High complex PCI: a case with heavy coronary calcification and wire entrapment

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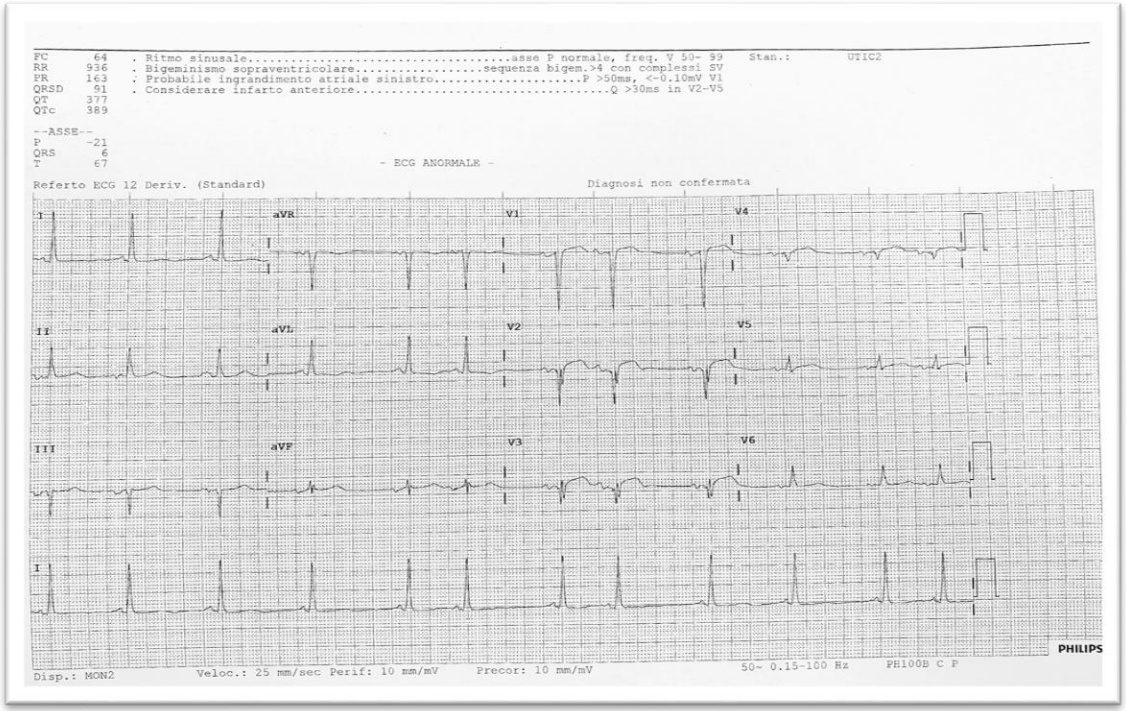
Background & Clinical Presentation

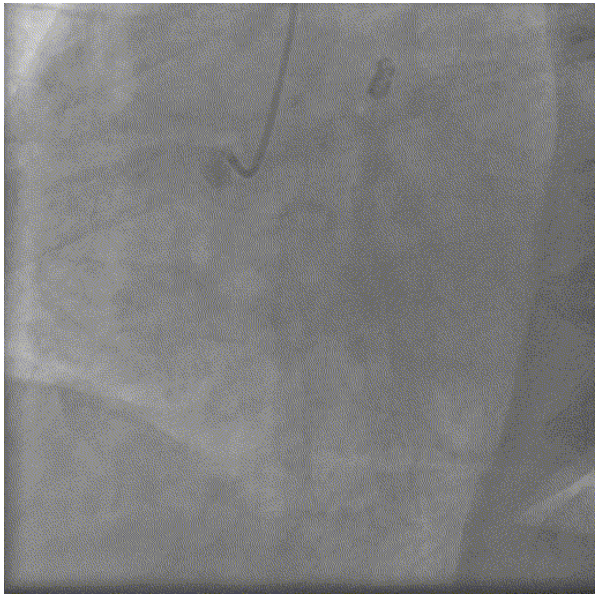
Female, 84-year-old

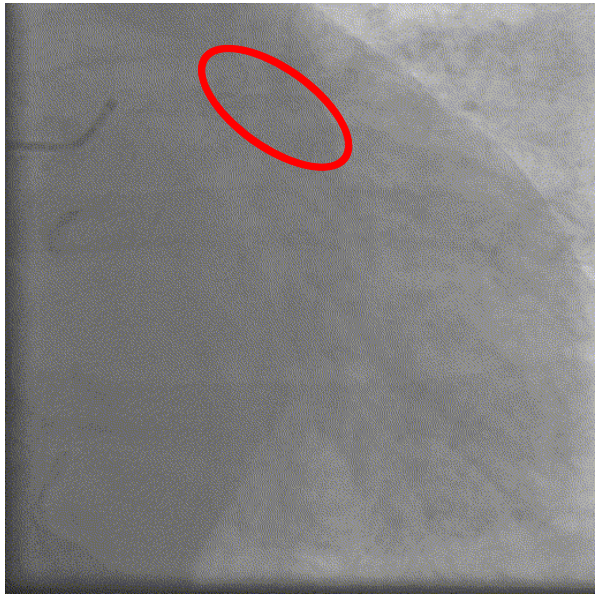
Angina for minimal exertion and evidence of new Q waves in V1-V4 on ECG

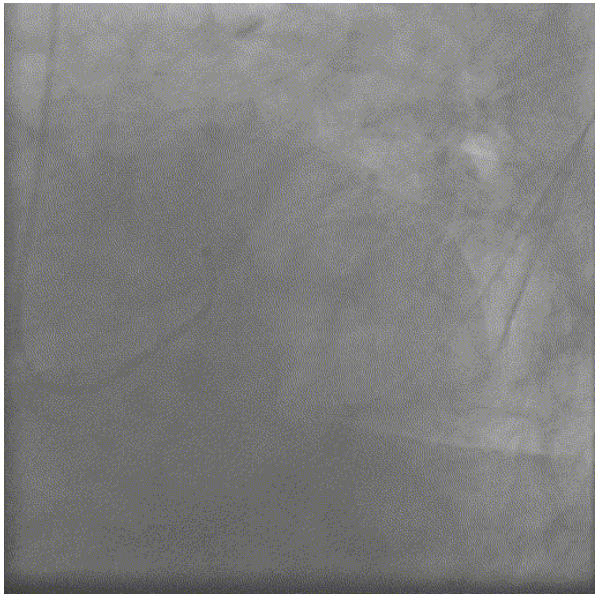
- **Cardiovascular risk factors**: hypertension, dyslipidaemia, overweight
- **Past medical history**: 2019 dual lead pacemaker implantation for paroxysmal III-degree atrio-ventricular block
- **Day 1**: pulmonary oedema and elevated biomarker release – TnT 2364 pg/mL
- **Echo:** LVEF 35%, septal and apical akinesia, moderate mitral regurgitation

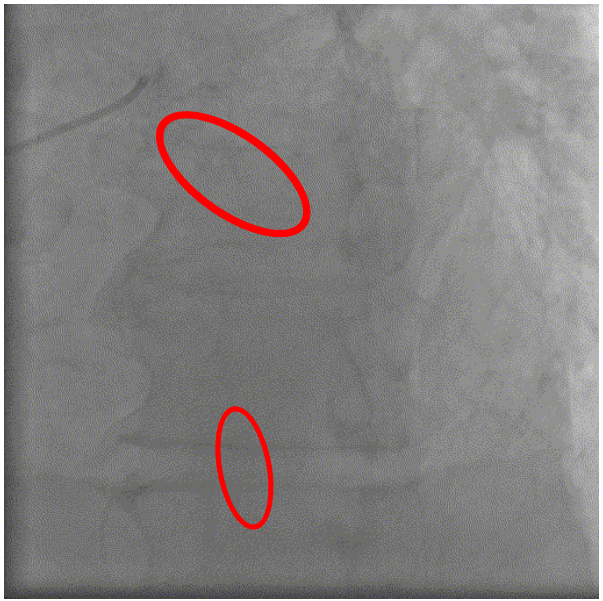


Coronary angiogram









3 vessel disease:
CTO of right coronary artery
Critical stenosis of left anterior descending and intermediate in high calcified vessels

Euroscore II 6.1%
SYNTAX score 21

High risk PCI

Which strategy???

Decision Making

Options available in our cath lab:

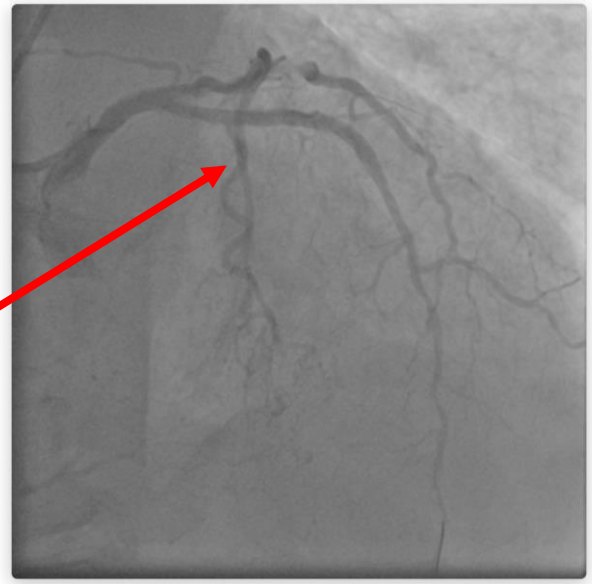
- Cutting balloon
- Intravascular lithotripsy
- Rotational atherectomy

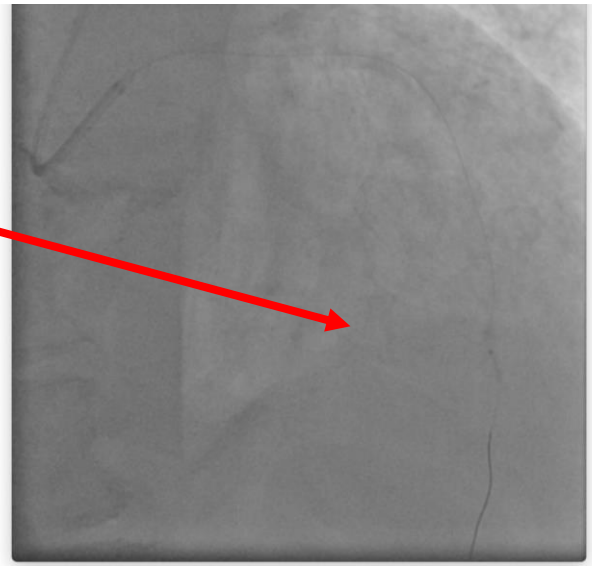
PCI to left anterior descending:

- cutting balloon+DES **proximal** (SES 3,0x38mm)

and

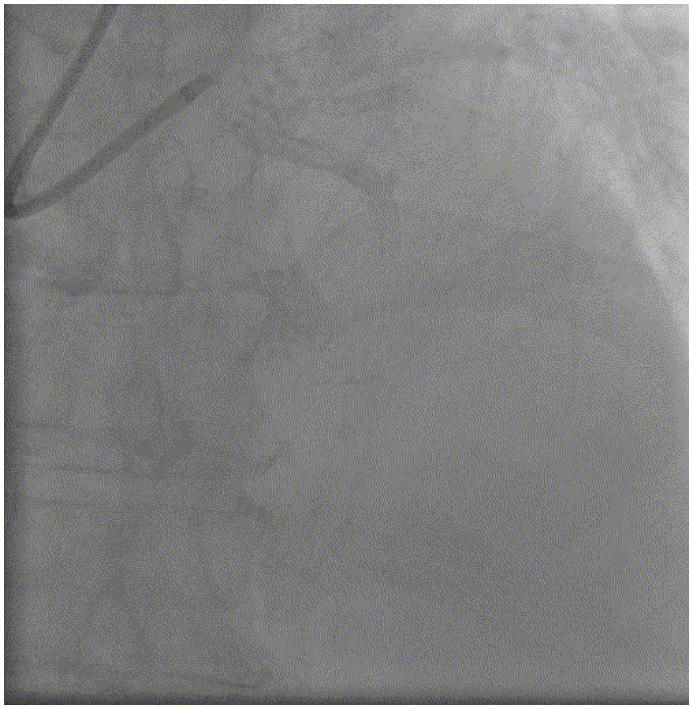
- POBA **distal** with 1,5x10mm SC balloon (difficult crossing and high balloon waste)

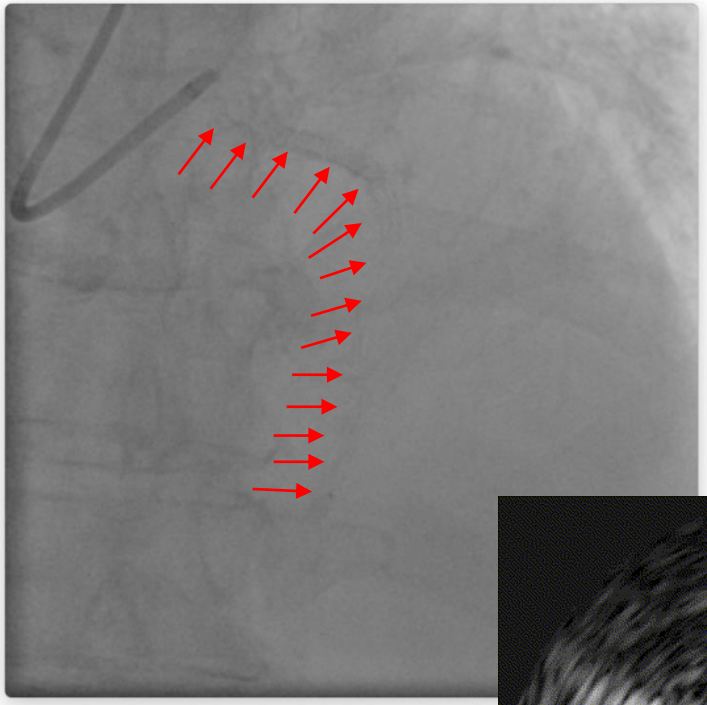


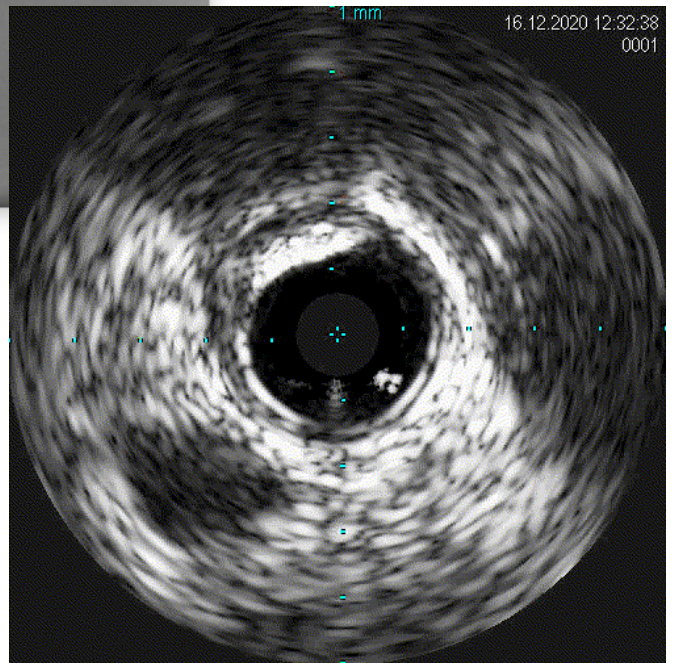


Staged PCI to intermediate branch with rotablator

Staged PCI – What we found

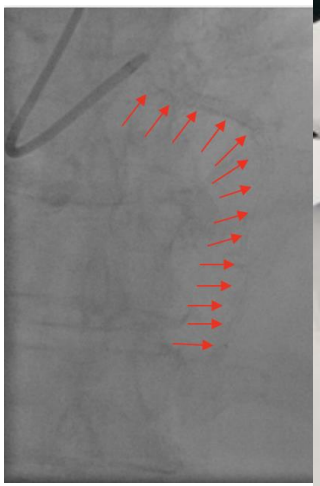


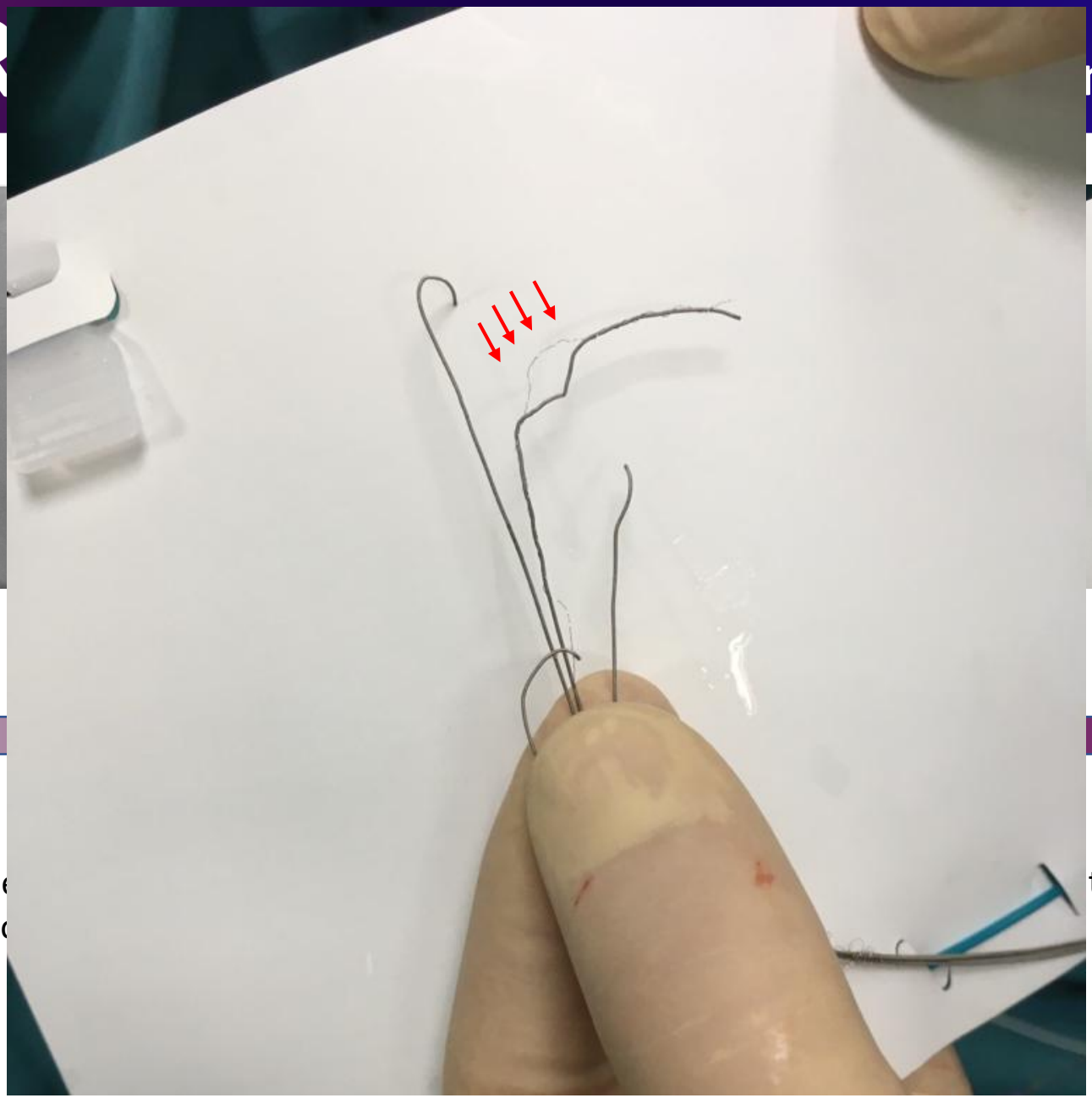


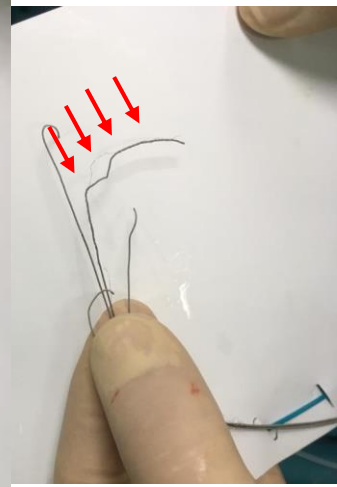


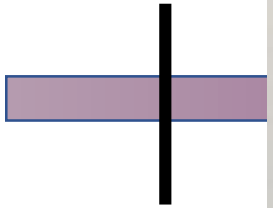
- Good result of recent PCI
- Deterioration of the plaque in distal LAD
- Endoluminal fragment of a fringed wire entrapped from distal left anterior descending to ostial left main confirmed by IVUS

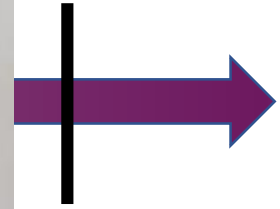
ng Wires









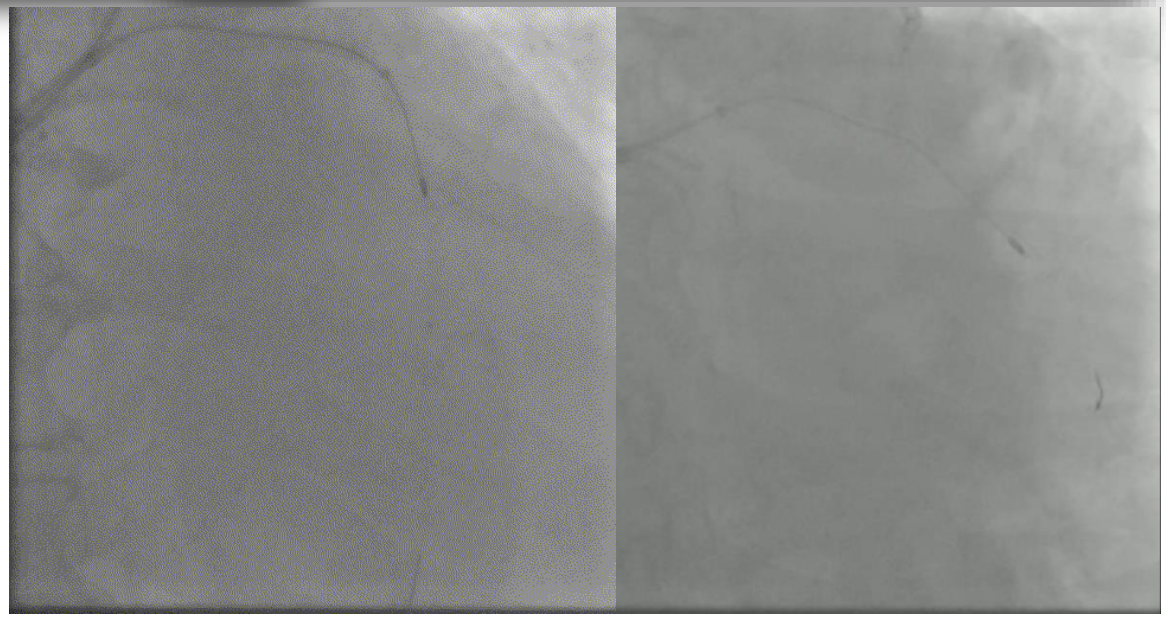


Wire fragment e
(from the previ
procedure!!!)

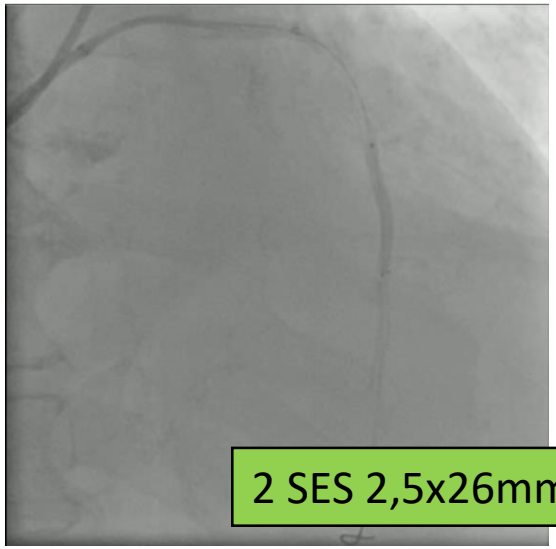
t removed

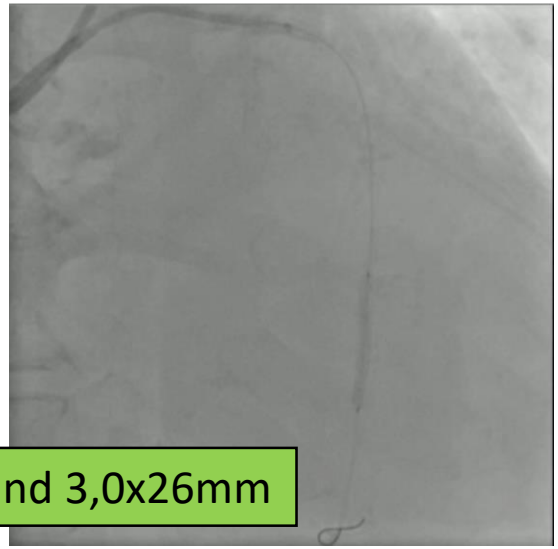
Rotablator

- Prepared first the rotablator (burr 1,25mm) on Guideliner to avoid obstacles in the transition collar
- Rotational atherectomy + stenting to mid and distal left anterior descending
- Rotational atherectomy + stenting to proximal Intermediate

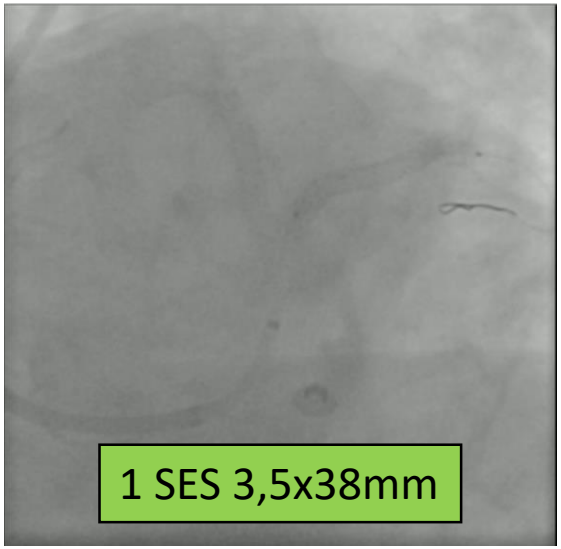


Final Result

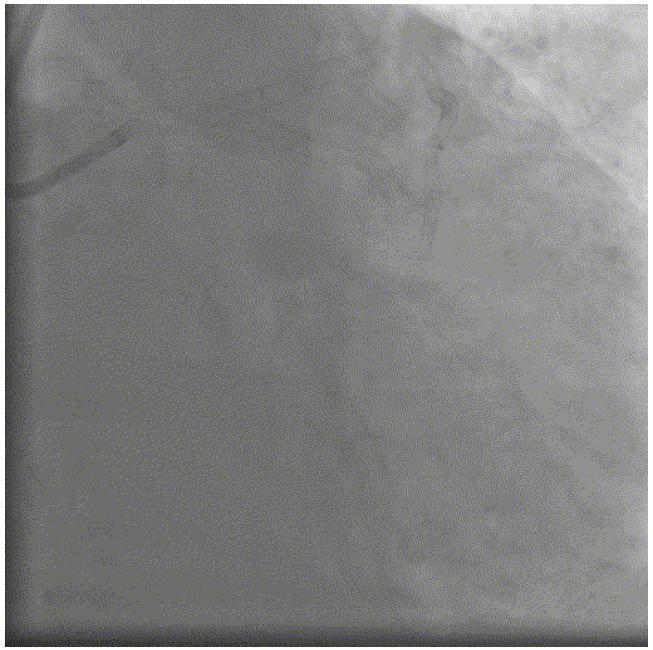


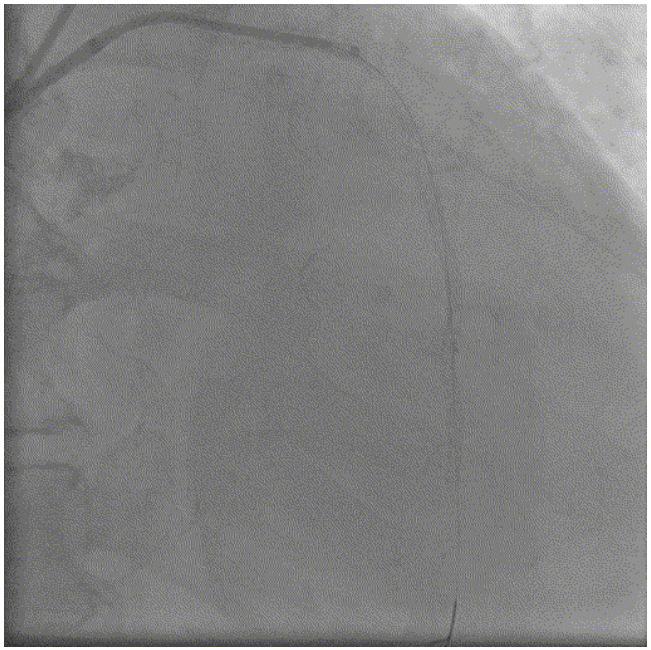


2 SES 2,5x26mm and 3,0x26mm



1 SES 3,5x38mm





Learning points

- The twisting wire technique is a valuable mean for wire retrieval
- Availability of different tools to deal with high calcified lesions and possibility to use combinations of them
- When planning a challenging procedure pursue maximum support and foresee material compatibility (e.g. Rotablator shaft does not fit the Guideliner 6F!!!!)