

CD session

We learn a lot from OCT

European Bifurcation Club



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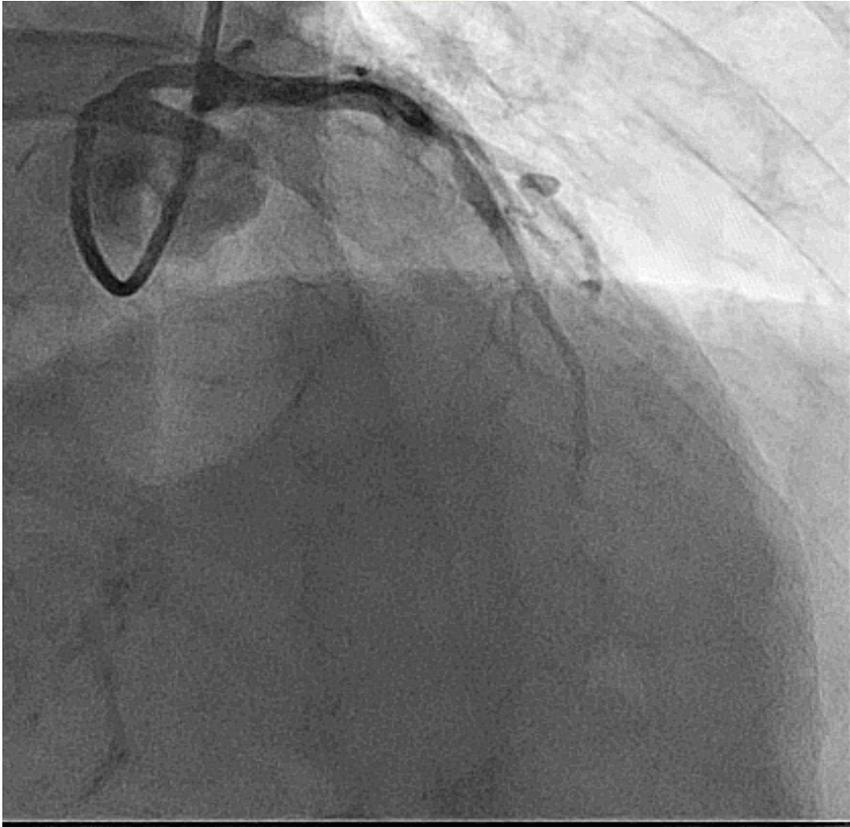


Case: 64 y.o. Male

- **The patient was admitted due to critical ischemia in left lower extremity and underwent amputation due to irreversible necrosis. Since the patient had restricted his activity due to the PAD, he had never experienced chest pain. A coronary angiography was performed for further examination of the calcification in LAD demonstrated in the chest CT.**
- **Risk factors: DM, HT, dyslipidemia, smoking**

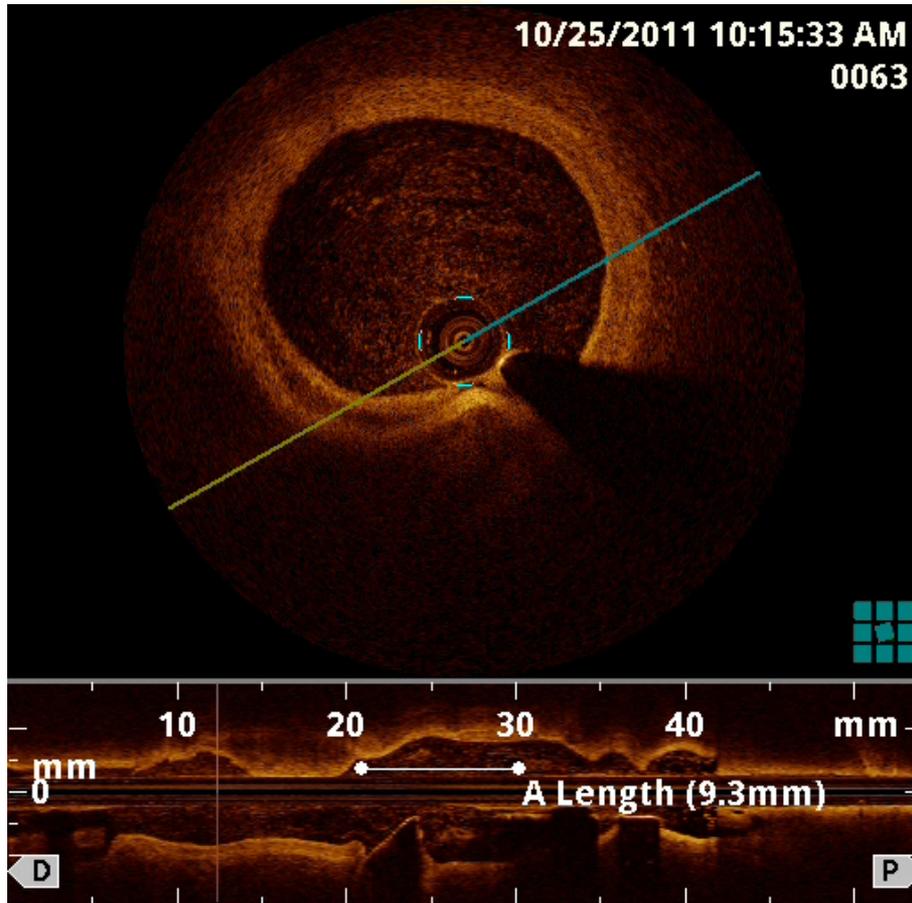


1-1-1 lesion in LAD – diag bifurcation



OCT: baseline

- Lipid containing eccentric plaque with partial rupture which was located in the opposite side of the diagonal branch to the myocardial site.

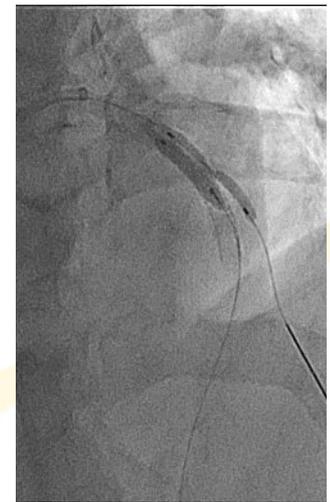
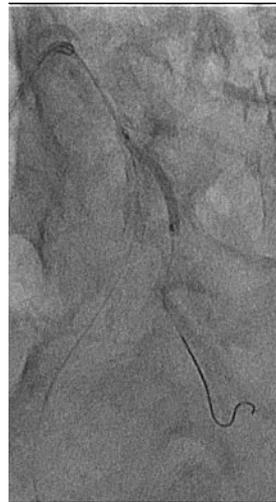
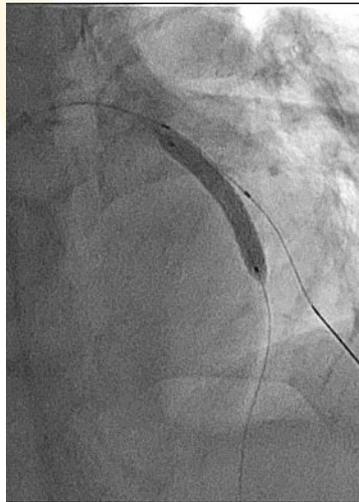
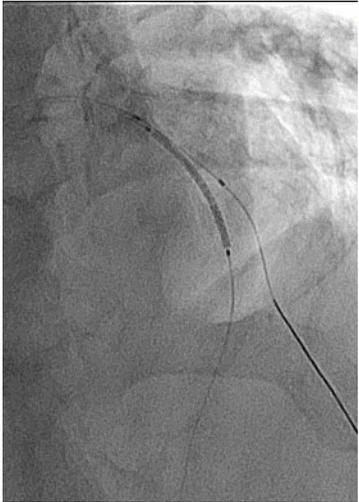


**MV stenting with jailed
balloon technique**

**SB
dilation**

**MV
dilation**

KBT



**Rt. Radial
GC: Heartrail II
IL4.0
GW: Fielder,
Sion blue**

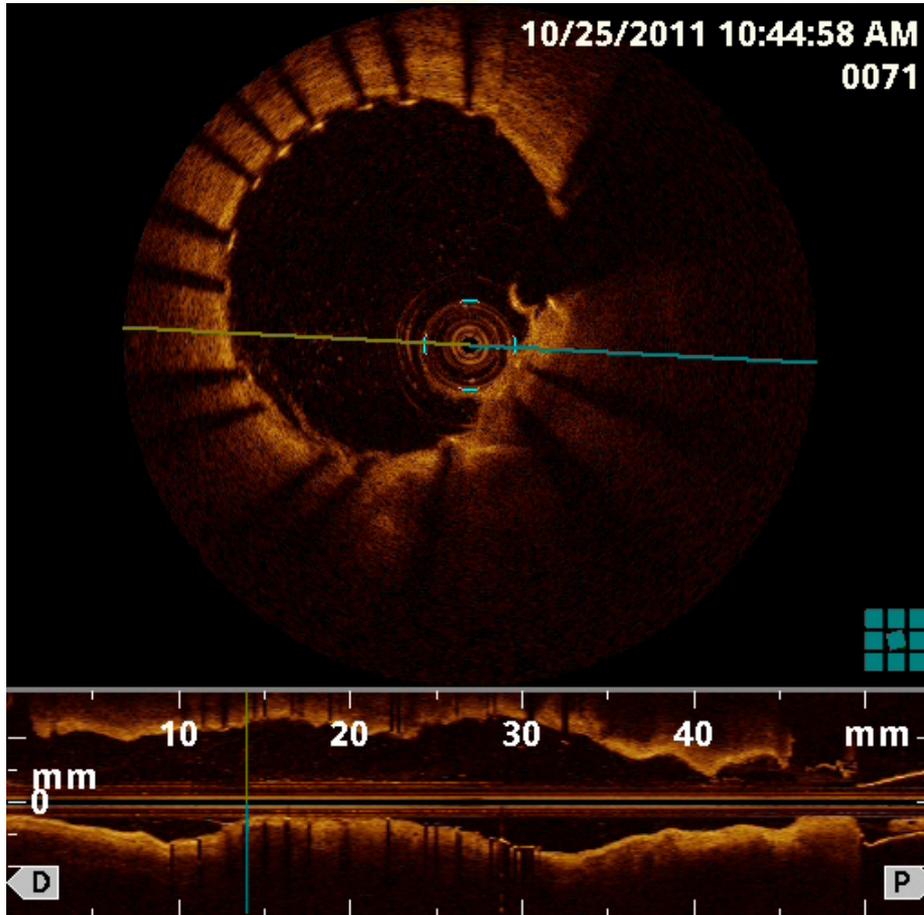
**MV: Nobori
3.5/24
SB: Maverick
II 2.0/20**

**Maverick II
2.0/20,
14atm**

**Raiden
3.5/13,
18atm**

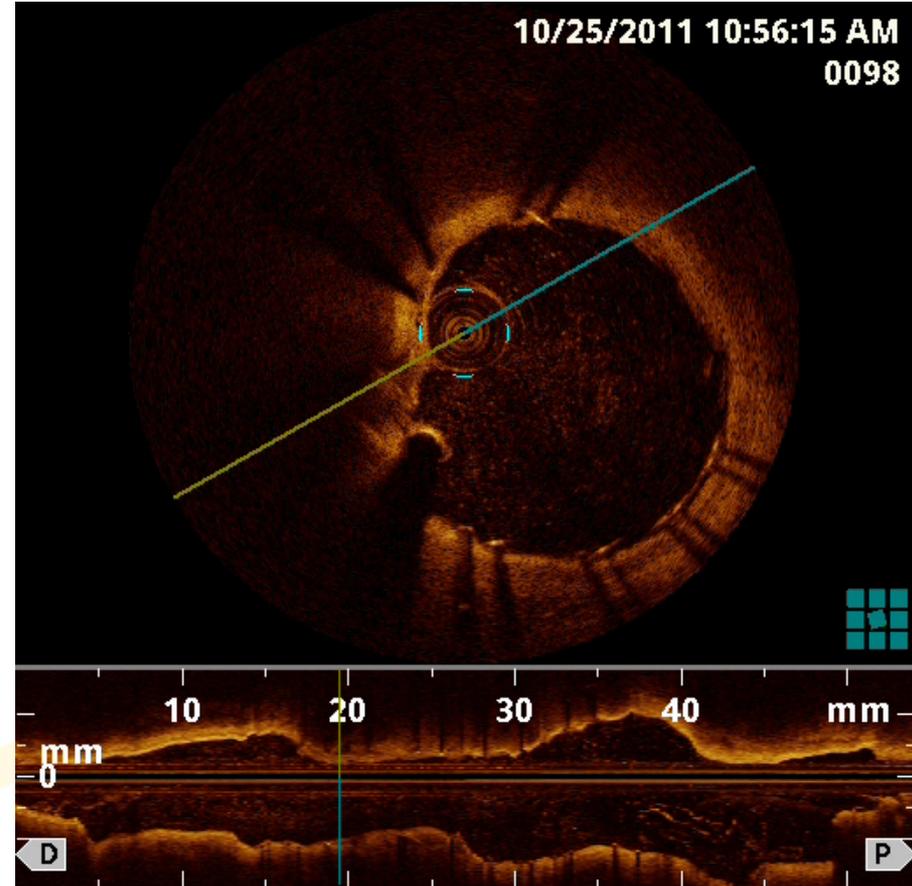
8atm

OCT after SB dilation



- **Malapposition of the struts at the distal to the SB ostium**
- **Strut-uncovered area at the proximal to the SB ostium**
- **Inadequate stent expansion in the proximal stent edge**

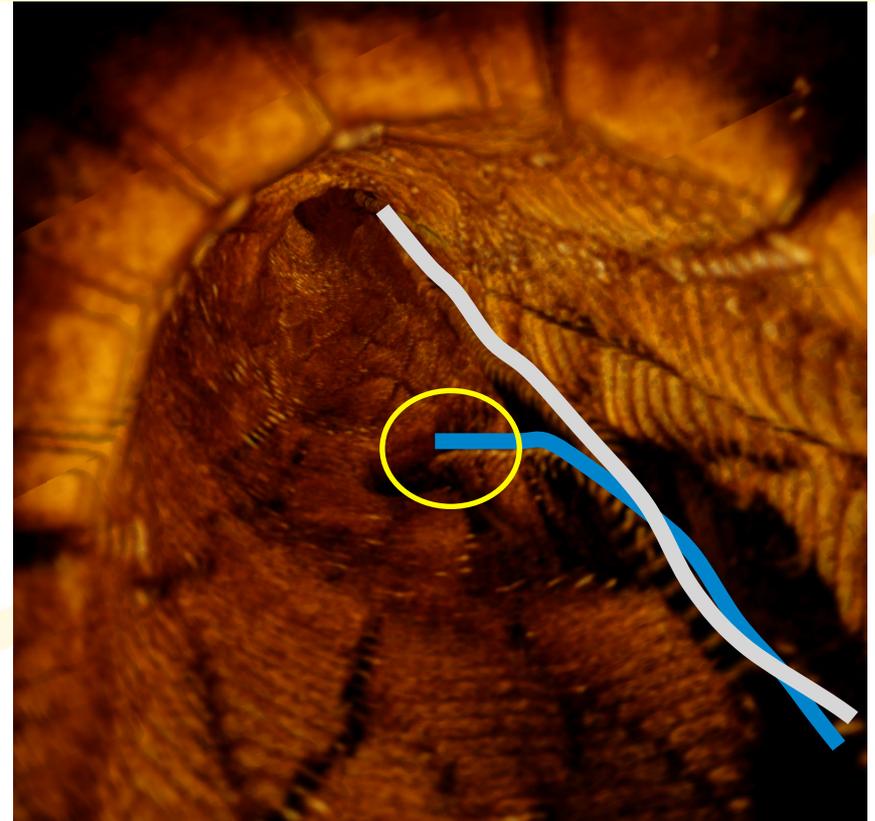
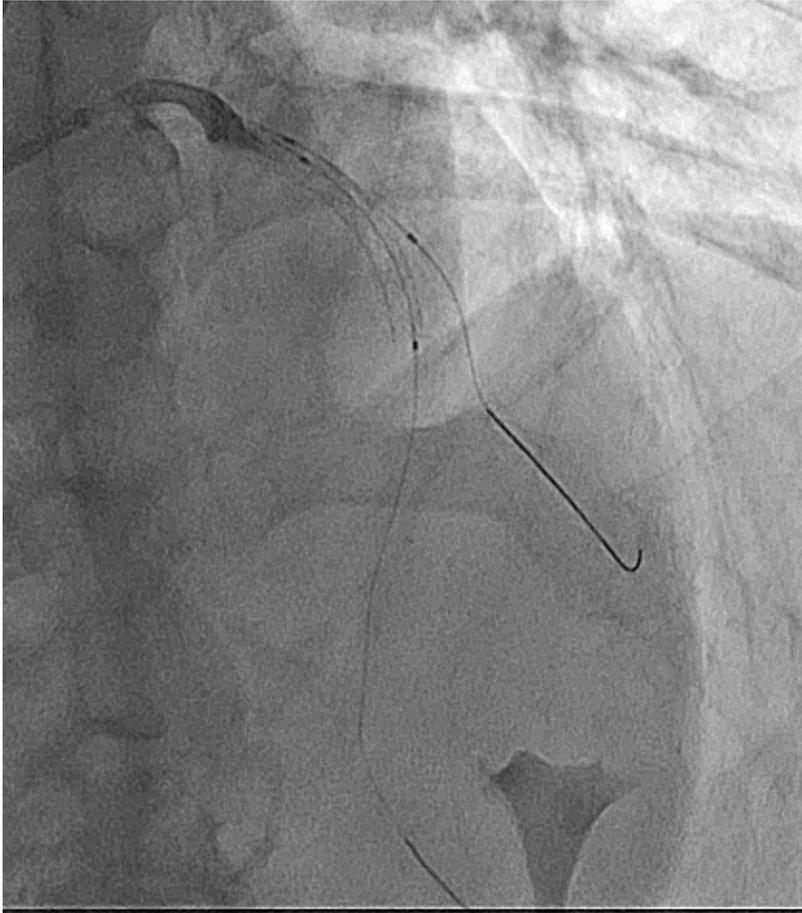
Final CAG & OCT



The strut-uncovered area remained at the proximal to the SBOS, while malaposition was improved at the distal site.

GW recrossing the SB

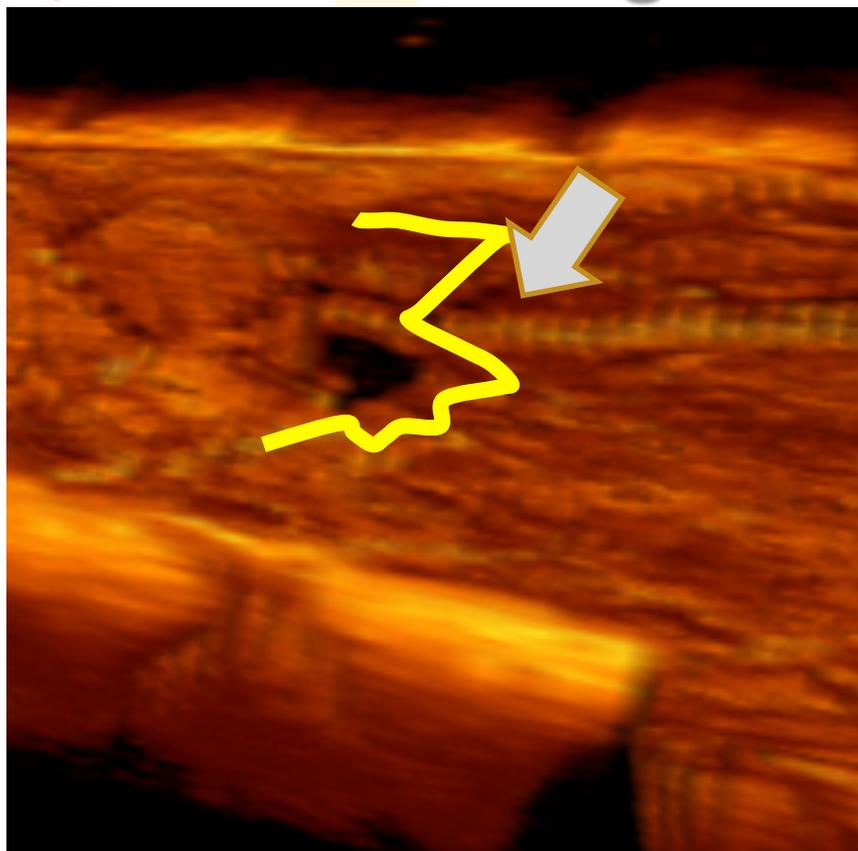
GW recrossing seemed well-positioned!



After MV stenting, tight ostial lesion remained in the diagonal br. Hard negotiation of GW recrossing in the SB was required.

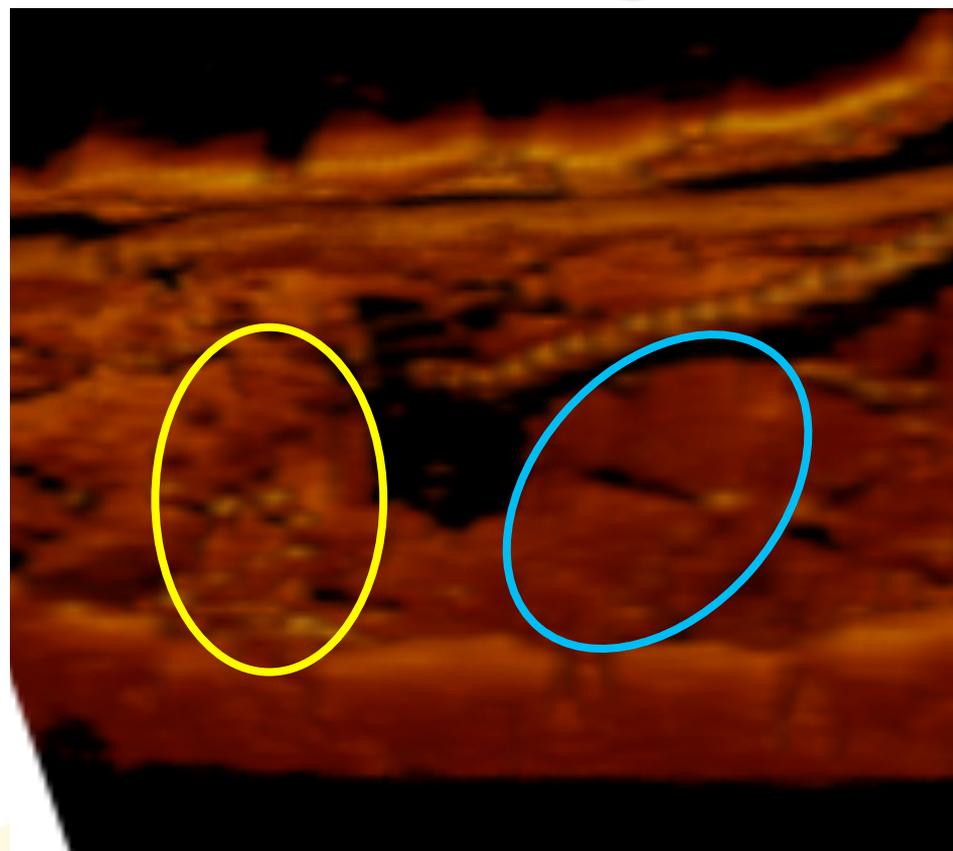


GW recrossing



Actually, the GW slipped under the proximal stent strut.

SB ballooning

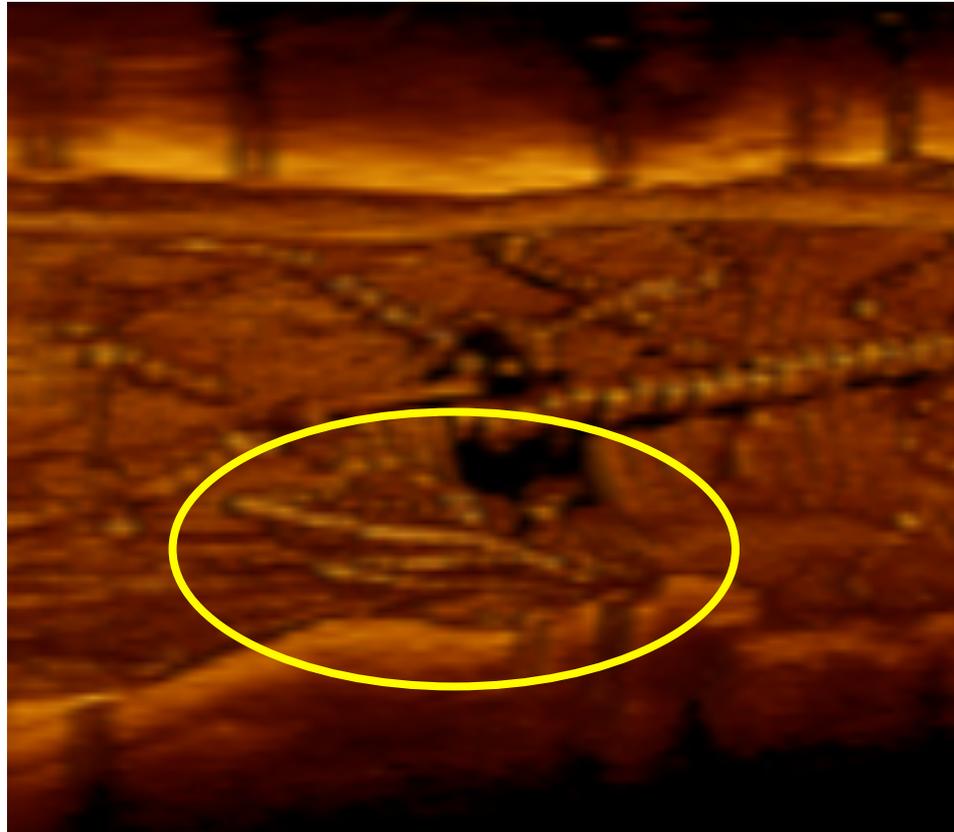


The proximal strut was raised up and protruded into the MV (yellow circle). No strut was observed in the area proximal to the SB ostium (blue circle).

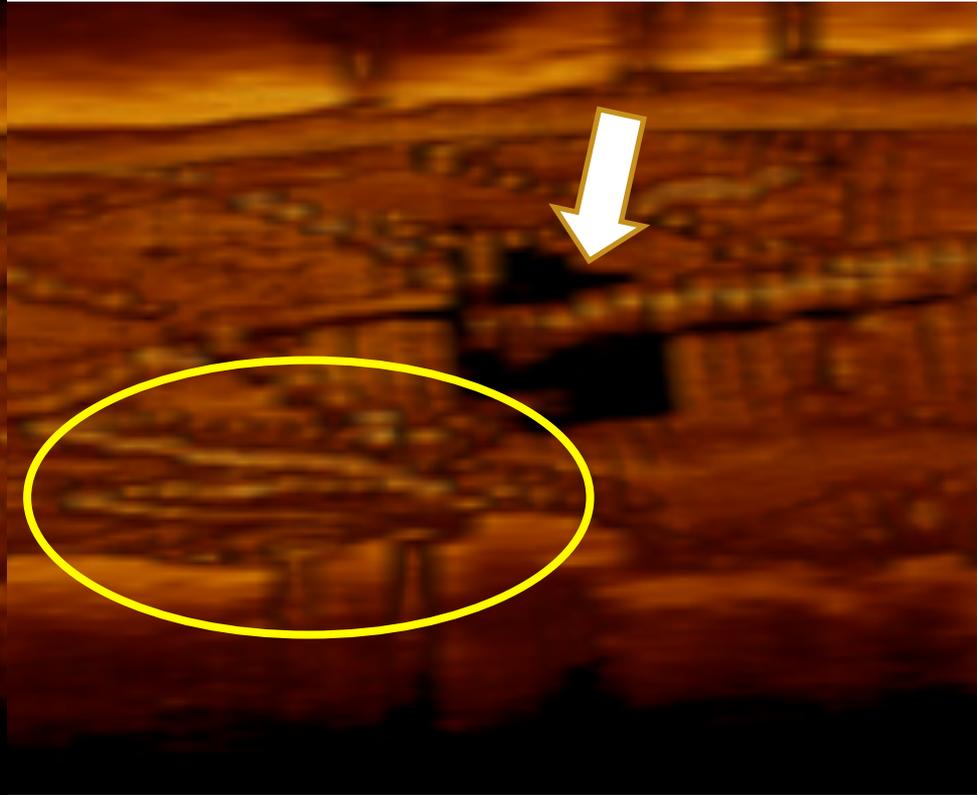


After MV ballooning

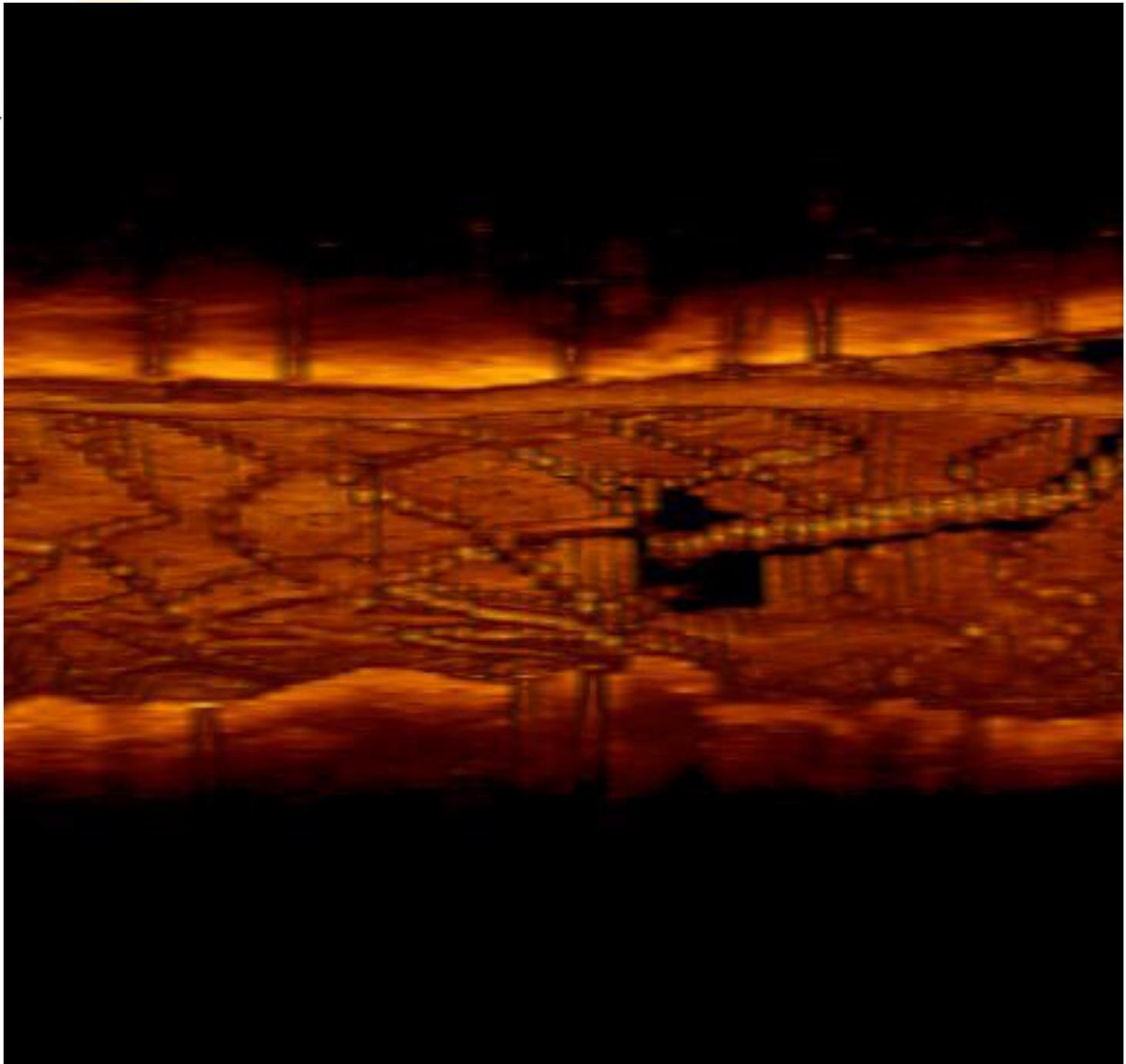
After KBT



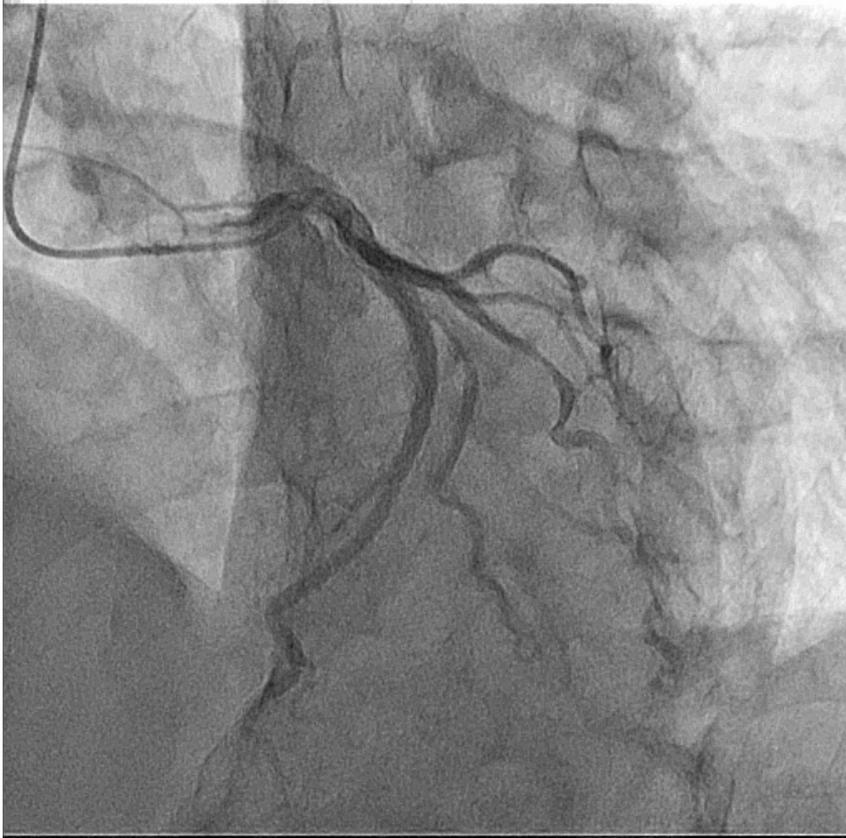
The protruded strut was reflected to the distal side and the SB ostium was narrowed again (yellow circle).



The SB ostium was opened up and carina relocation was achieved (white arrow).



9 mo F/U CAG



- **No restenosis in LAD**
- **75% restenotic lesion remained in diagonal branch**
- **No ischemic or thrombotic event**
- **Medical F/U**
- **DAPT changed to single APT (ASA).**



Summary

- **GW recrossing through the proximal site of the jailed strut into the SB resulted in reflecting the jailed strut to the distal site after KBT.**
- **It was difficult to detect the accurate condition of stent deformation using conventional OCT observation during procedure.**
- **3-dimensional reconstruction clearly visualized how the stent struts deformed in this complex procedure.**

Conclusion

- **3-dimensional reconstruction of OCT images is useful for bifurcation intervention.**
- **On-line analysis system will be more convenient for precise and dedicated complex procedure.**



Thank you for your attention!