A novel way to release stuck rotational atherectomy burr

Tuomas Rissanen, MD PhD

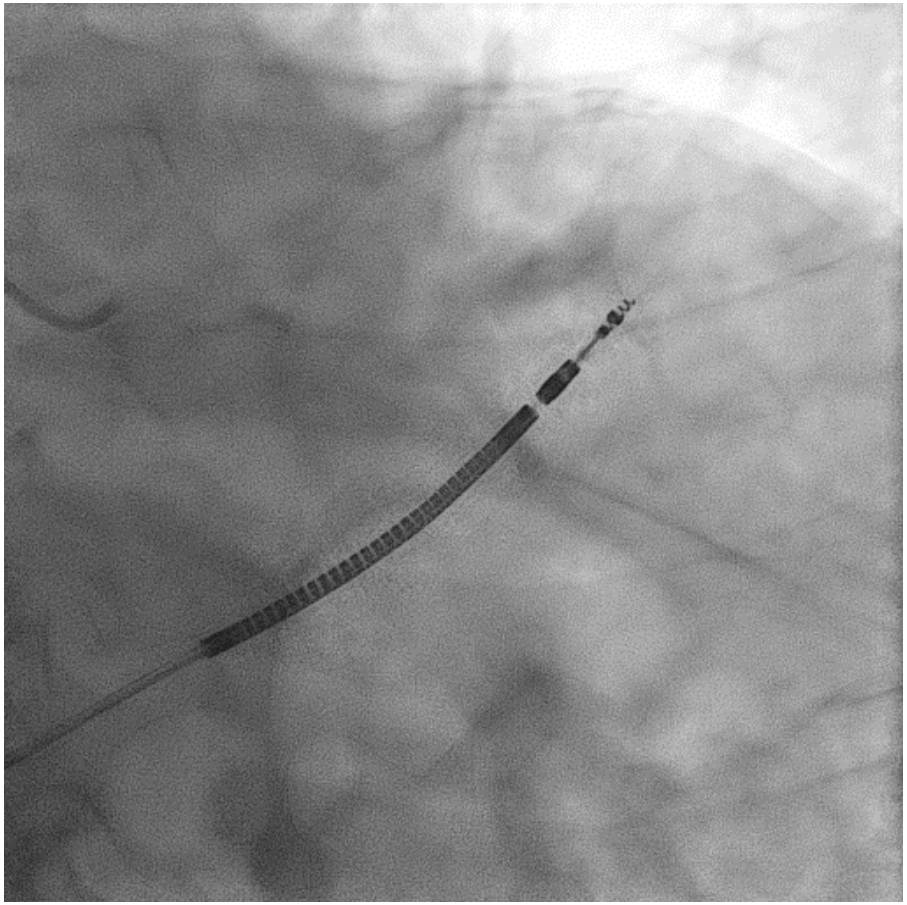
Joensuu Heart Center

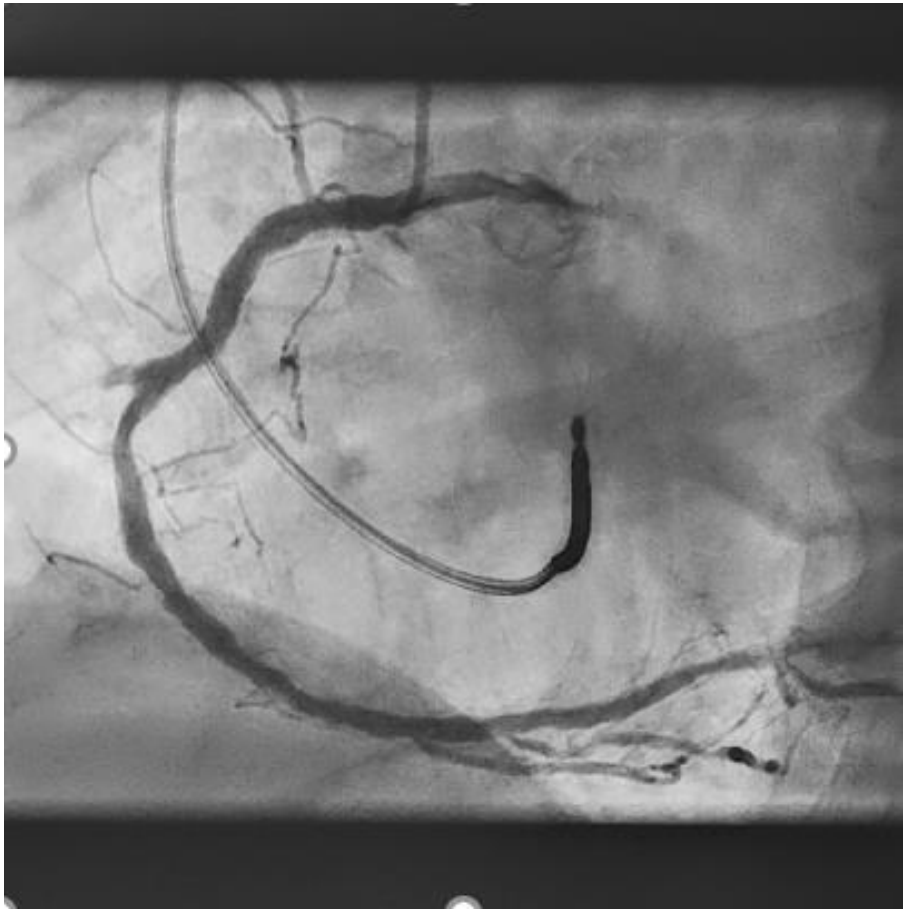
Finland

84 yr old man

- The patient had had symptomatic coronary artery disease for many years
- ICD for primary prevention
- Atrial fibrillation
- Now presenting with NSTEMI
- Antithrombotic medication before coronary angiogram: warfarin + aspirin

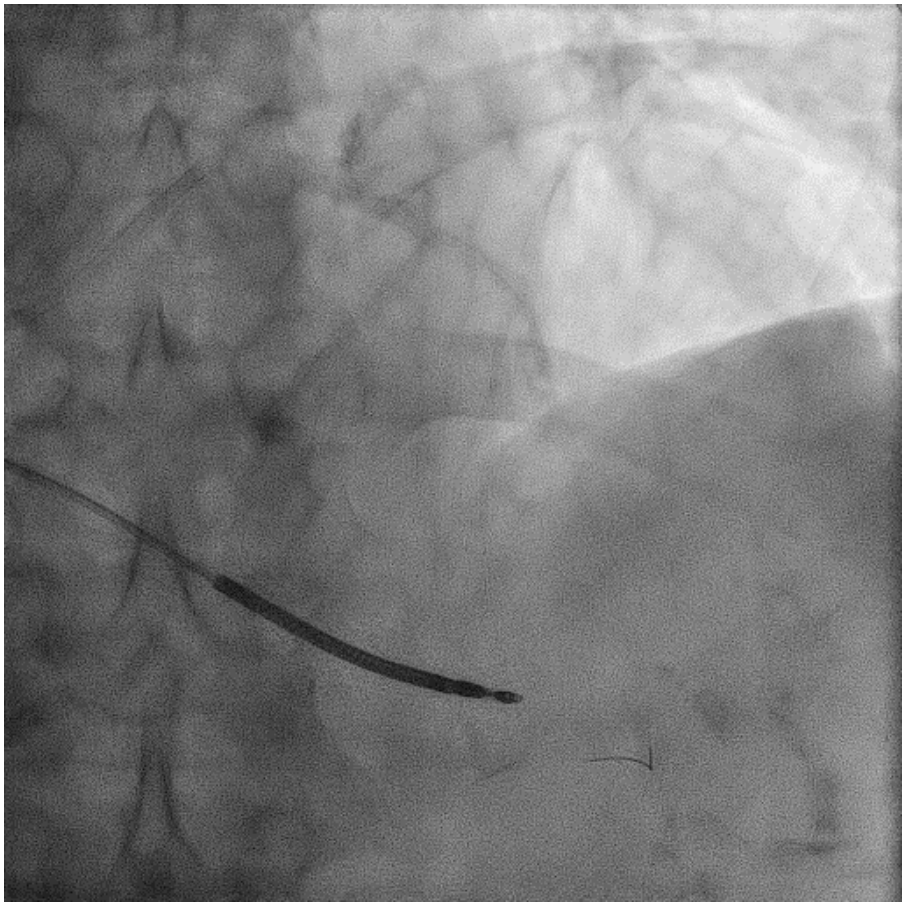
Coronary angiogram





Very diffuse CAD in the left coronary artery with calcium
The patient was too frail for CABG

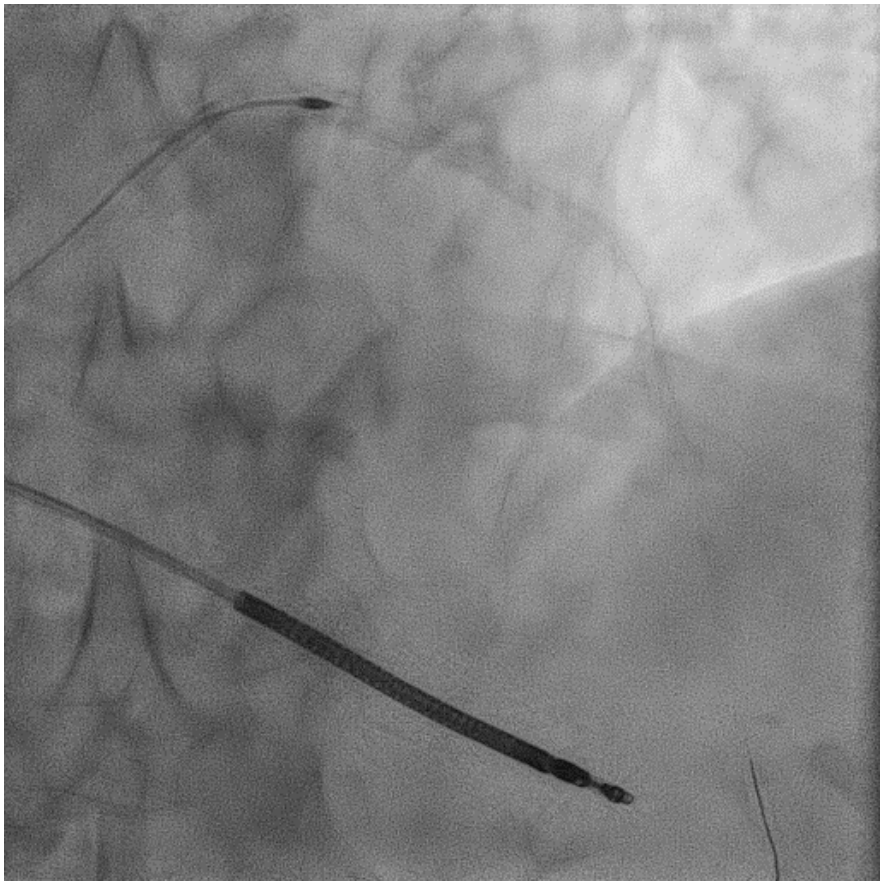
Coronary angiogram



Left anterior descending artery was calcified and torturous
The strategy: cangrelor infusion, upstream rota, 7F extrabackup

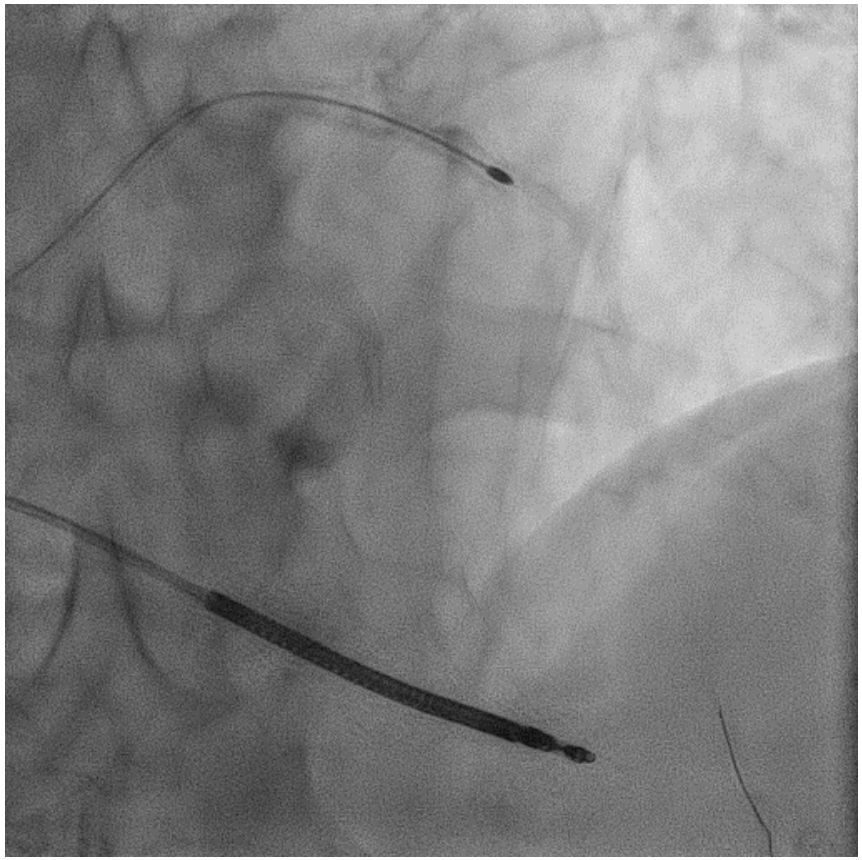
Strategy: rotablation of the left anterior descending artery

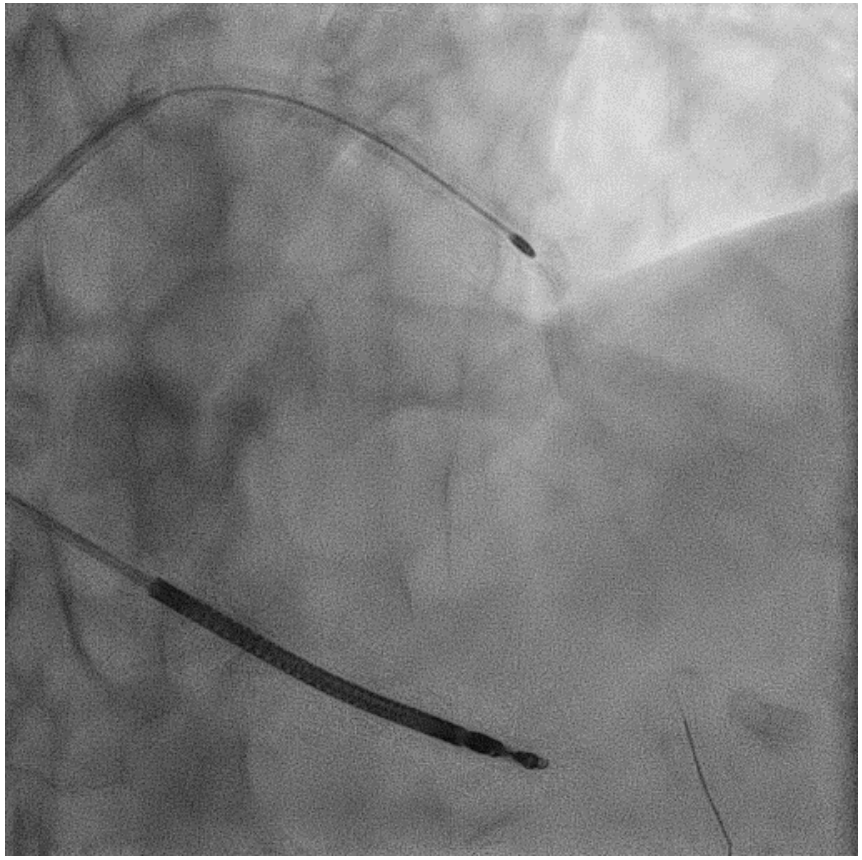
floppy rotawire
exchanged using microcatheter



The proximal LAD was debulked with 1.5 mm burr (180k RPM)

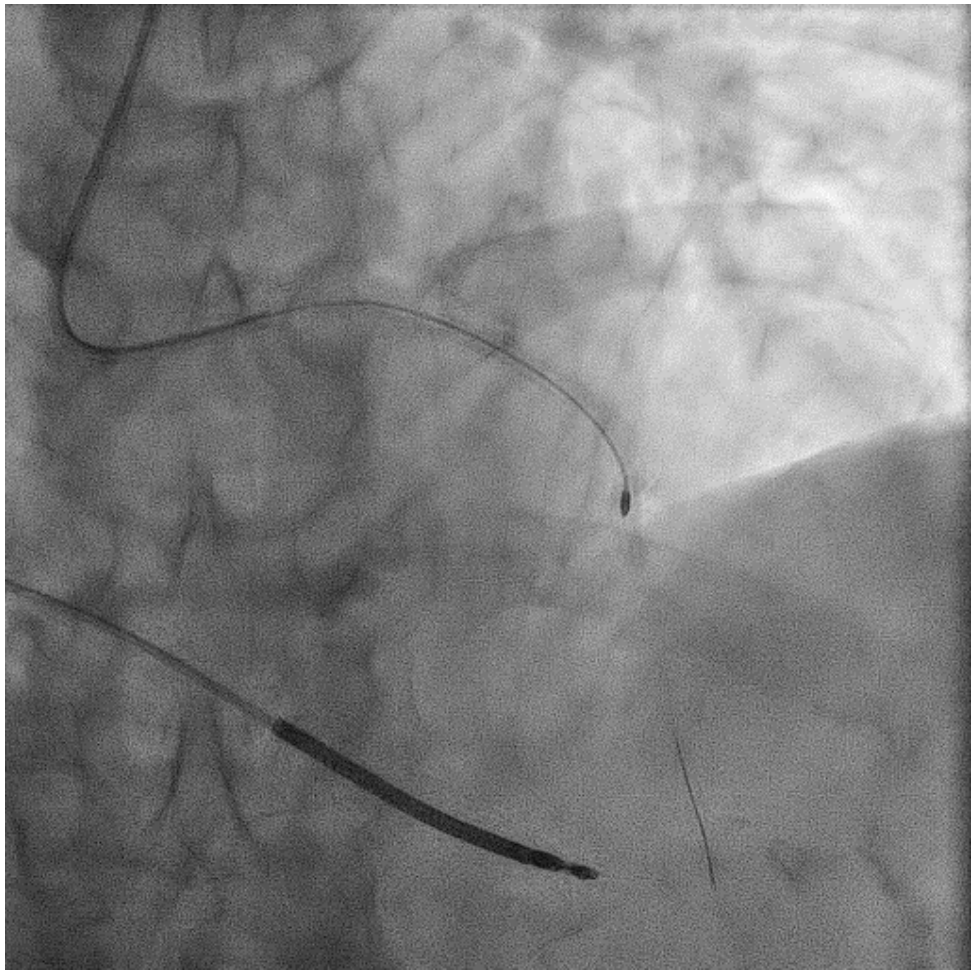
Rotablation of the left anterior descending artery





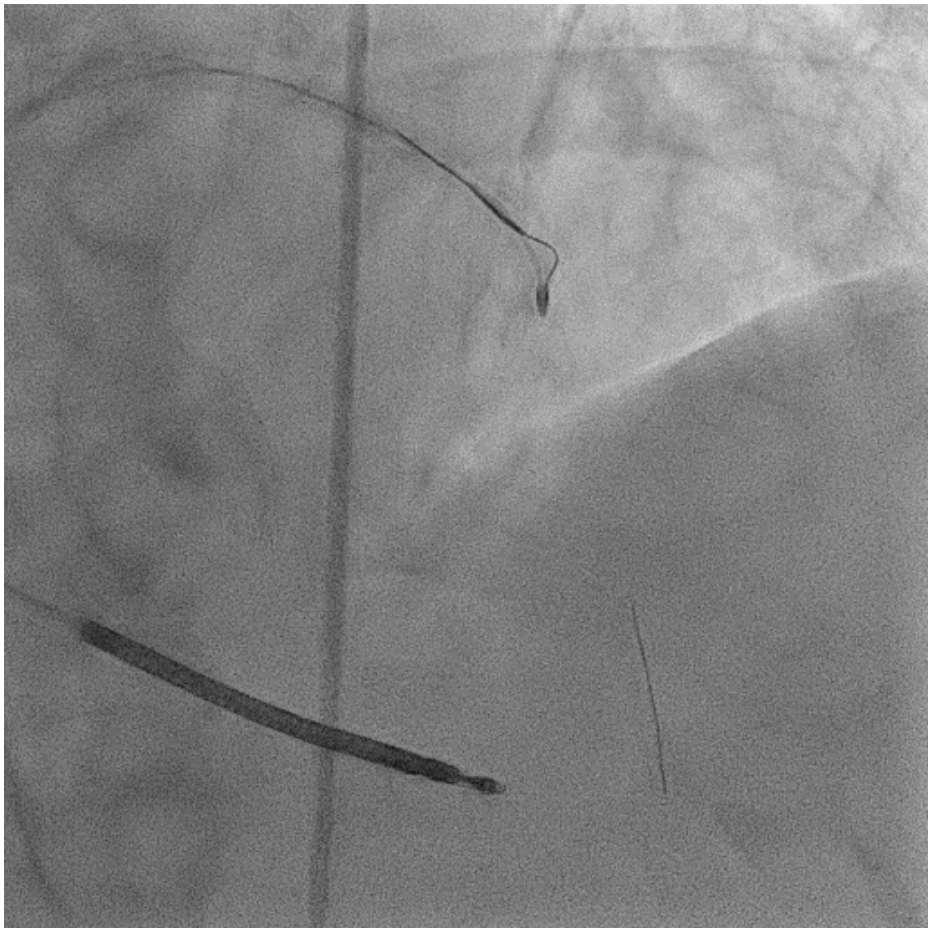
1.5mm burr did not cross the tightest stenosis behind the curve despite several attempts

Stuck rota burr

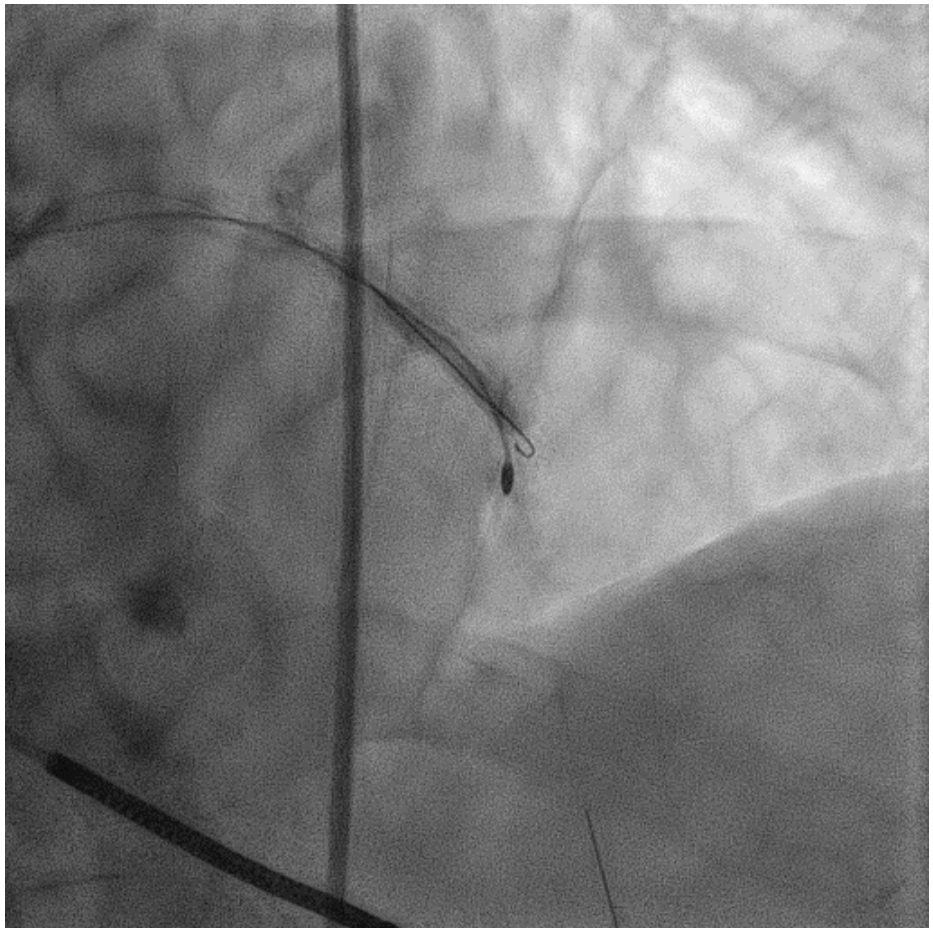


The final attempt to cross resulted in stuck burr
The burr did not retract with force

Application of a CTO technique for detaching the burr

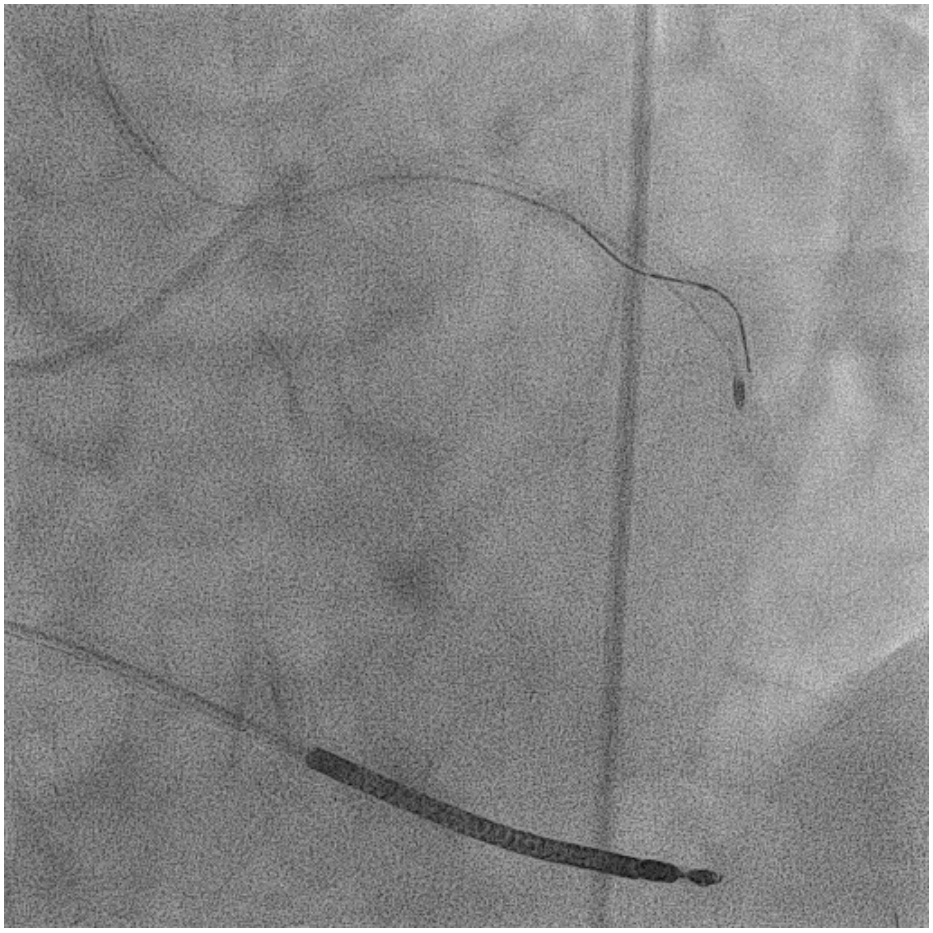


Pingpong guide
No success to pass the burr with any wire

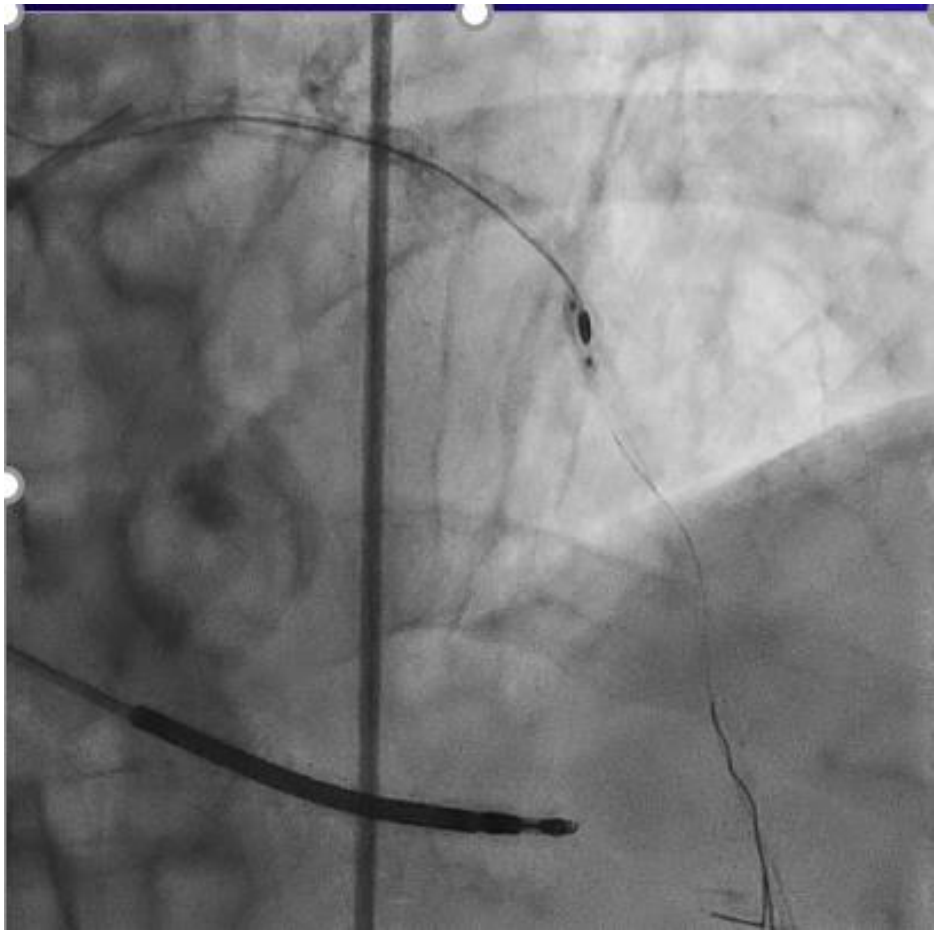


Proximal balloon inflation via pingpong guide was tested without success

Application of a CTO technique for detaching the burr

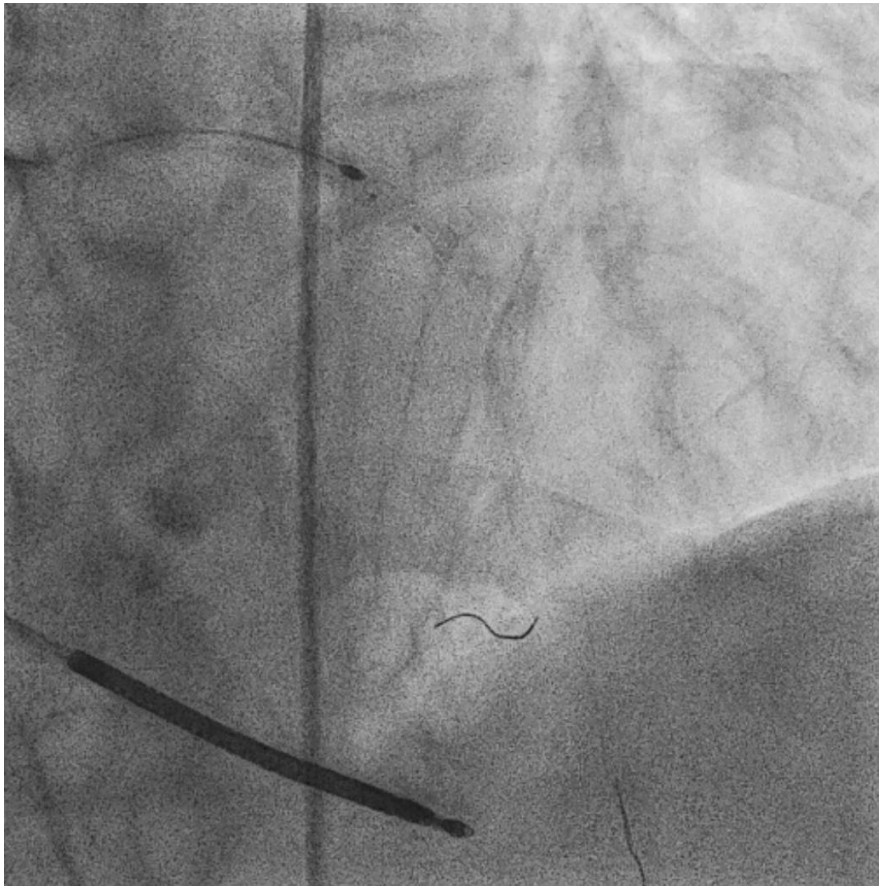


Changed strategy to knuckle technique with Gladius wire



Balloon inflation 2 x 10mm in the subintimal space

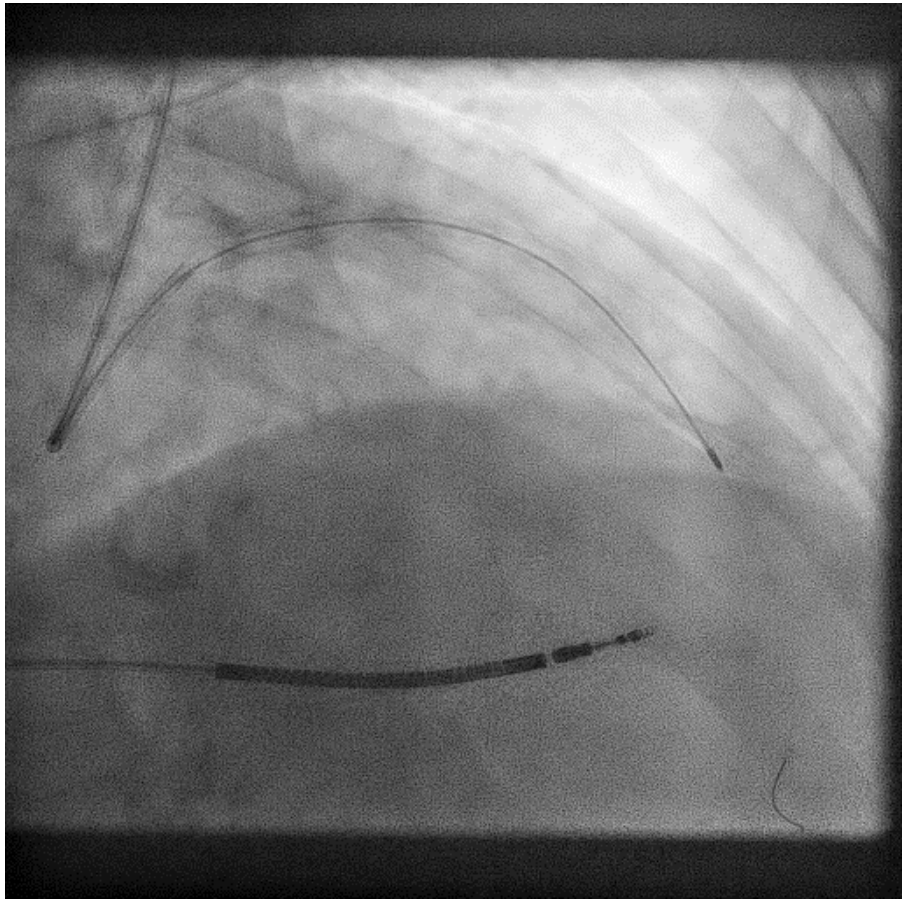
Release of the burr



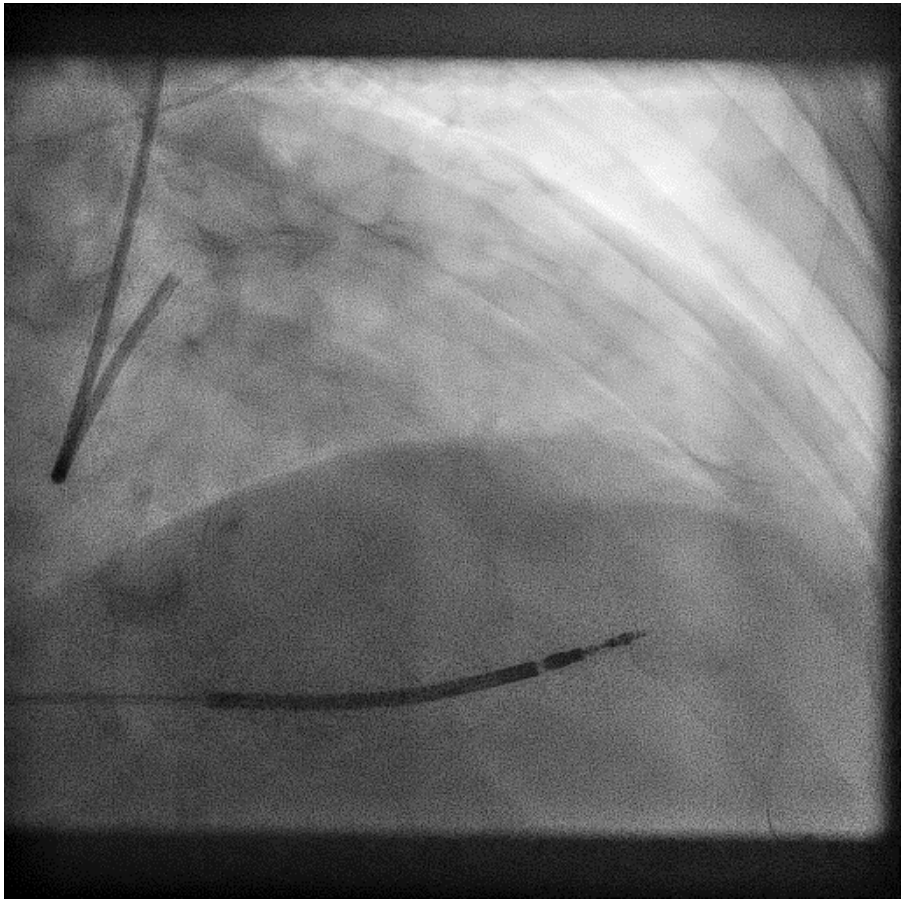
Now the burr releases easily
Rota wire exchanged to workhorse wire

Ballooning in true lumen with 2.5 x 15 mm NC
Distal LAD not crossable with 1.25mm balloon

Rotablation of the distal LAD

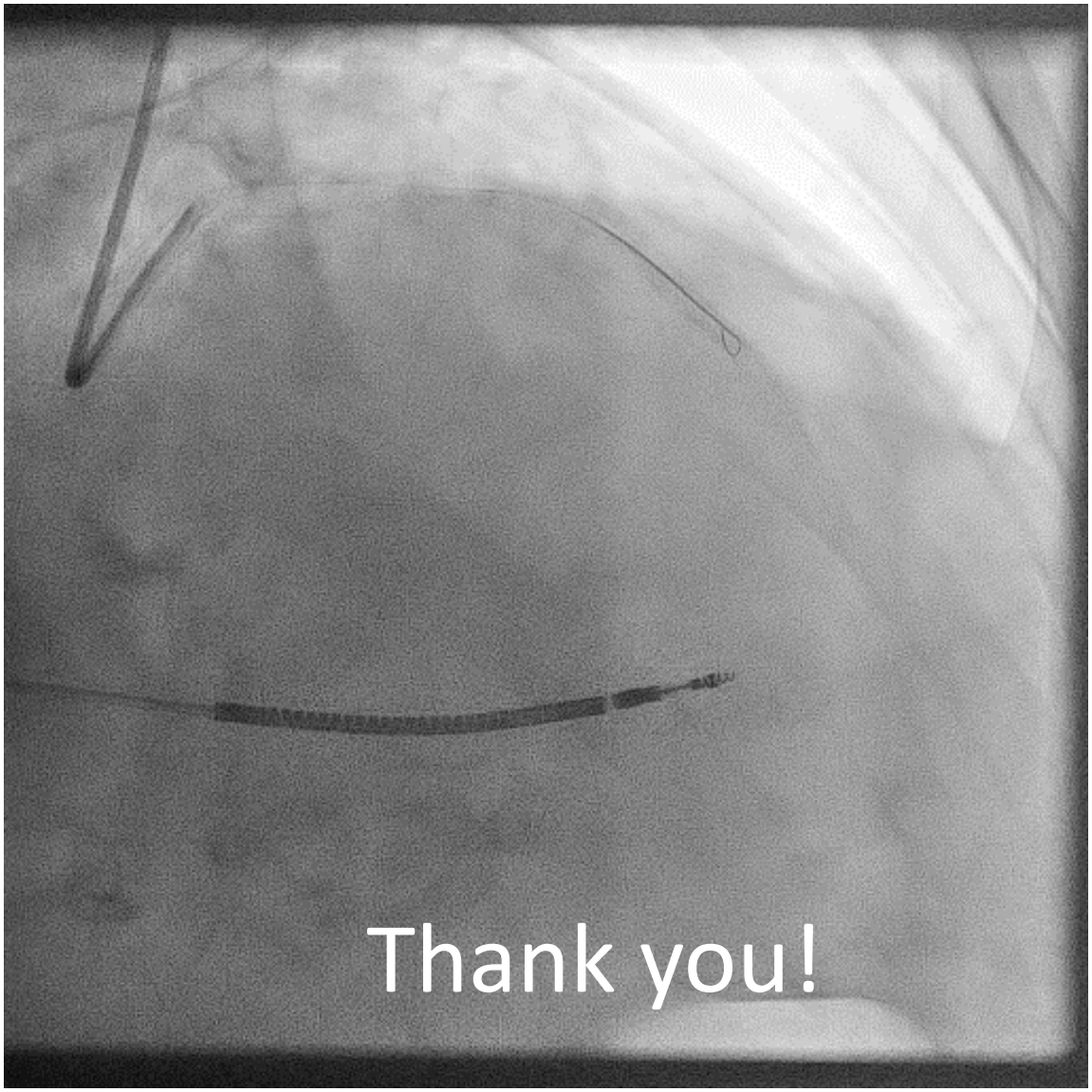


1.25mm burr



After rotablation

Final result



LM-LAD
DES 4.00 x 24
DES 3.5 x 48
DES 2.50 x 48

IM
Paclitaxel-DCB
2.5x15

Medication:
Ticagrelor 12 months
Perioperative ASA
NOAC
PPI