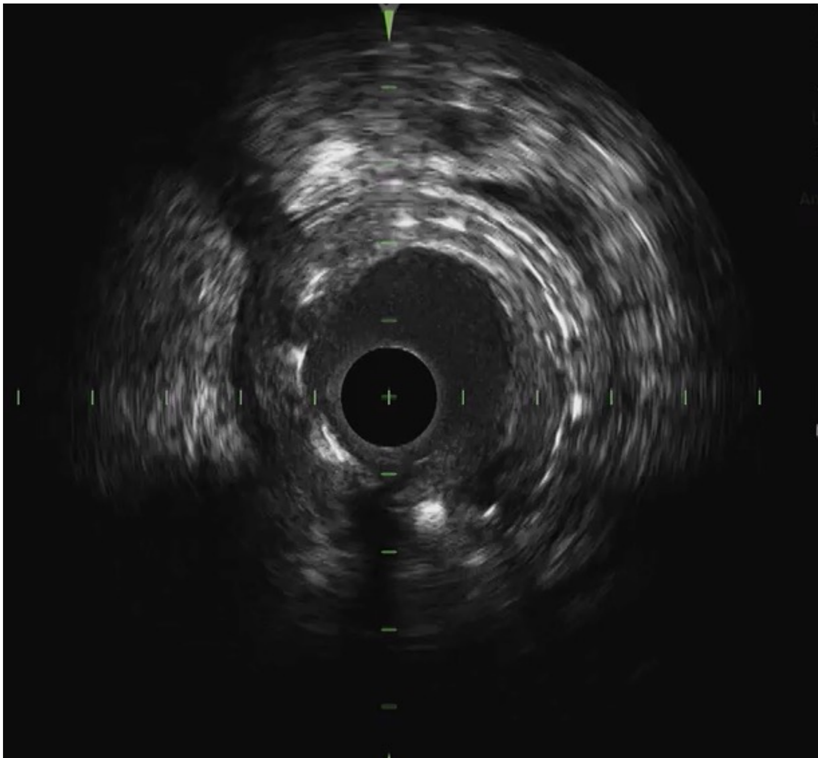
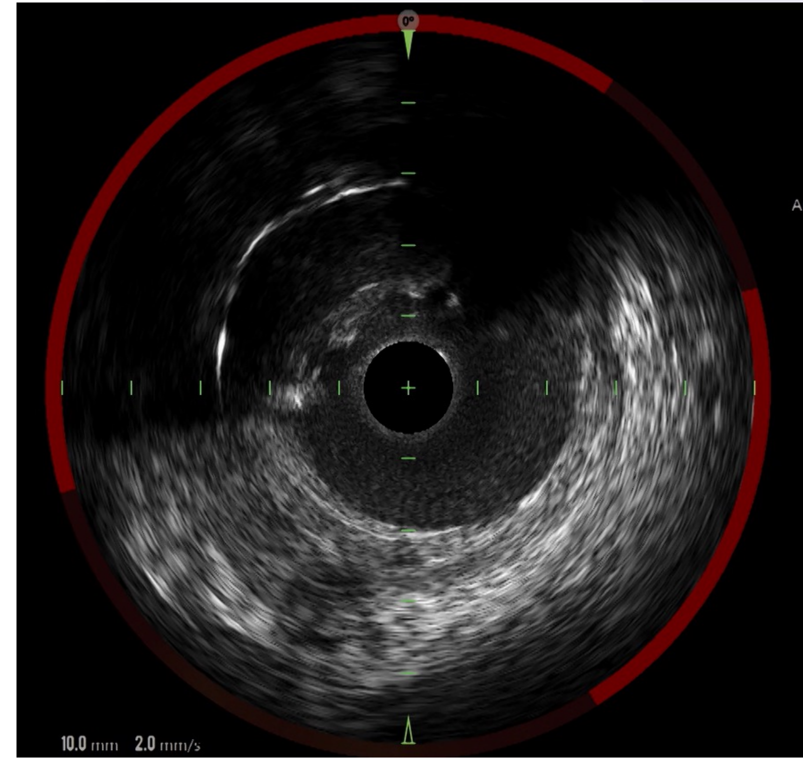
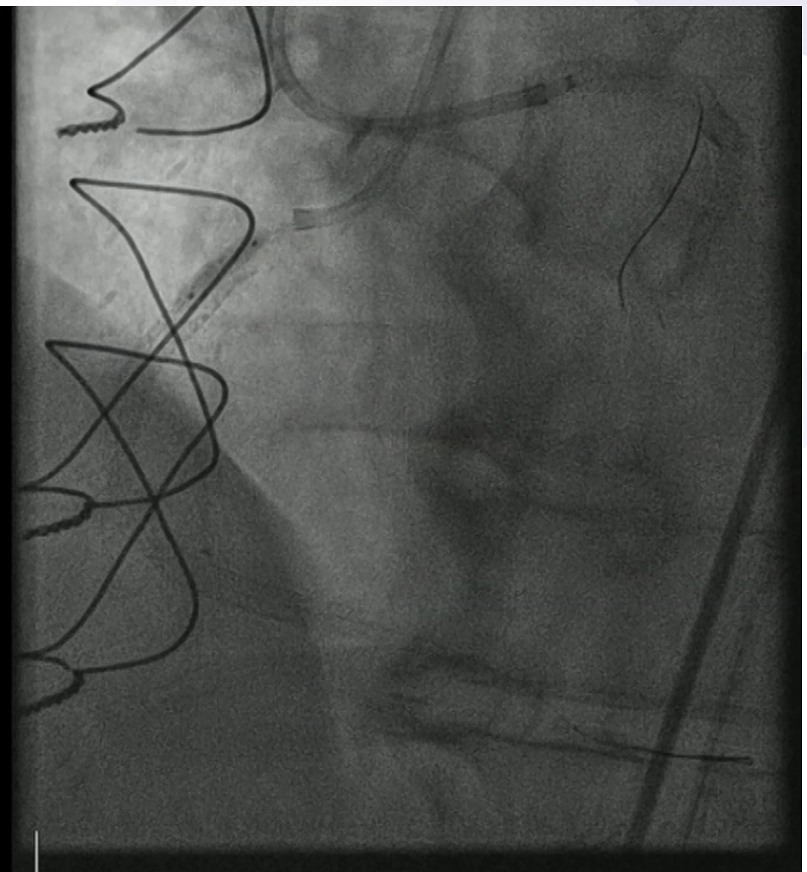




IVUS-NIRS performed after balloon dilatation showed an intraluminal position of the wire in the distal and middle RCA but an evident subintimal tracking in the first 20 mm proximally with a almost completely crush of the stent (Cypher select 3.5mm)



The crush of the stent strut was clear also angiography like demonstrated in this slide

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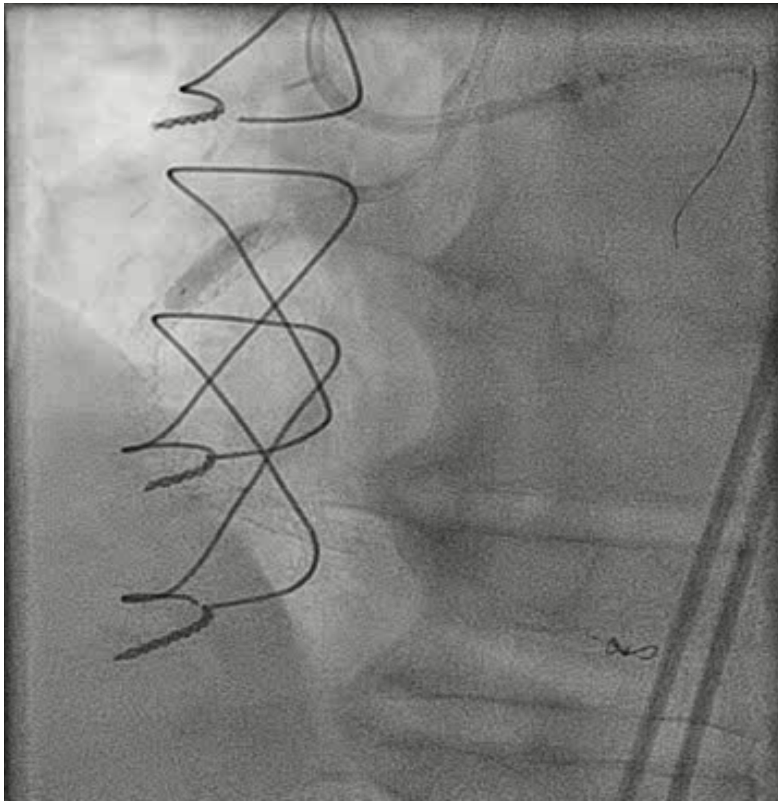

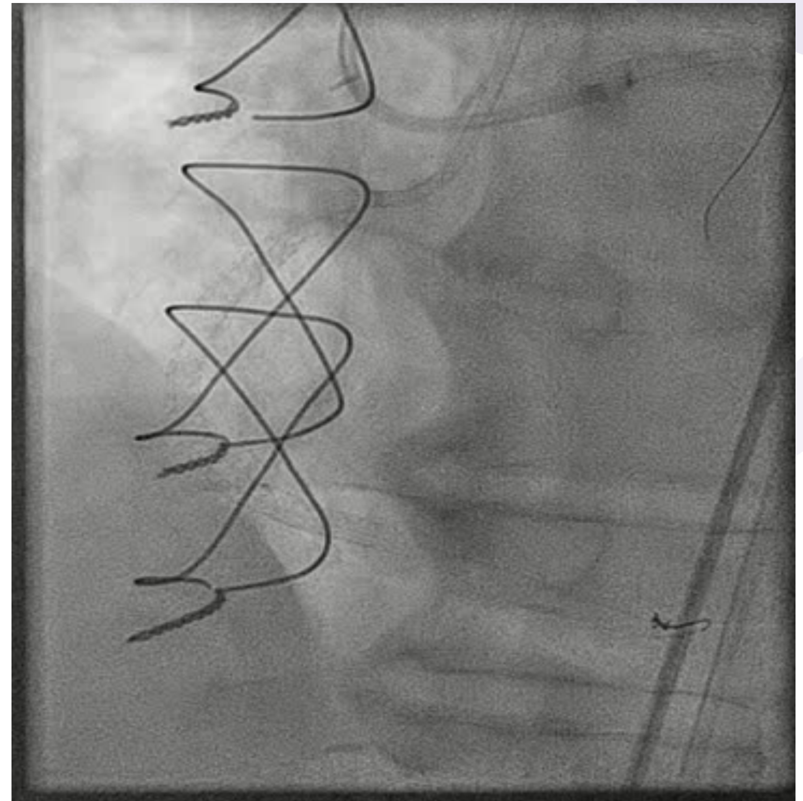

The next step was to dilate more aggressively the proximal part with 4.0 OPN-NC Balloon at 45 atm.

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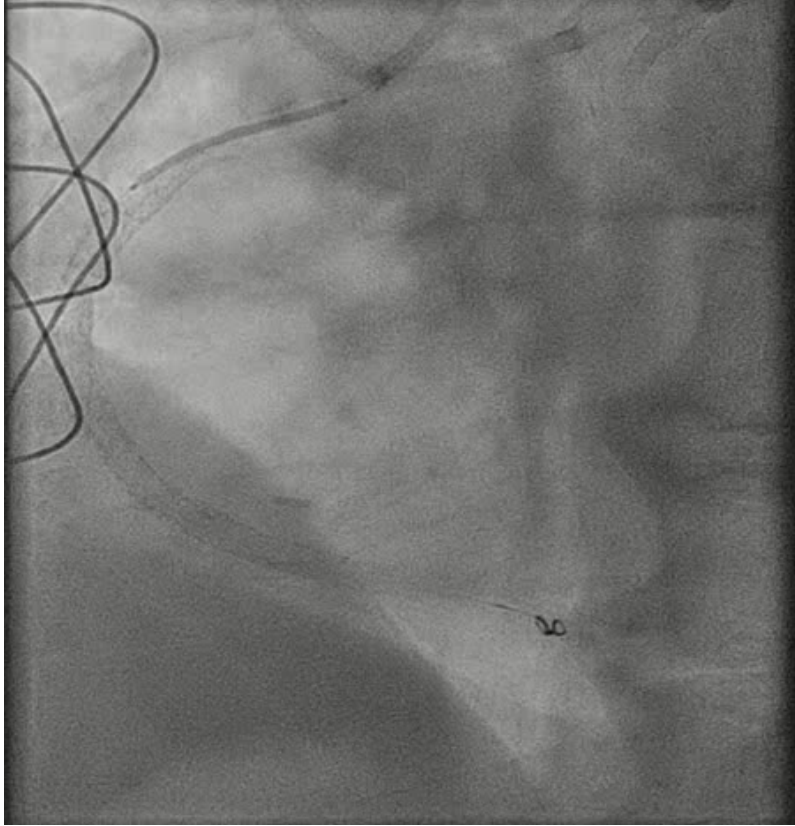

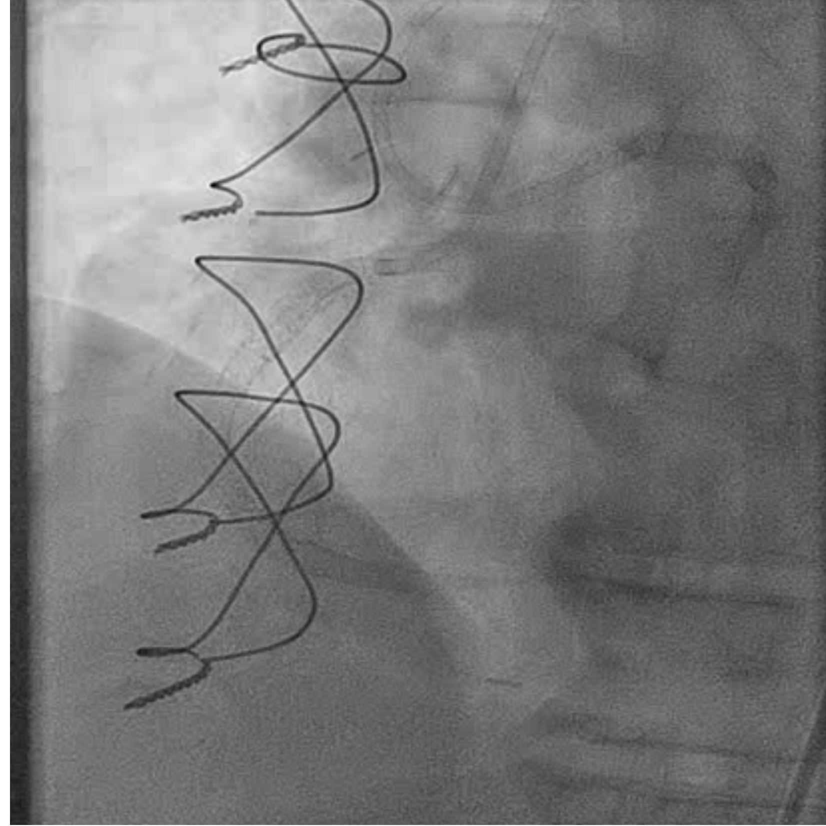

3 DES implantation (3.5x38; 4.0x38; 4.5x26) and post-dilatation this is the final result

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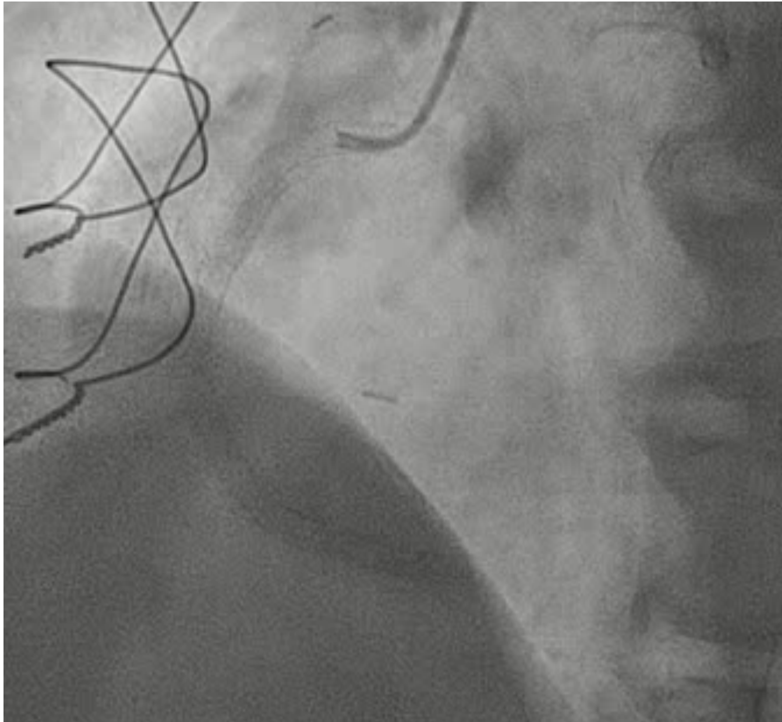

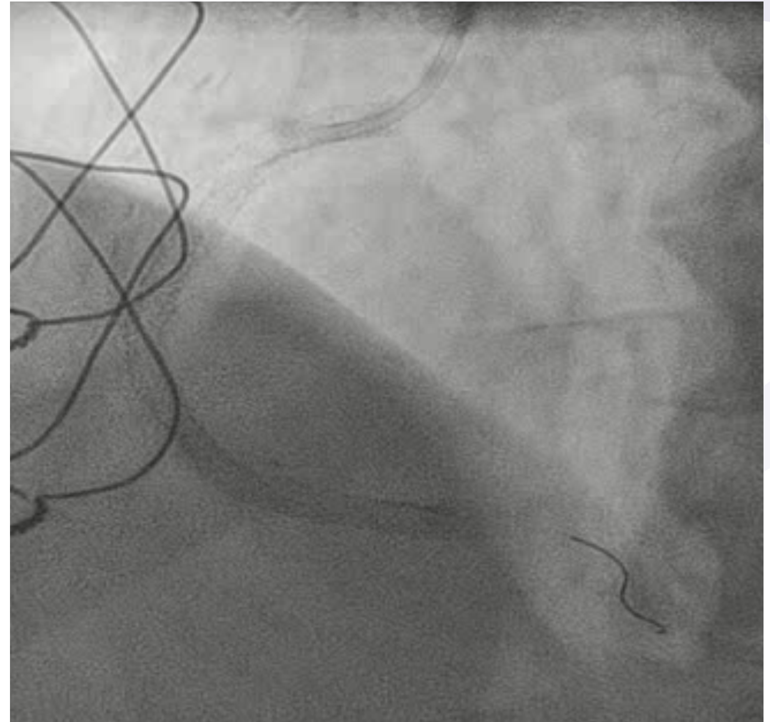

6 Months angiography demonstrated a gut result in the crushed stent struts while the middle and the distal part,without stent-crushed, showed high grade re-stenosis treated with ultra-high-pressure balloons and 3 DCB