

*Heavily calcified lesions
Case presentation*

8 min

Antonio Colombo

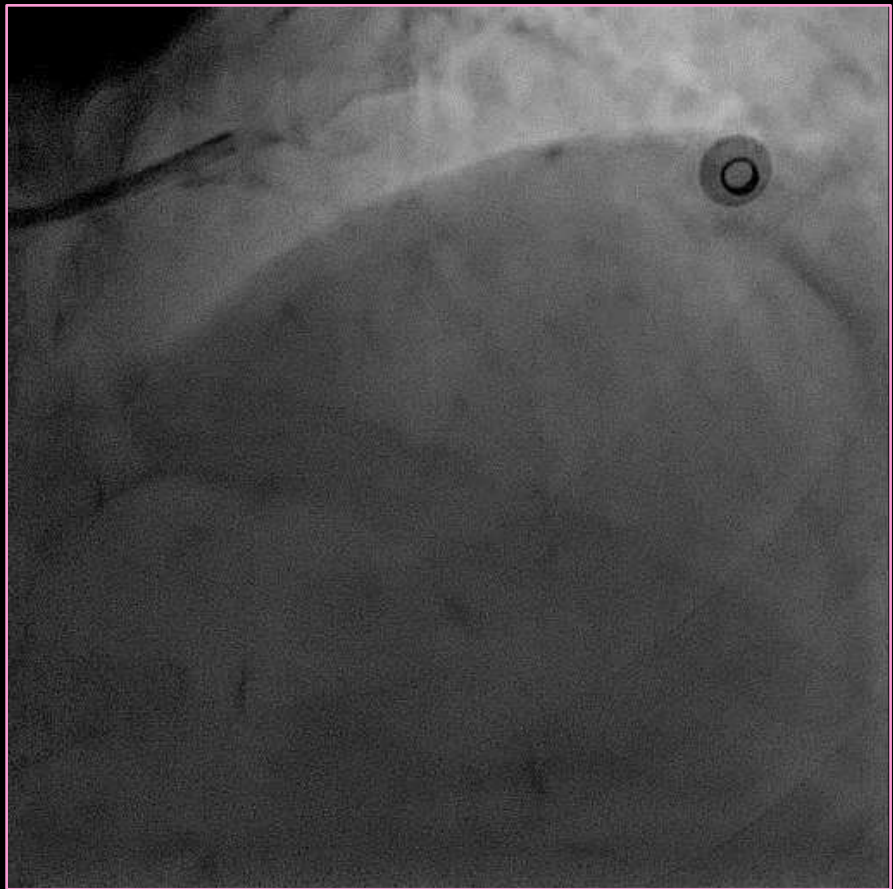
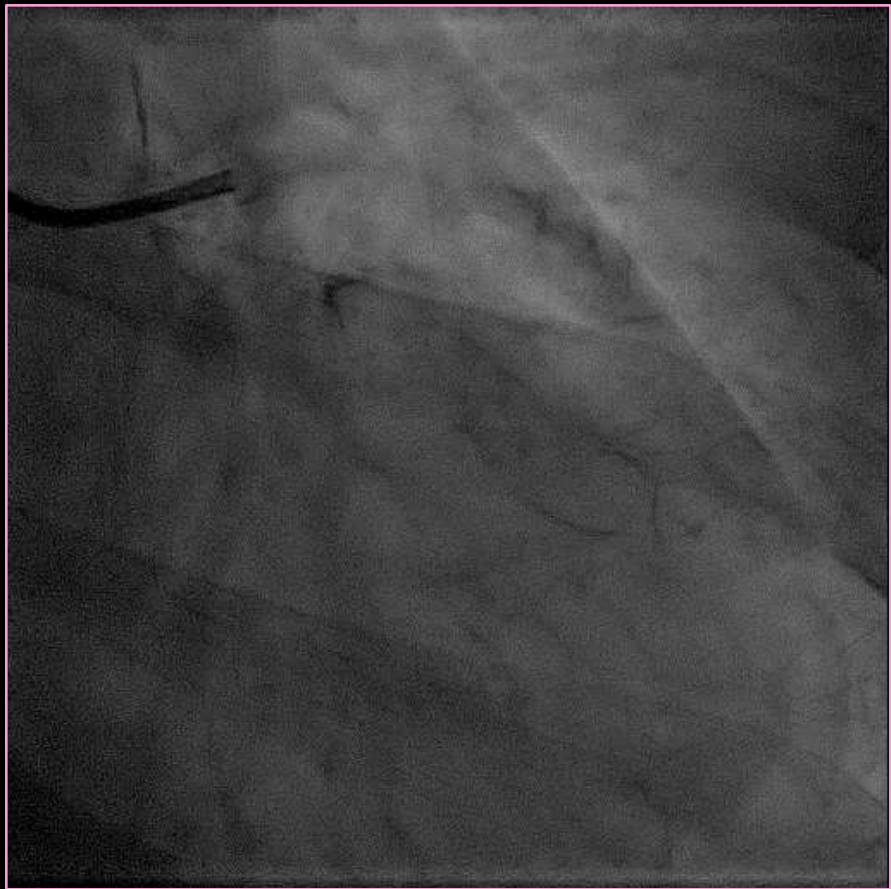
Centro Cuore Columbus, Milan, Italy

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No conflicts to disclose

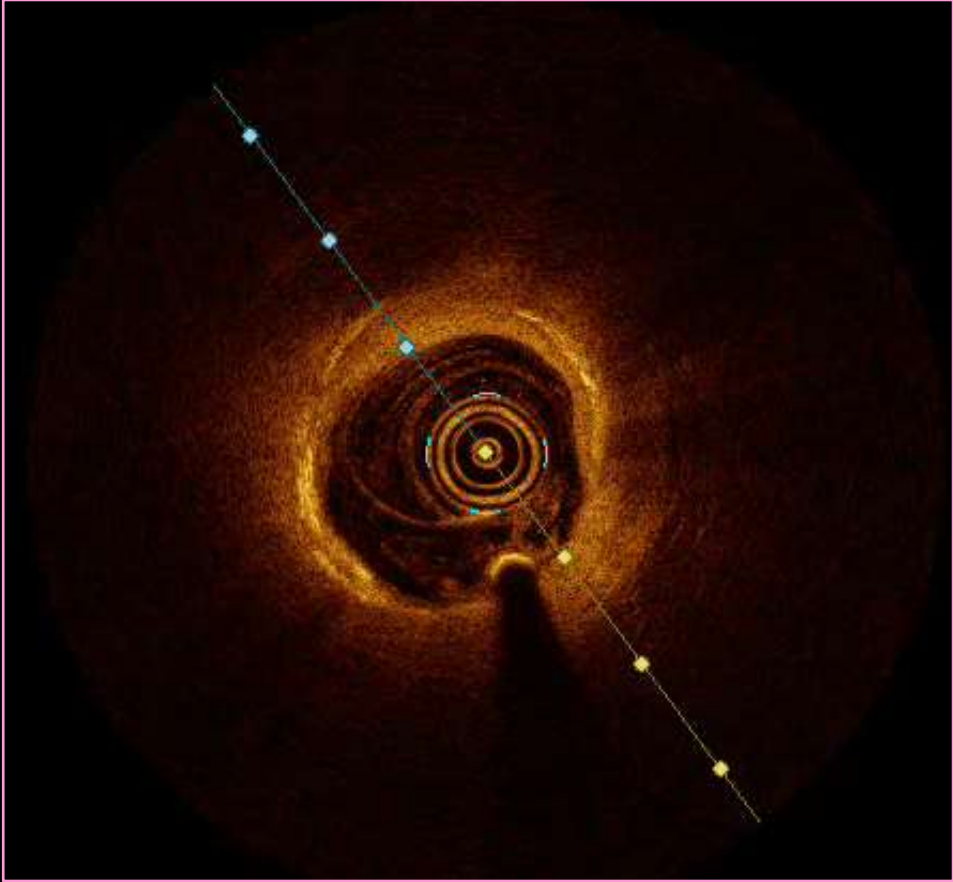
Case 1. diffuse mid LAD lesion

72 year-old, female
Coronary risk factors: hypertension, dyslipidemia
Stable angina



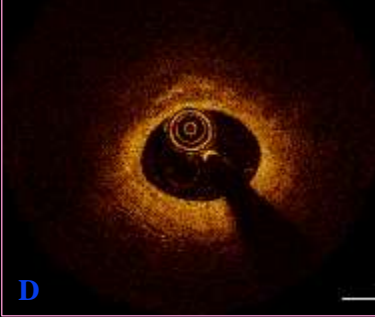
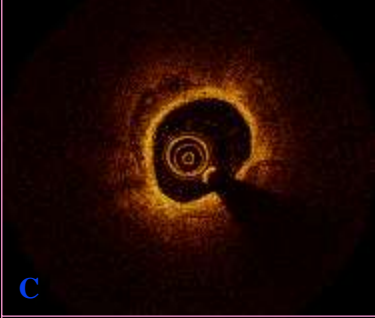
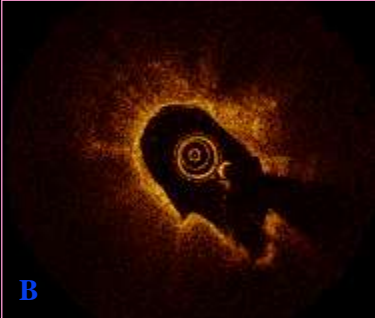
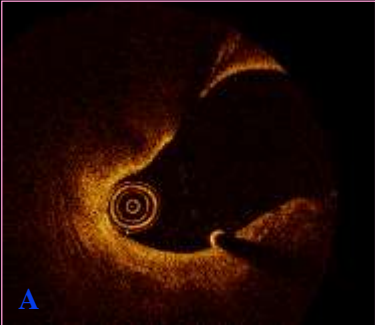
Mid LAD: diffusely and

Case 1. diffuse mid LAD lesion



Baseline OCT pullback:
➔ Diffusely and severely calcified lesion

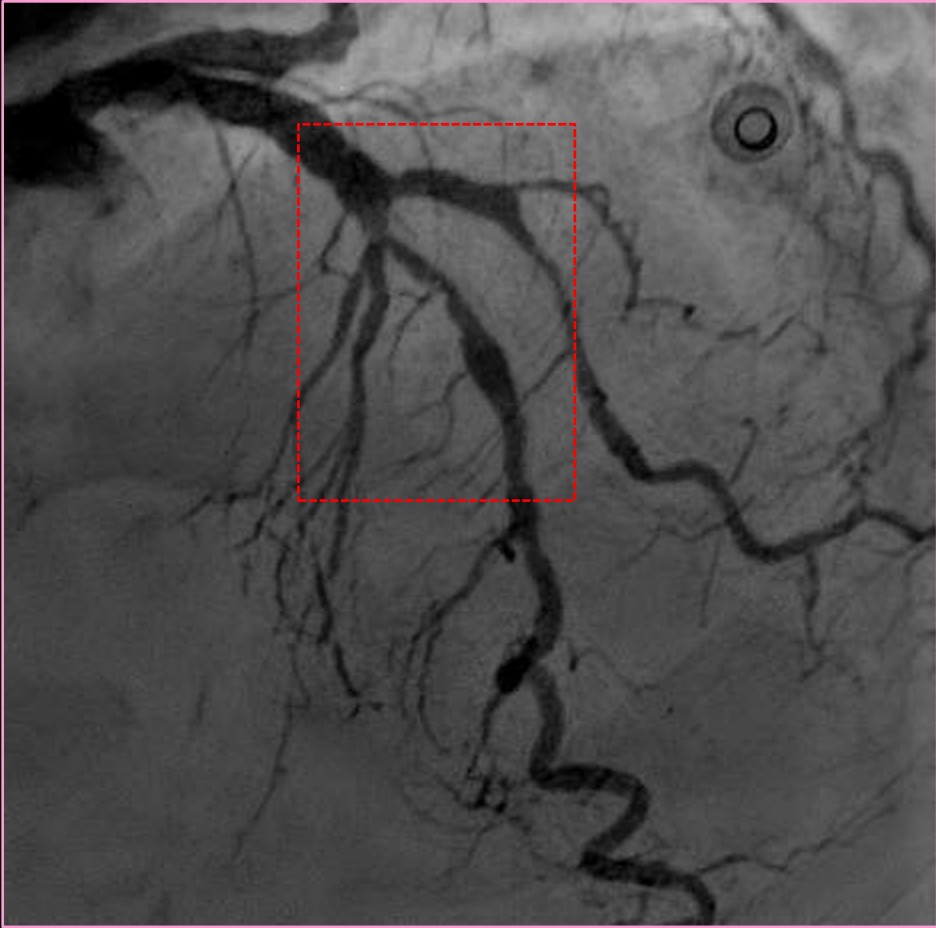
Case 1. diffuse mid LAD lesion



Diffusely and severely calcified LAD

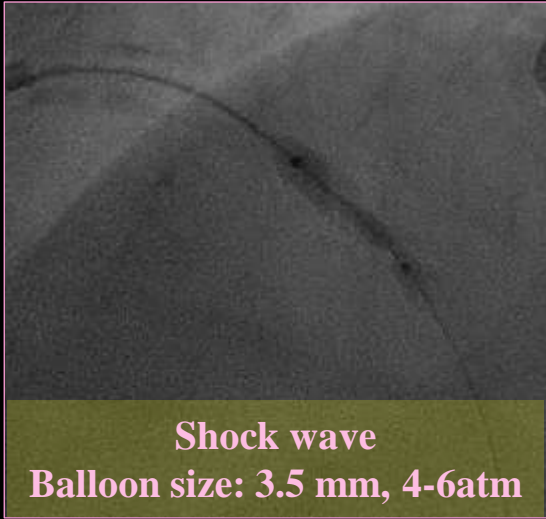
- ✓ Large arc (>180 degrees)
- ✓ Thick calcification

Lesion preparation with shock wave

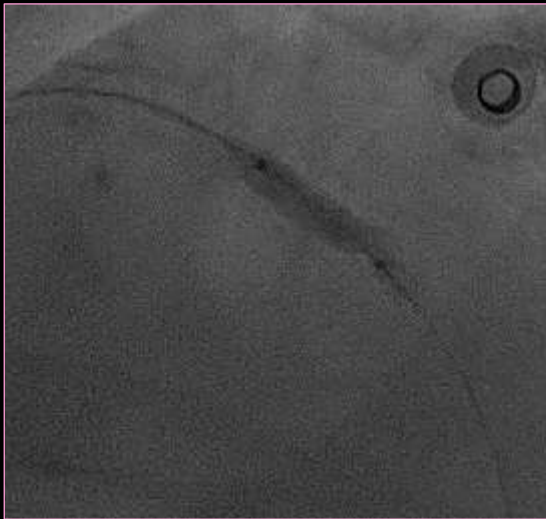


Lesion preparation with shock wave

Balloon inflation: 4atm (10 sec shock wave)
⇒ 6atm ⇒ deflation
(Maximum: 8 sessions/ catheter)

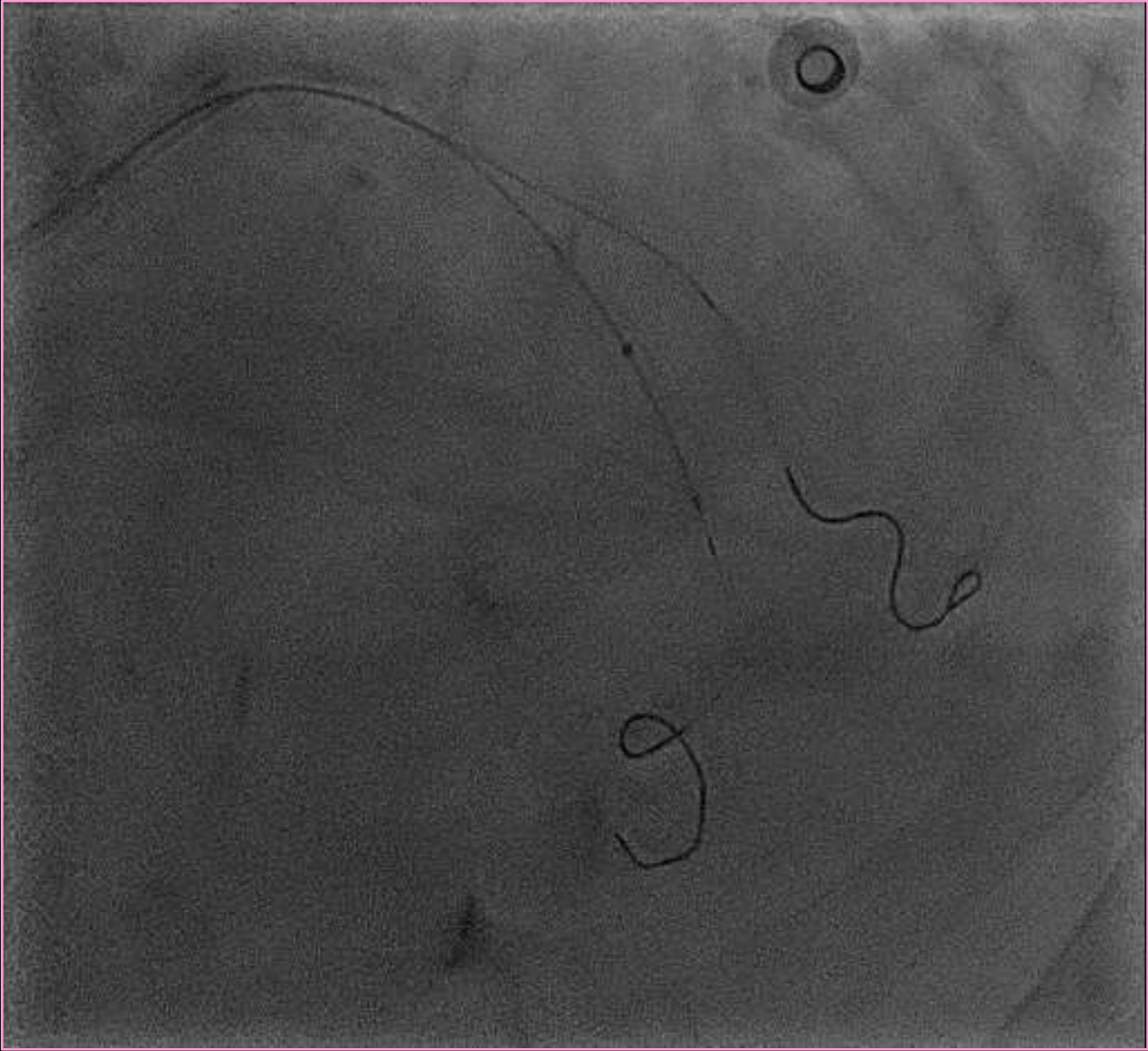


1st -3rd session: the lesion was undilated



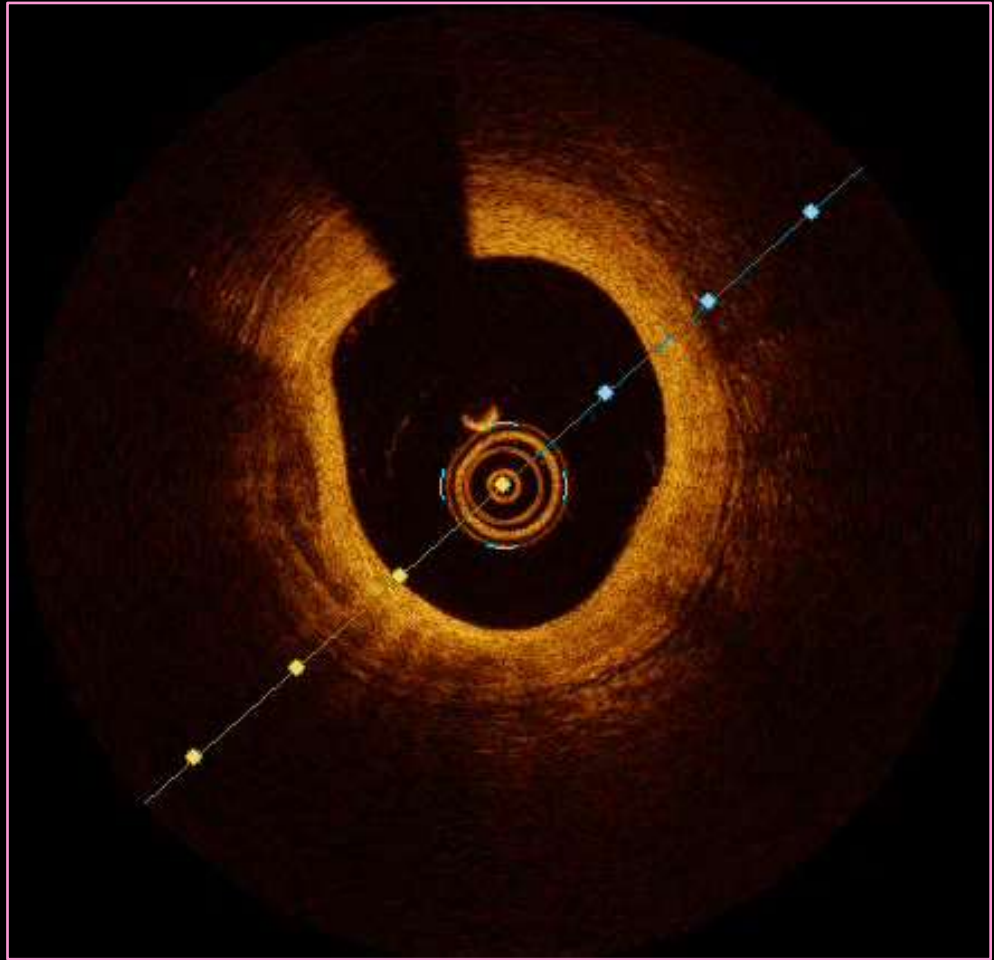
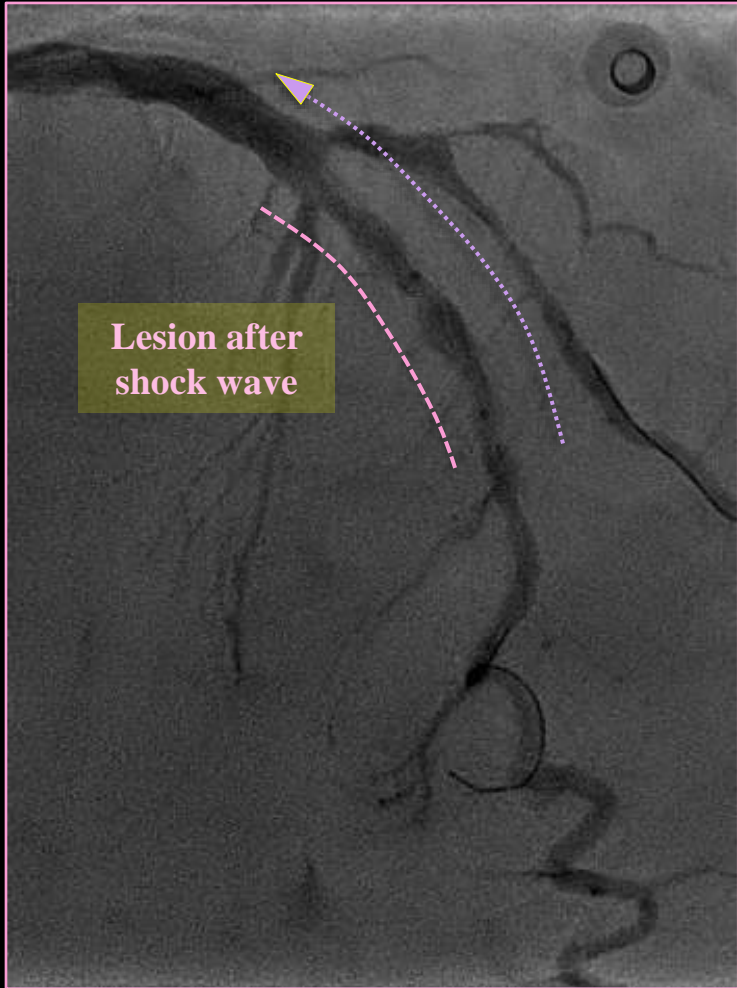
4th session: the lesion was dilated

Lesion preparation with shock wave



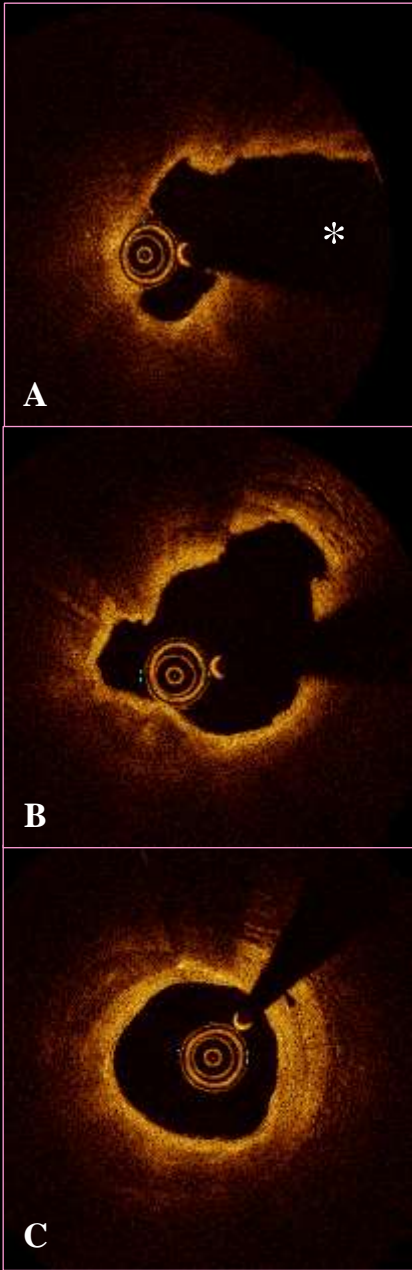
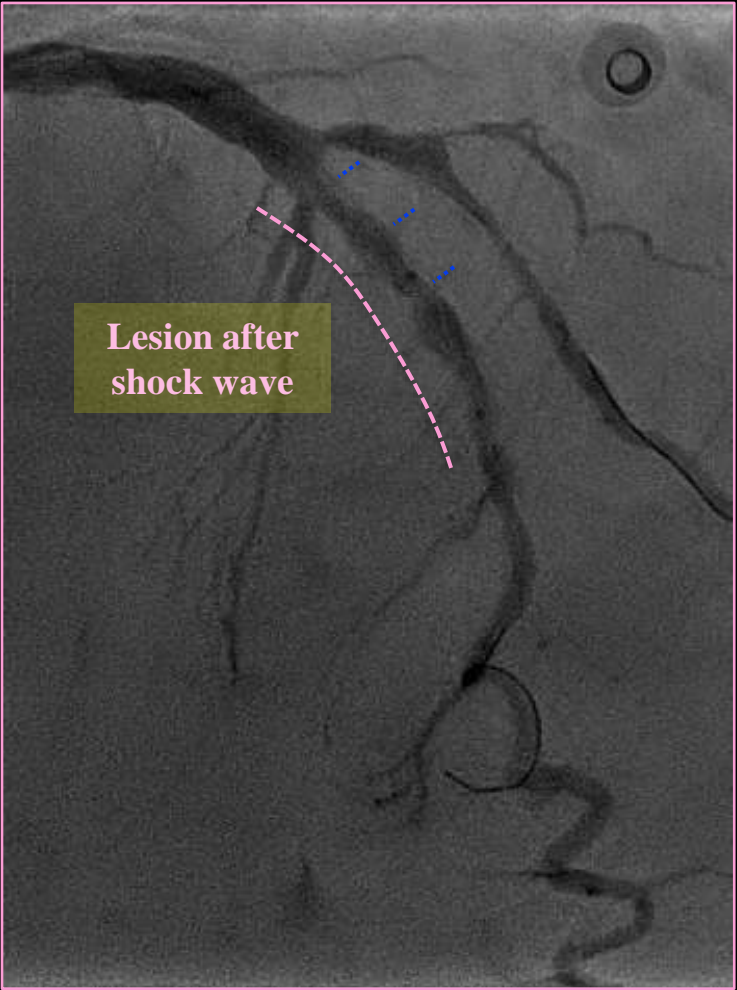
After shock wave (8 sessions)

OCT pullback after shock wave



➔ Expanded lesions with dissections

OCT findings after shock wave



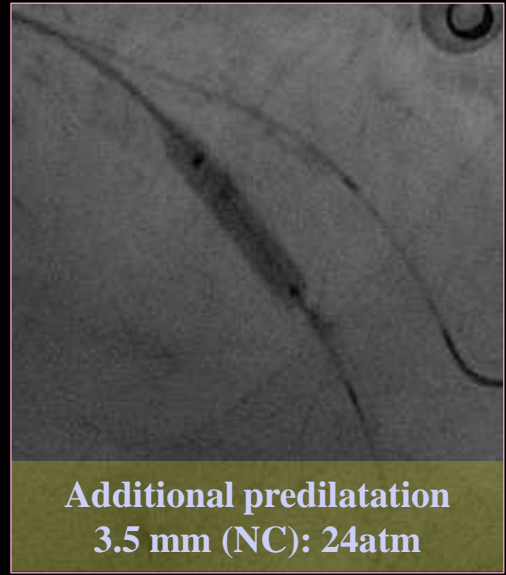
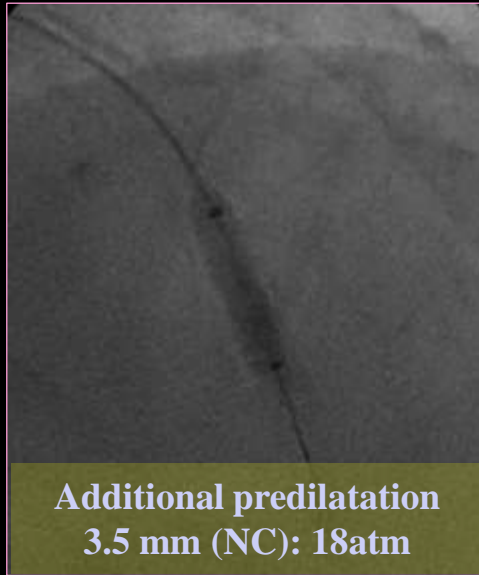
Lesions were expanded;

➔ ✓ No obvious cracks of calcification

✓ Dissection around calcifications

A: * Septal branch

Additional predilatations after shock wave

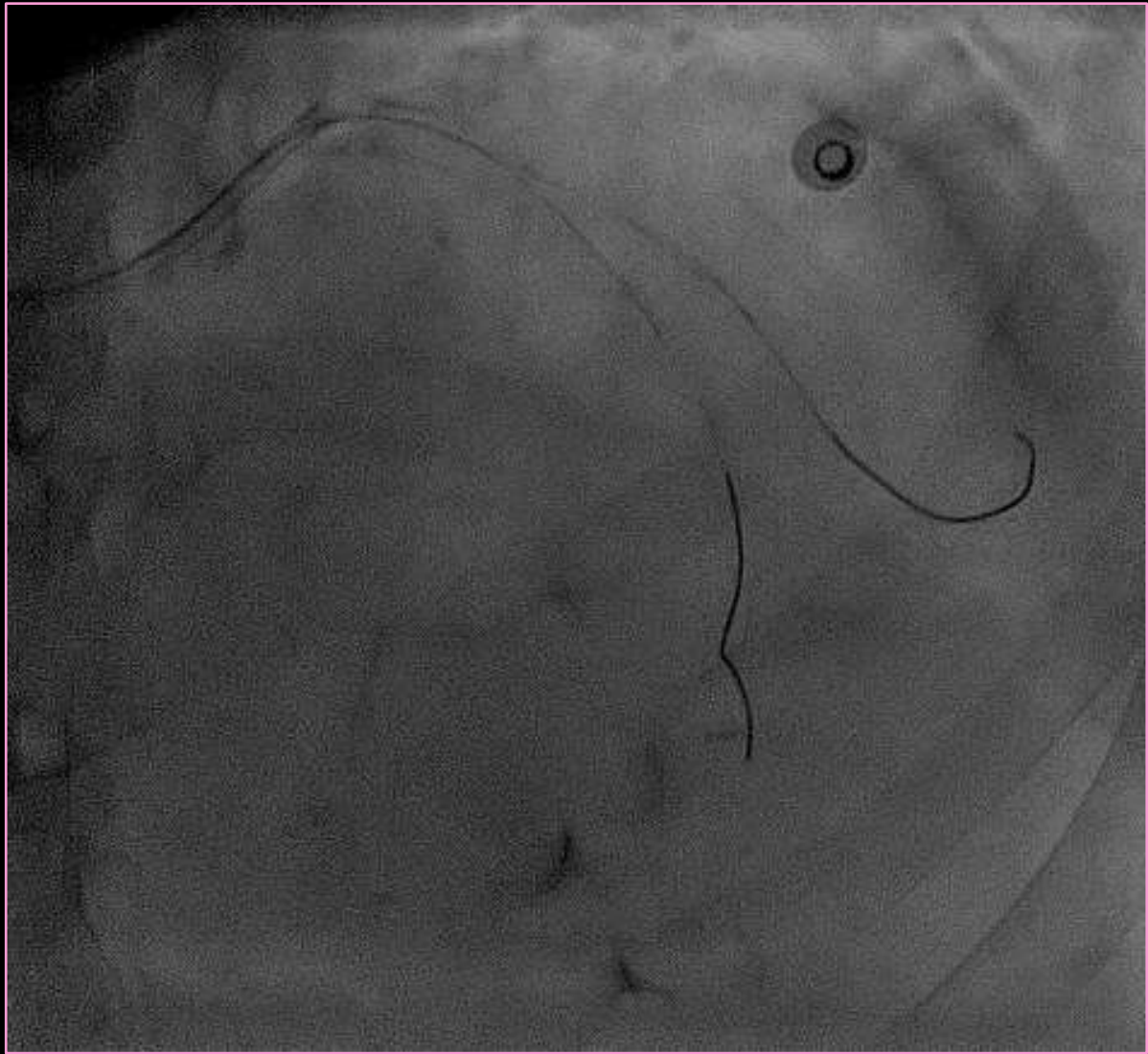


Multiple additional predilatations
for the lesions underwent shock wave

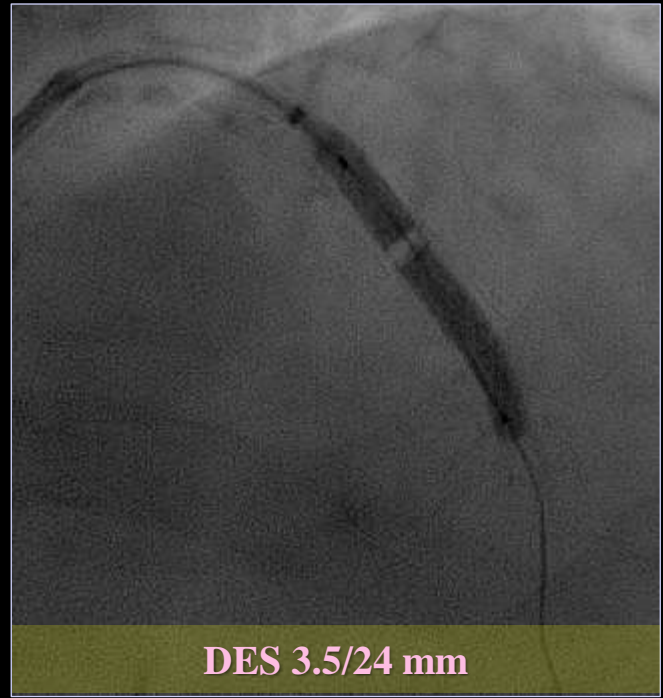
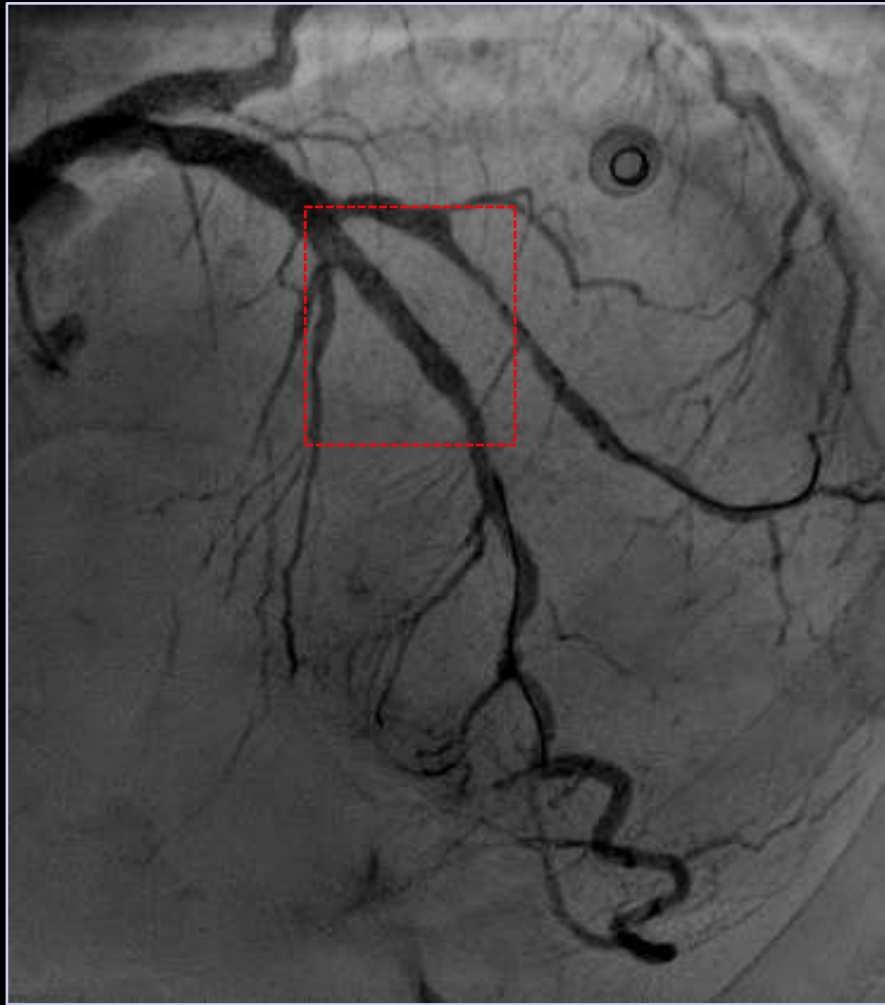
➔ Appropriate lesion expansion

After shock wave
➔ Additional predilatations

Additional predilatations after shock wave



➔ Appropriate lesion expansion: “stent-like” results

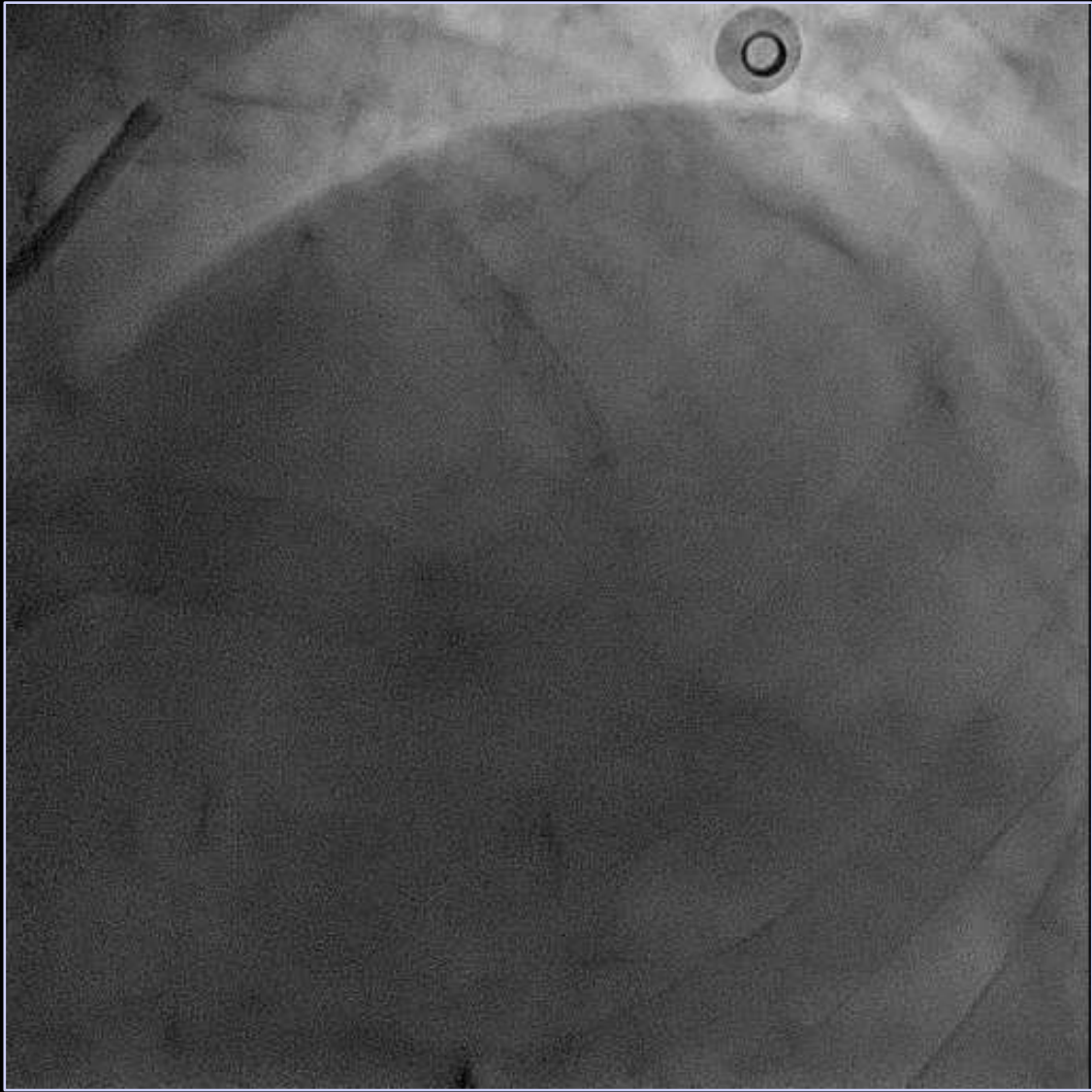


Because of the difficulty to deliver relatively long stent, GuideLiner support was required.

➔ **Post-dilatation: 3.5 mm (NC): 18-24atm**

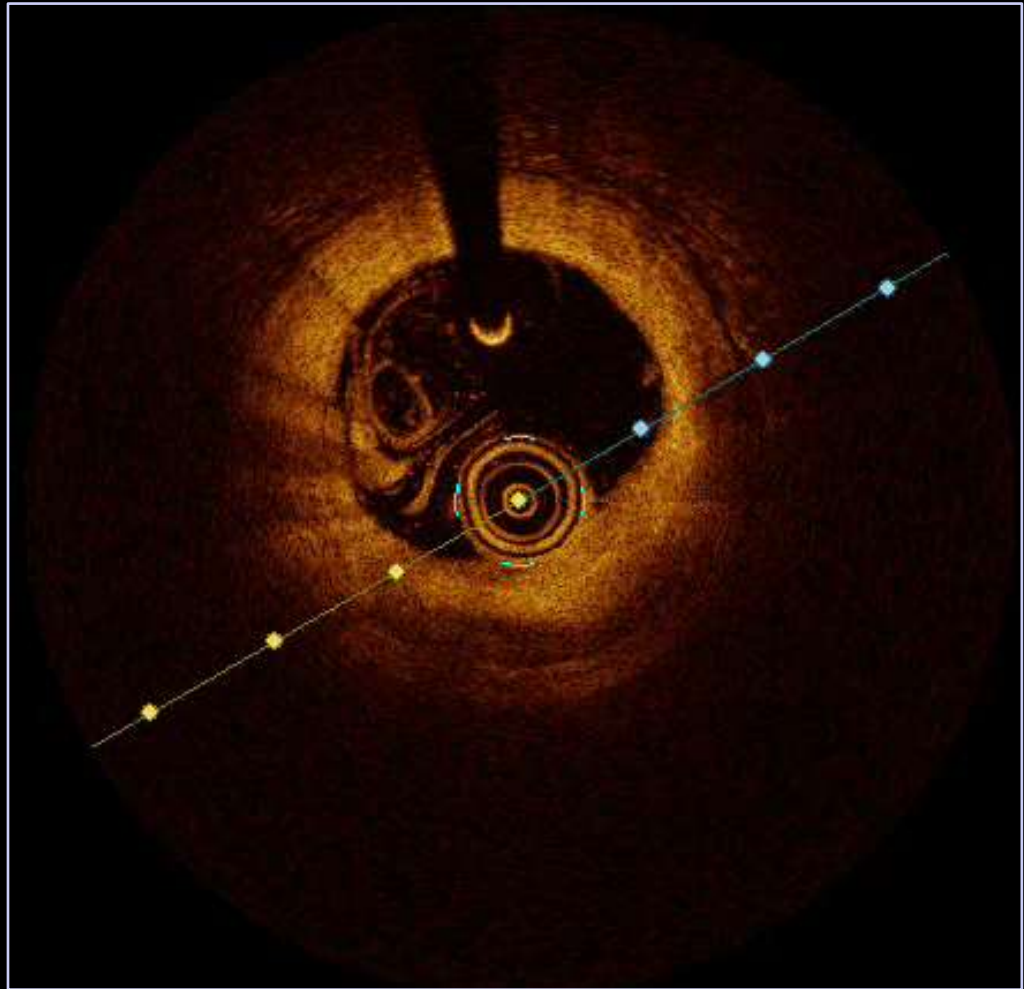
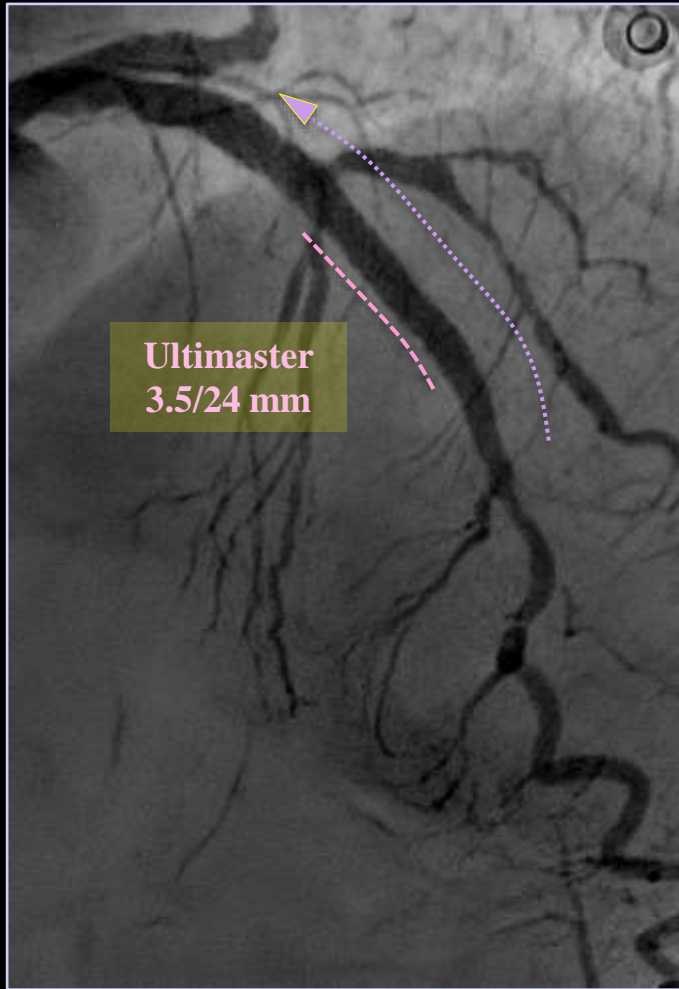
**DES implantation
after appropriate lesion preparation**

DES implantation after appropriate lesion preparation



→ Excellent angiographic results

OCT pullback after DES implantation



➔ Optimal stent expansion: “Round shape”
Optimal stent apposition

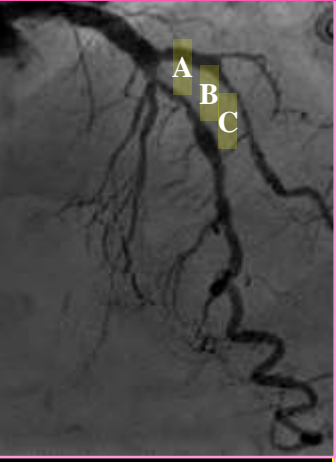
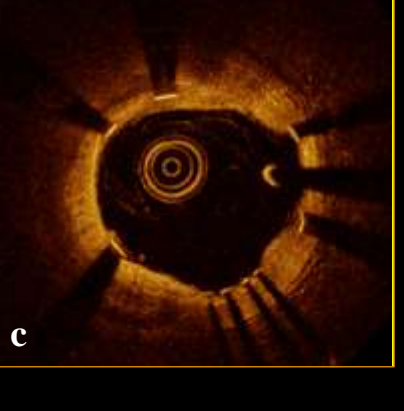
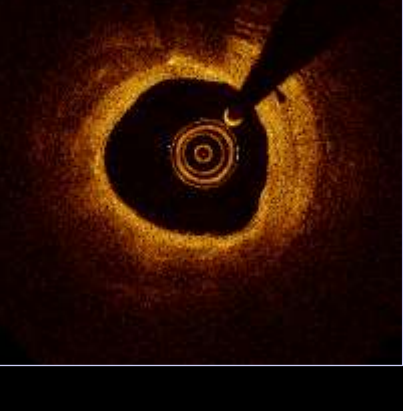
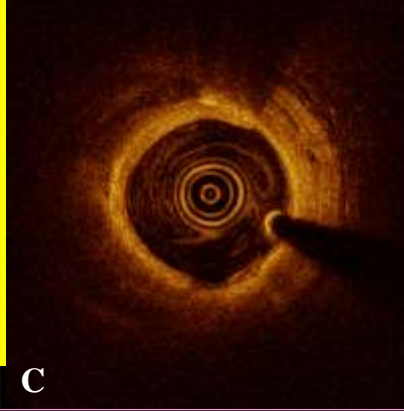
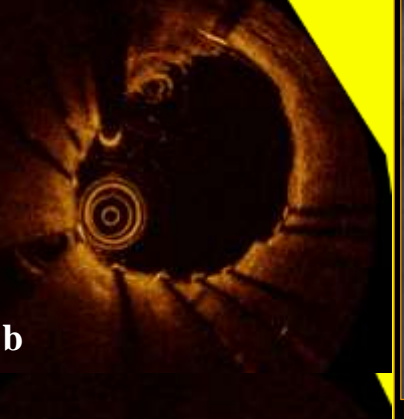
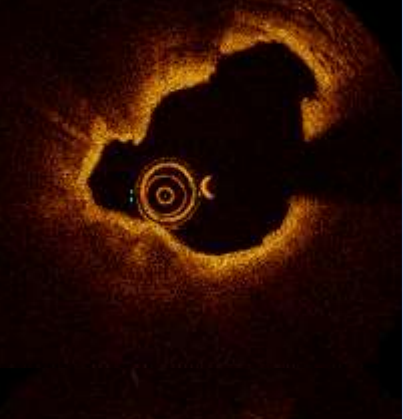
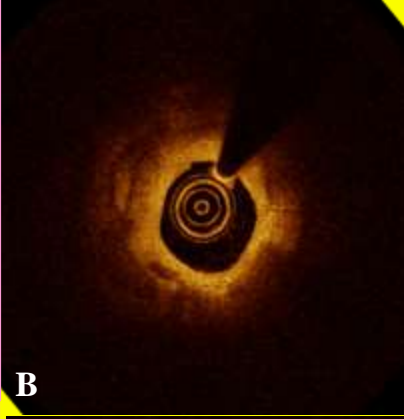
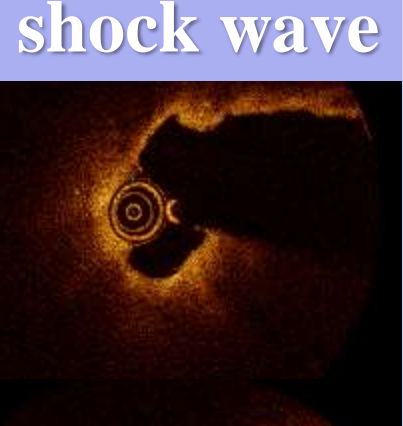
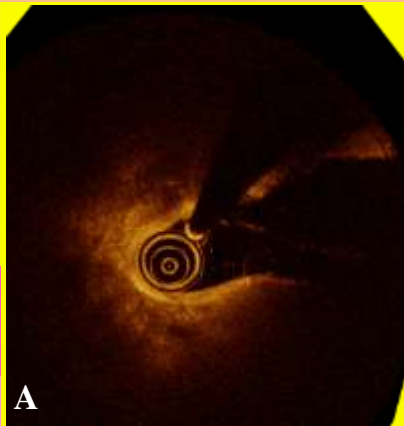
Baseline

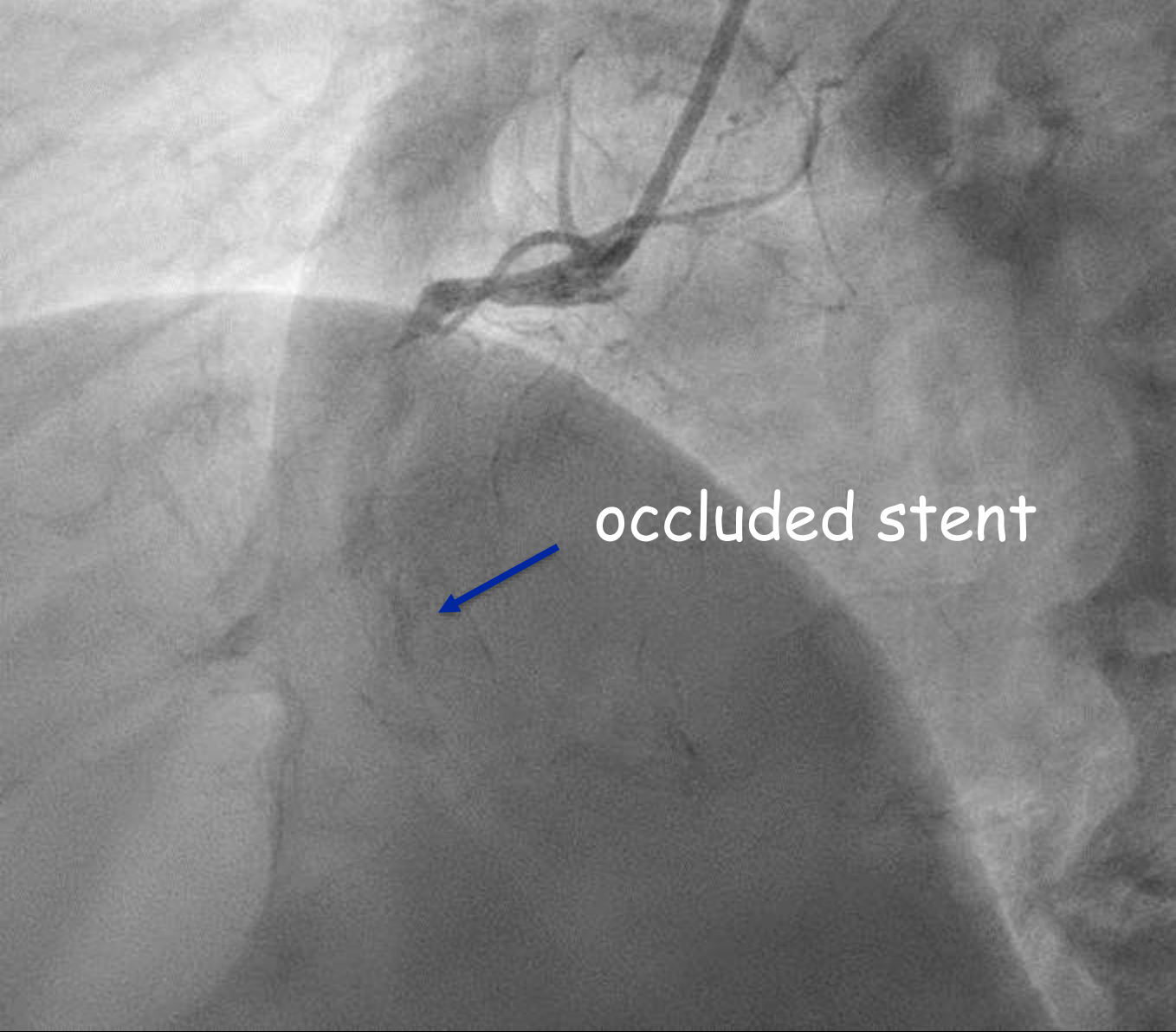
**After
shock wave**

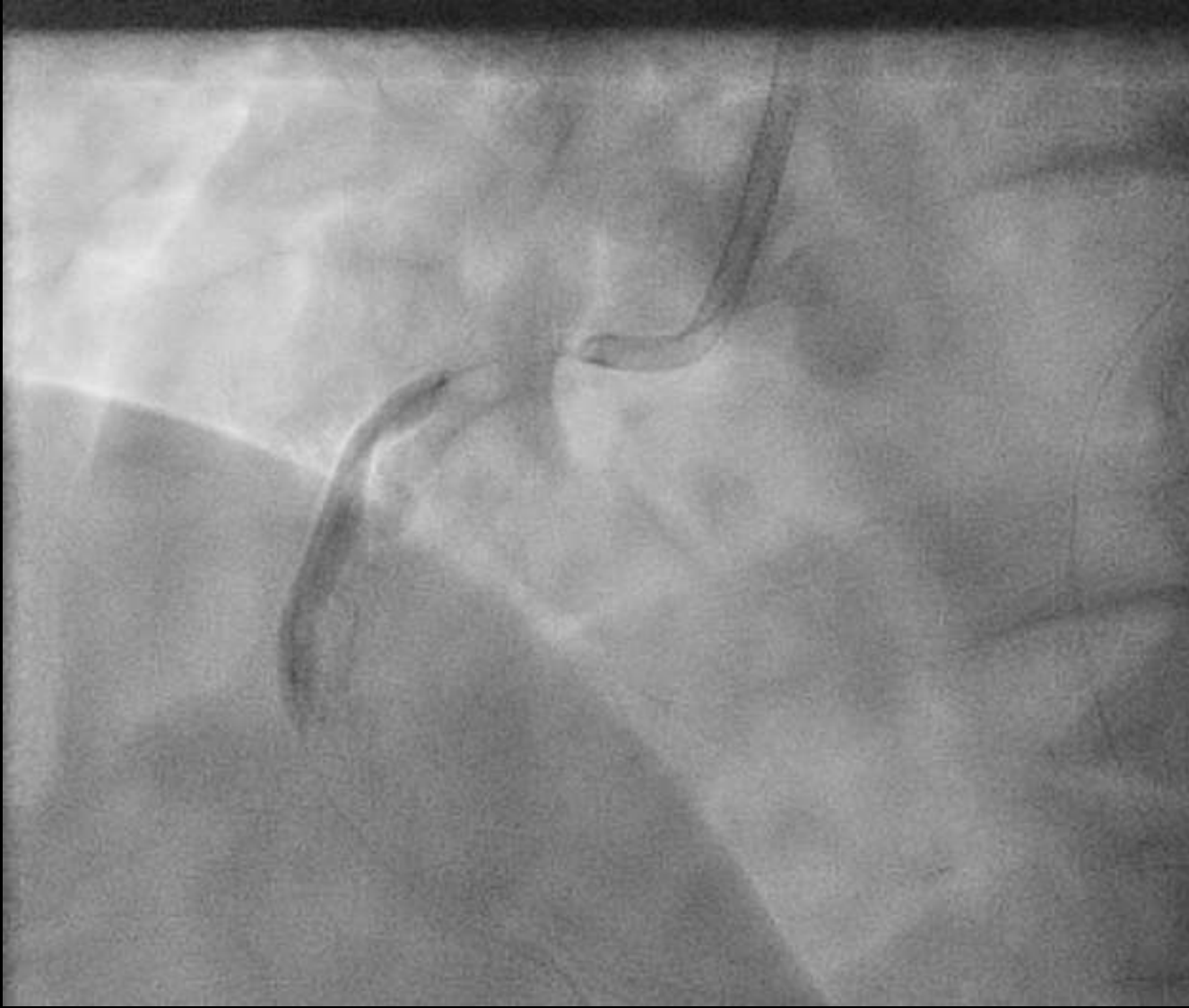
Final

Baseline

Final



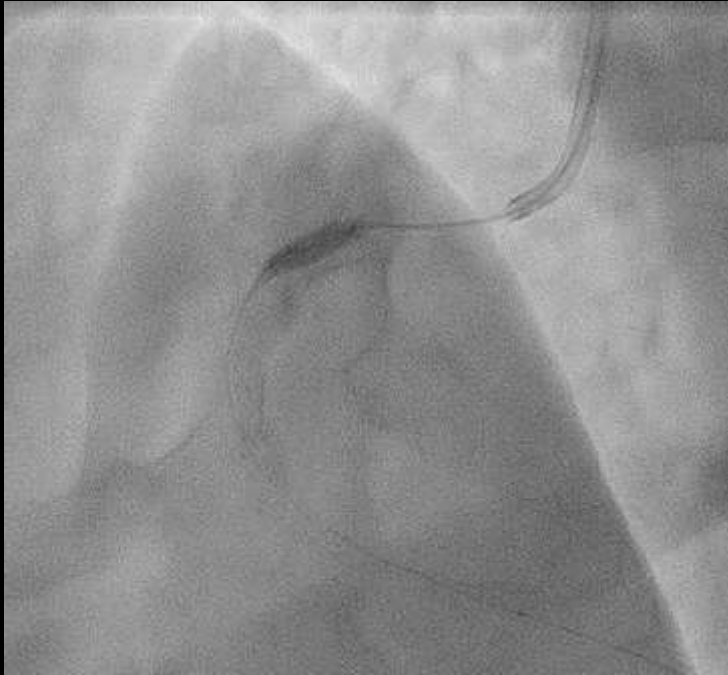




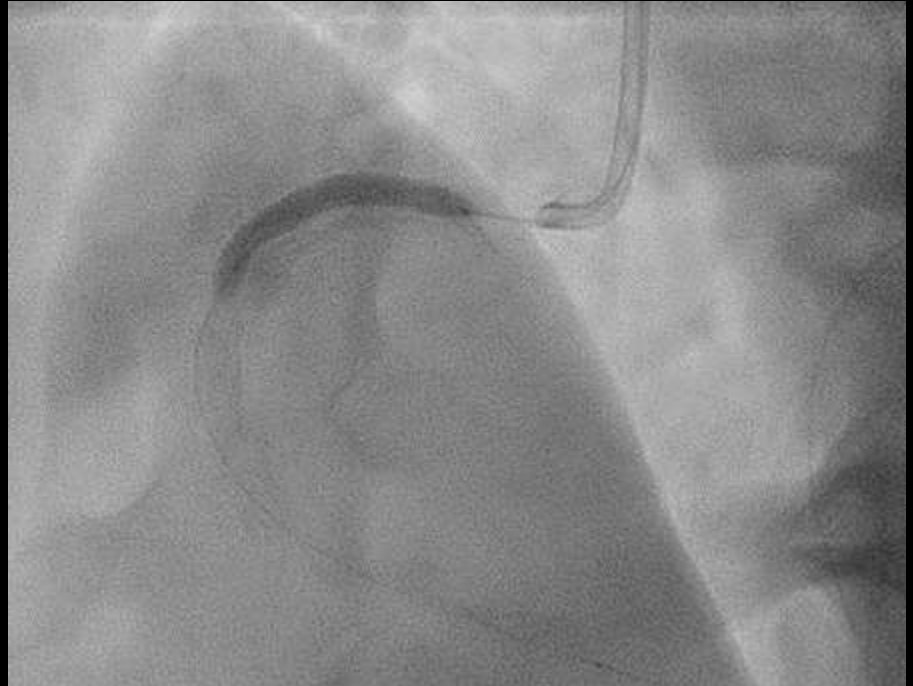
The passage has been subintimal all the way



Shockwave balloon



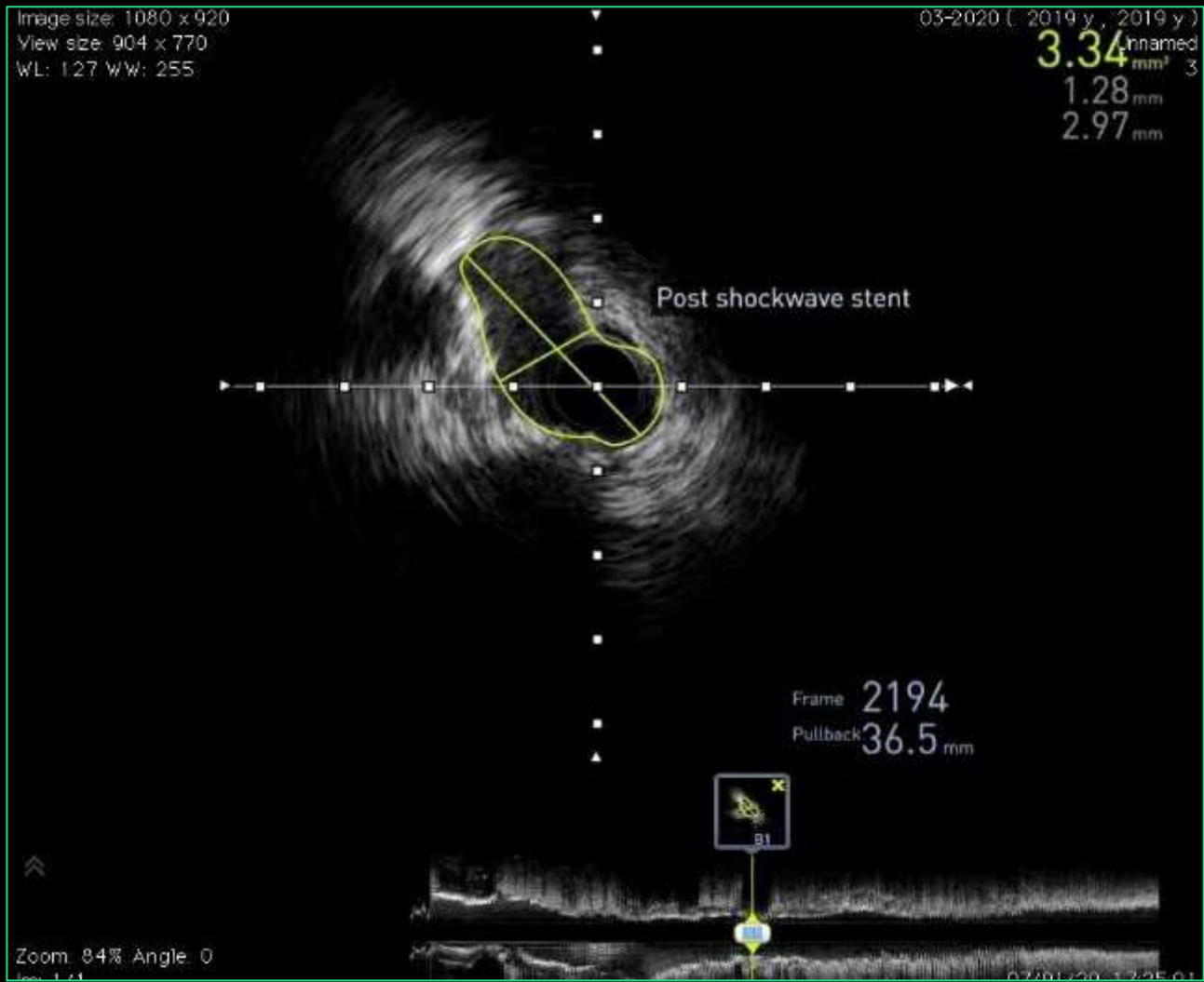
Full inflation of NC balloon



Final



IVUS



Post Shockwave 3.0, 22 atm predilatation and DES 3.0x38

IVUS



Post 2° Shockwave 3.0 and 3.0 24 atm NC

IVUS



Post OPN Balloon 3.0x20mm 37 atm

Conclusions

There are different strategies to obtain an optimal result in calcified lesions

Rotational atherectomy is very important and underutilized in calcified lesions

Imaging is essential to guide strategy and to establish if an optimal result has been achieved