

Optical coherence tomography for visualization of coronary arterial spasm induced by balloon dilation

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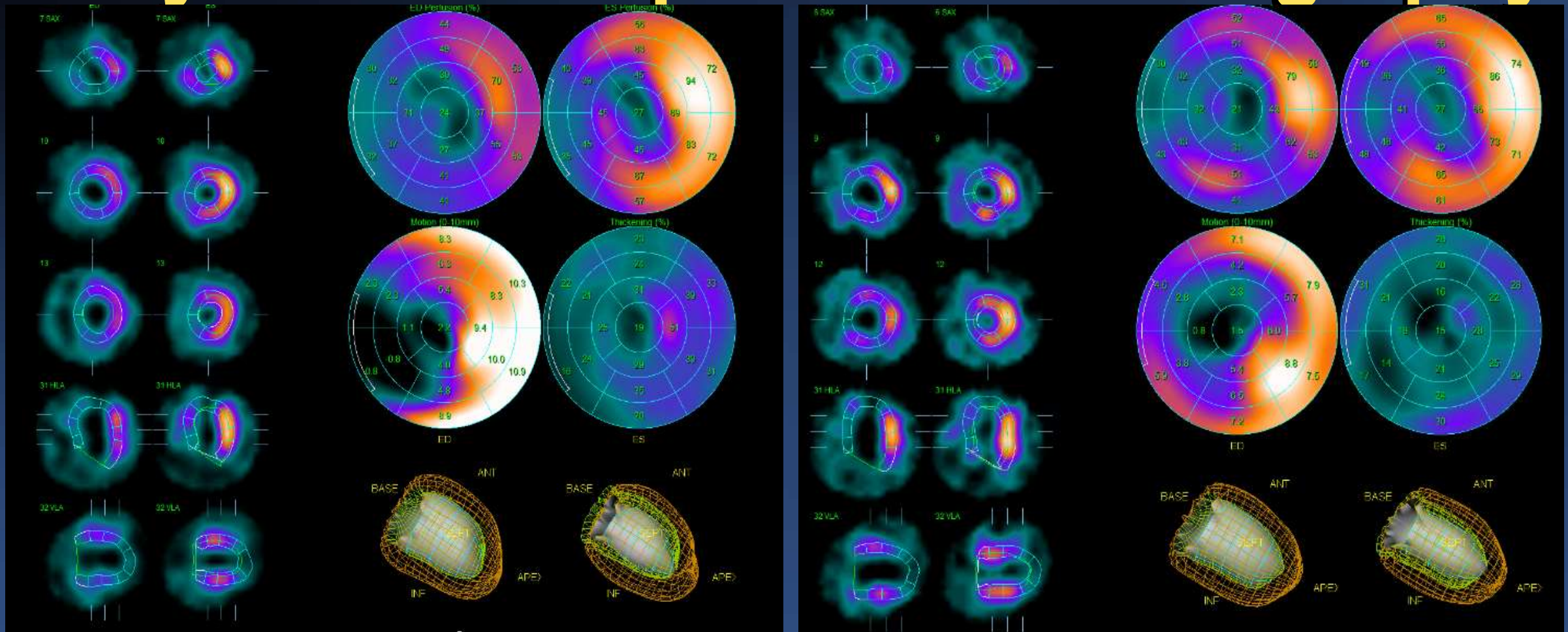
Speaker's name: Yusuke Otsu

✓ I do not have any potential conflict of interest

Case Presentation

- A 63-year-old man.
- He complained of chest compression during exertion.
- Five months ago, he underwent coronary intervention for a chronic occlusion in the left anterior descending artery.
- Coronary risk factors
 - ✓ Smoking
 - ✓ Dyslipidemia

Myocardial TI perfusion scintigraphy



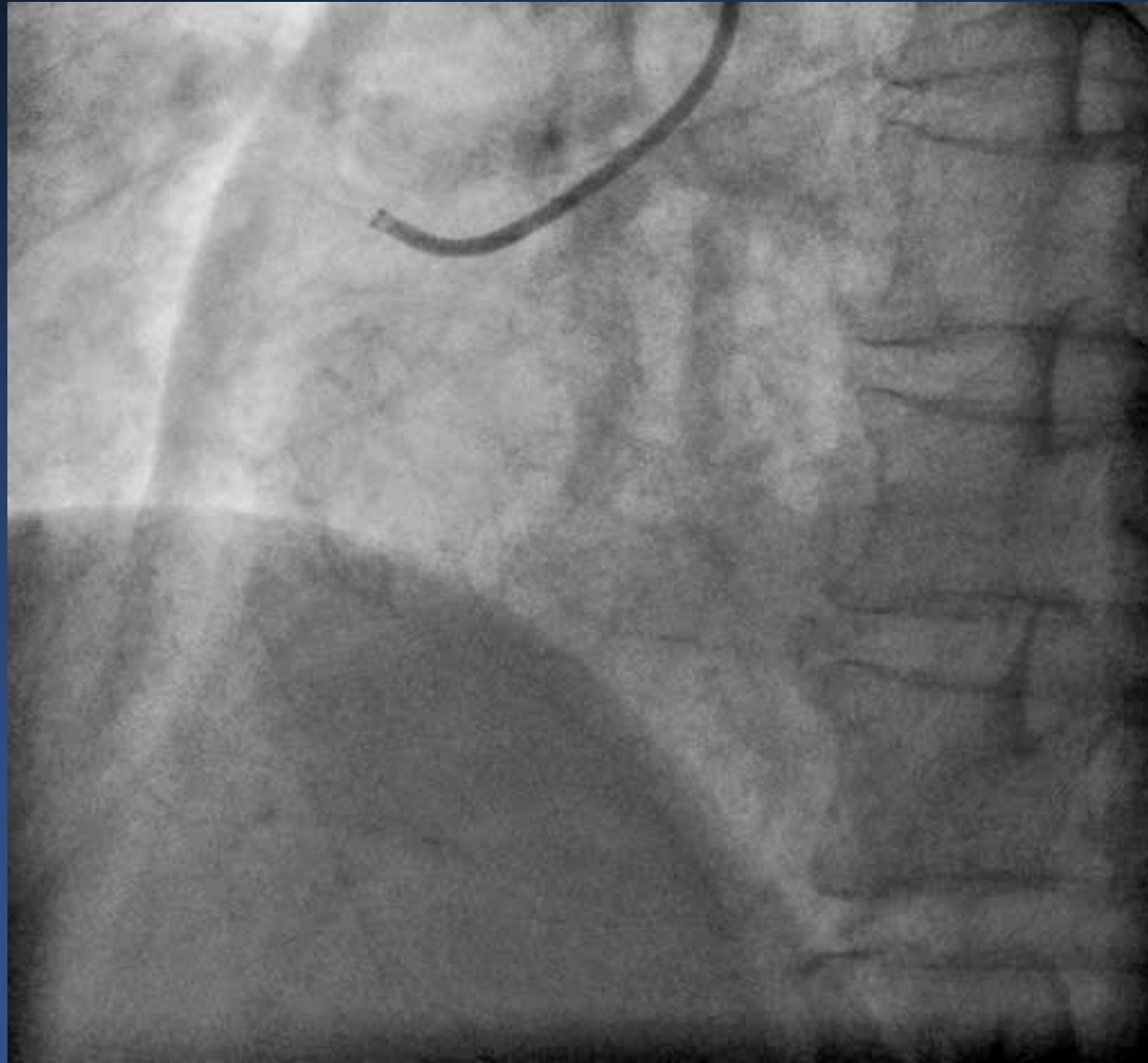
Stress

- ✓ persistent perfusion defect at anterior wall
- ✓ redistribution of TI at inferior wall at rest

Rest

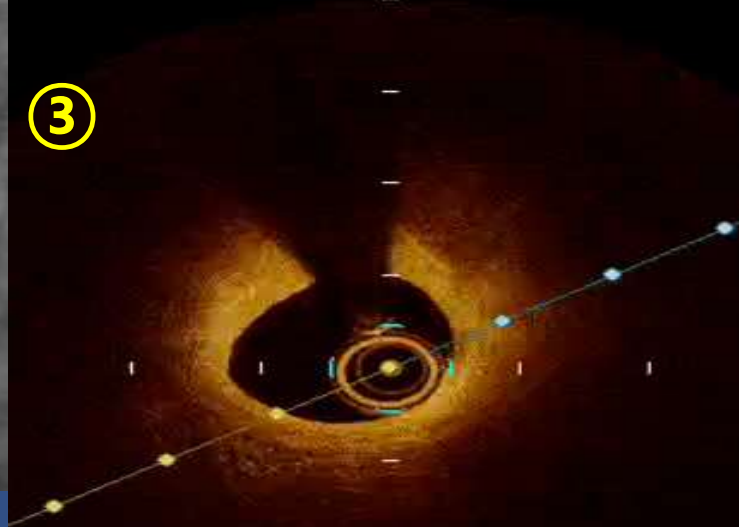
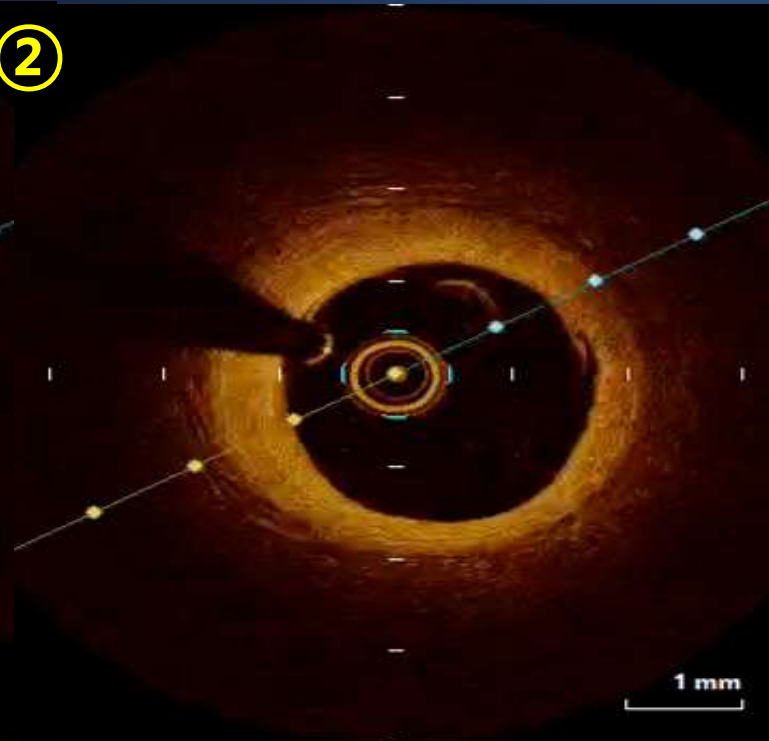
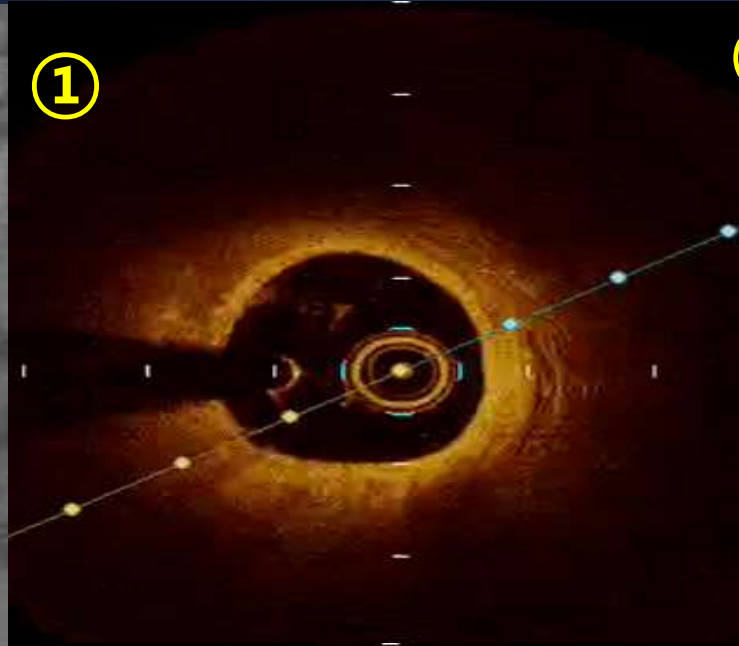
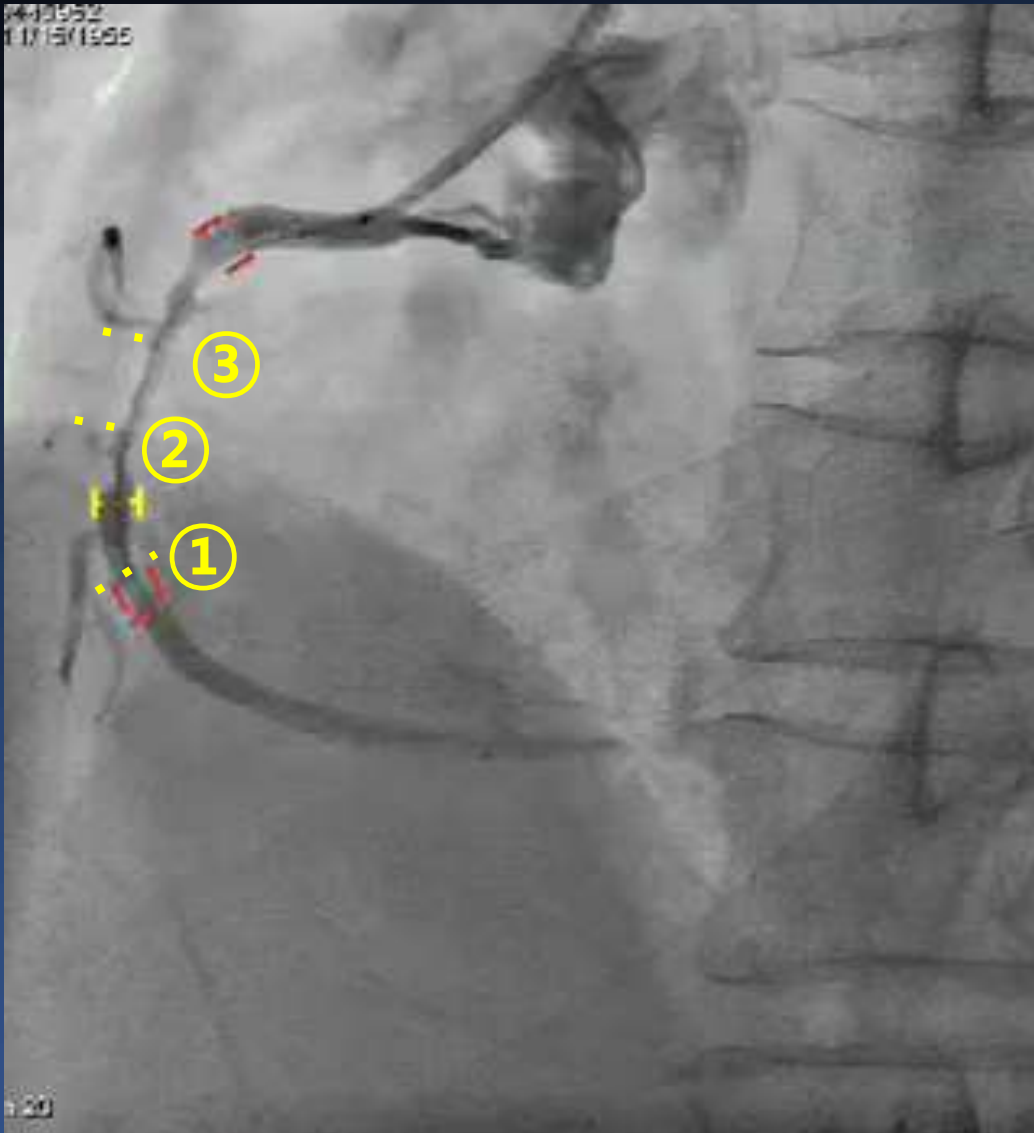
Initial Coronary Angiography

LAO 60



✓ Proximal RCA
75% stenosis

OCT before POBA



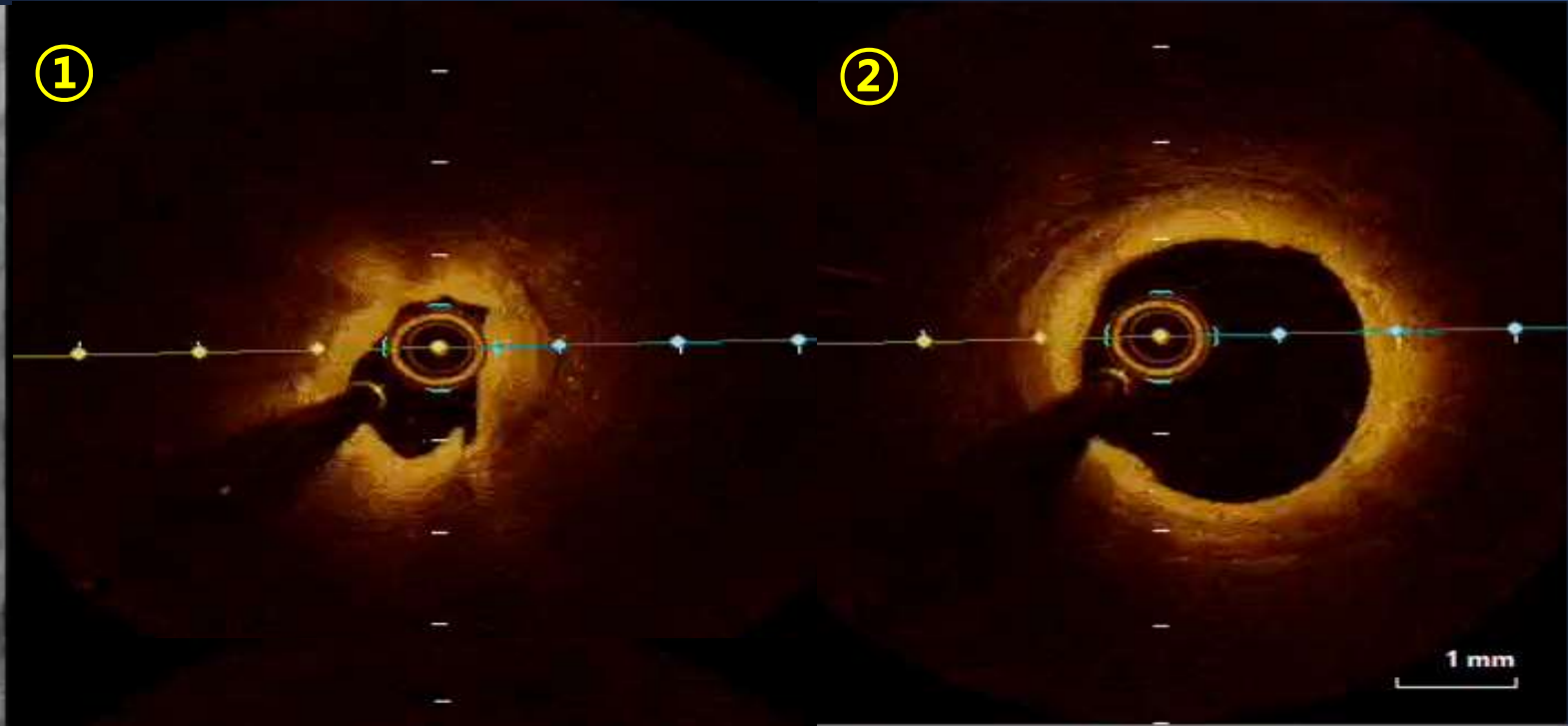
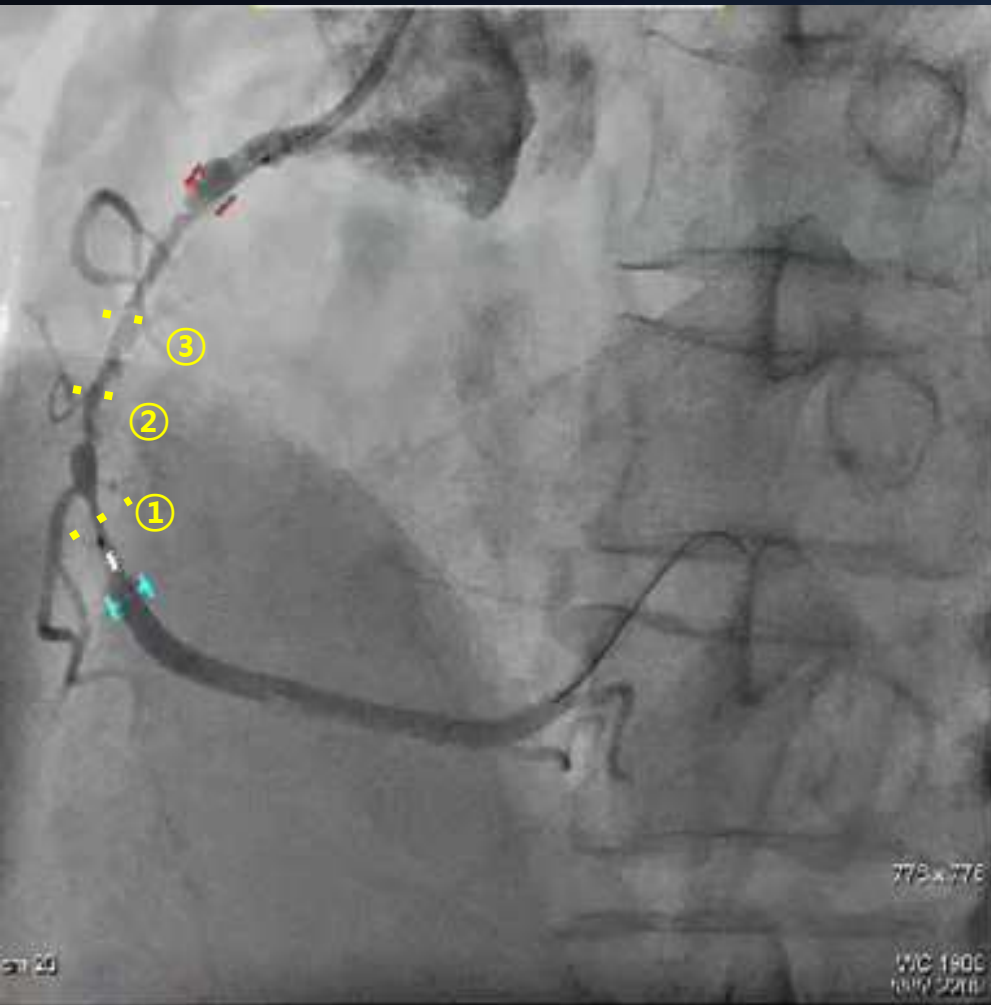
LAO 60

POBA at RCA #2

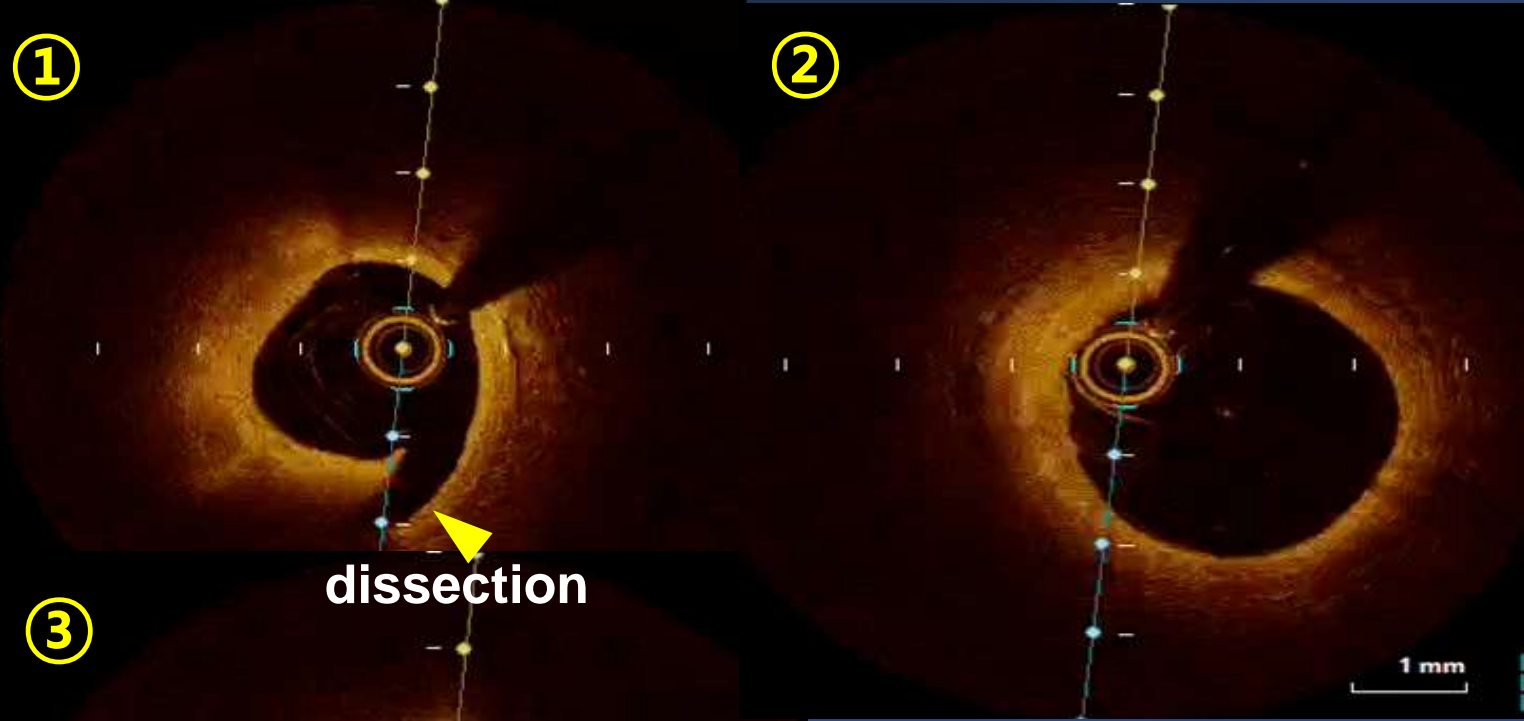
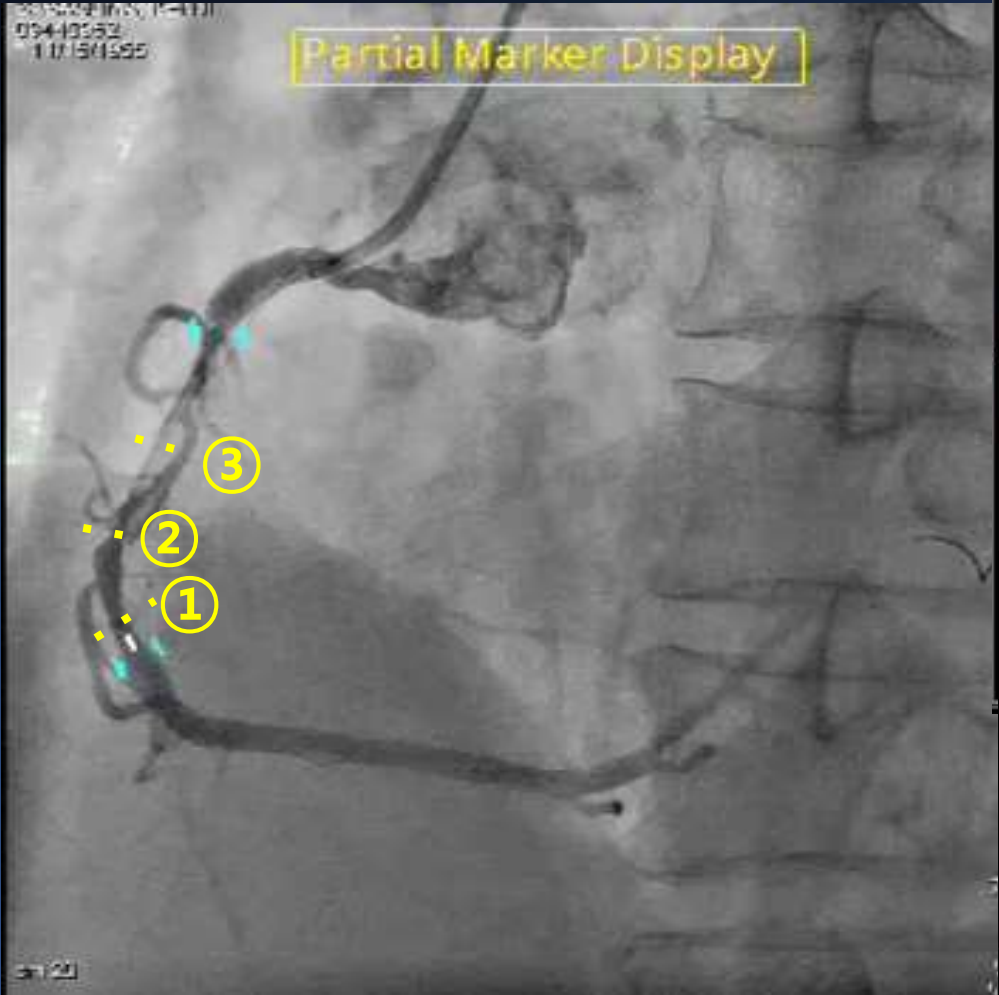


1. ScoreFlex NC(RX) 3.0×15mm 14atm 20sec
2. ScoreFlex NC(RX) 3.0×15mm 12atm 20sec
3. ScoreFlex NC(RX) 3.0×15mm 12atm 20sec

OCT after POBA

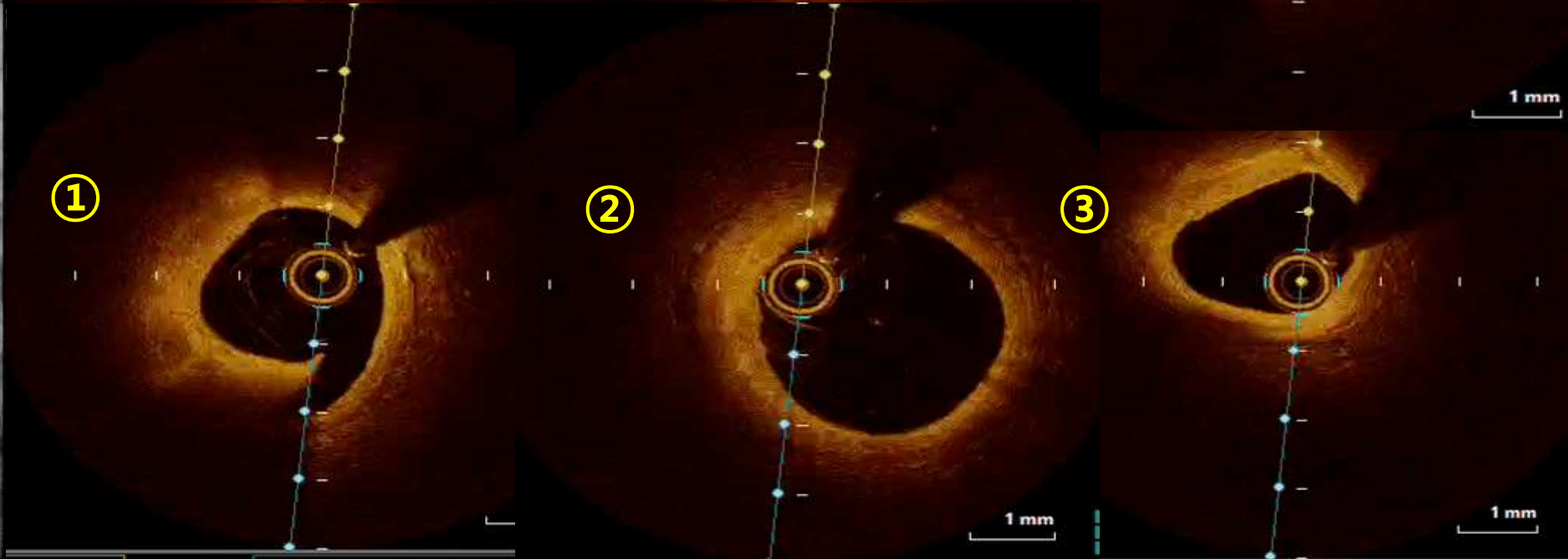
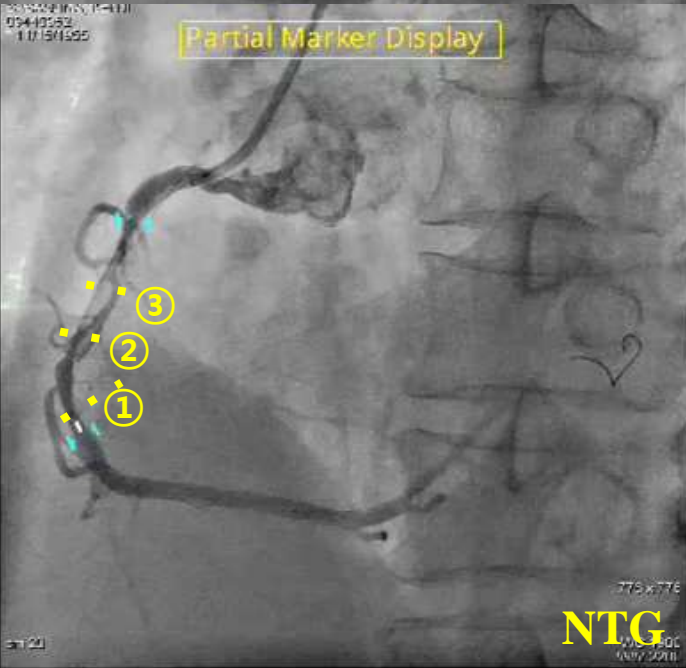
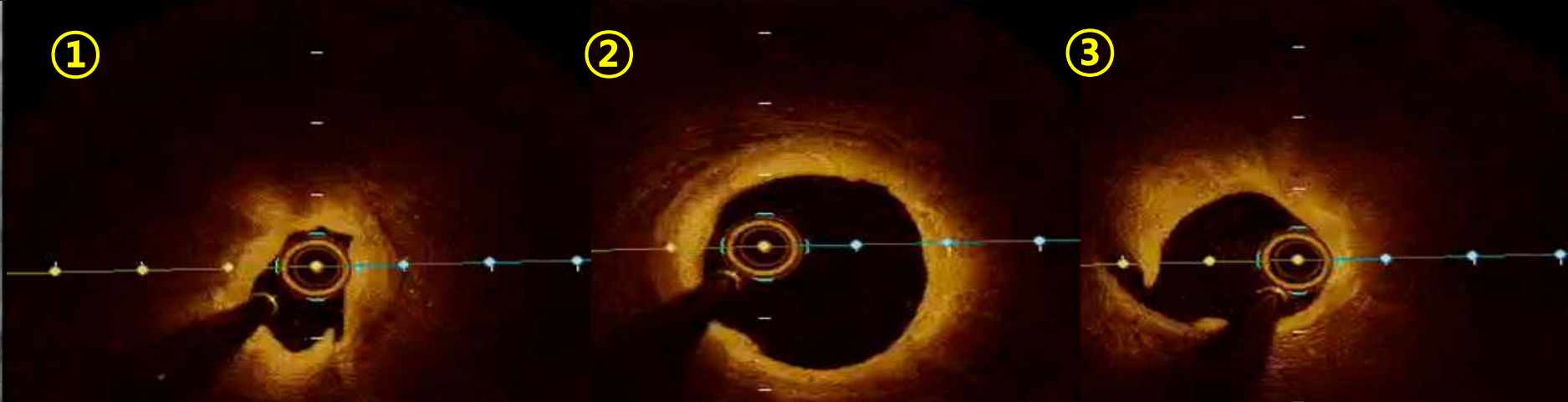
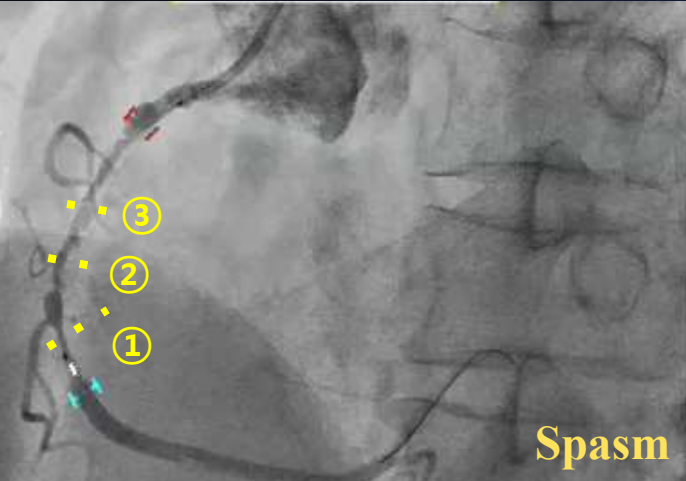


OCT after intracoronary injection of NTG



✓ Intracoronary injection of nitroglycerin improved the spasm.

OCT findings before and after NTG injection



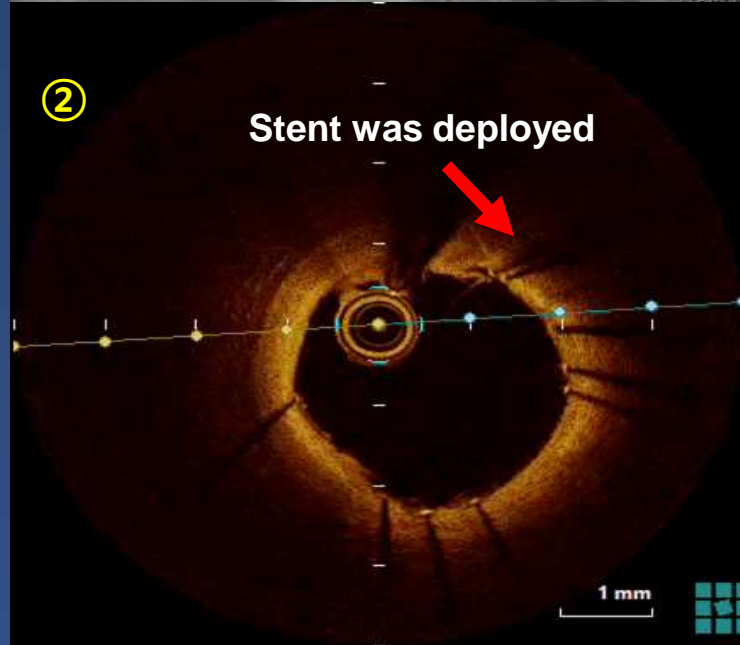
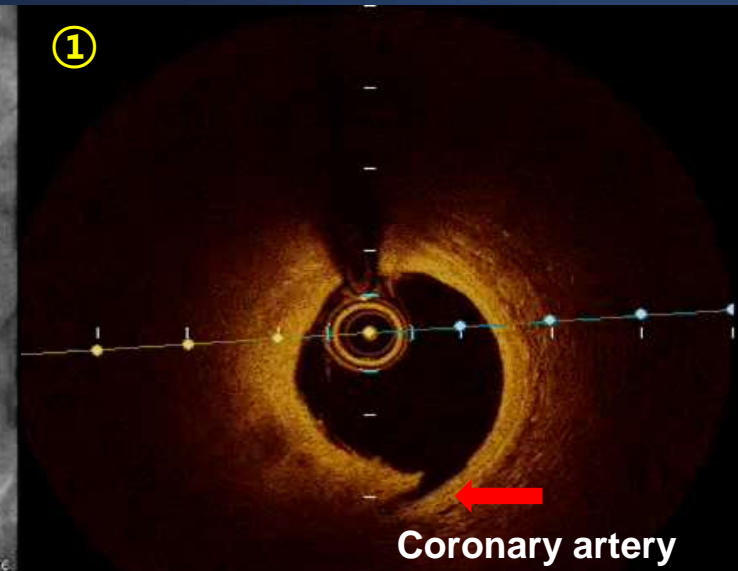
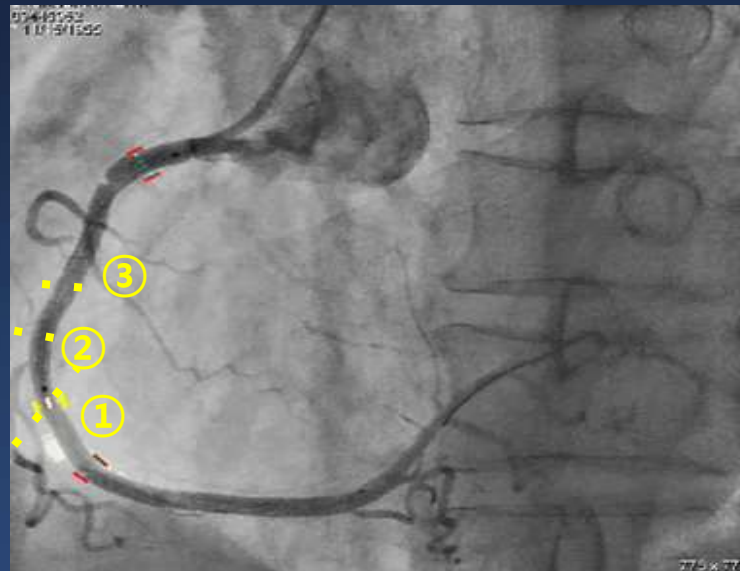
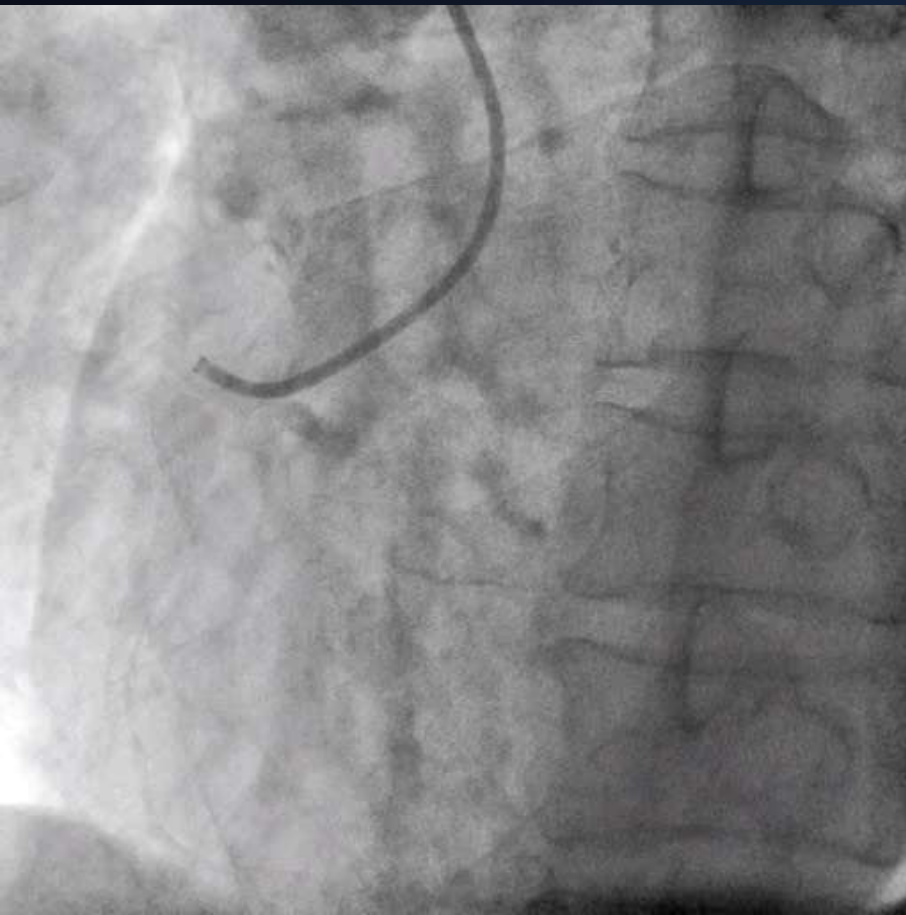
Stenting at RCA #1



- ✓ A drug eluting stent was deployed in the middle segment of RCA.
Orsiro 3.5×40mm 8atm 20sec
- ✓ Stent placement was performed only for organic stenosis without stenting for functional stenosis.

LAO 60

Optical coherence tomography



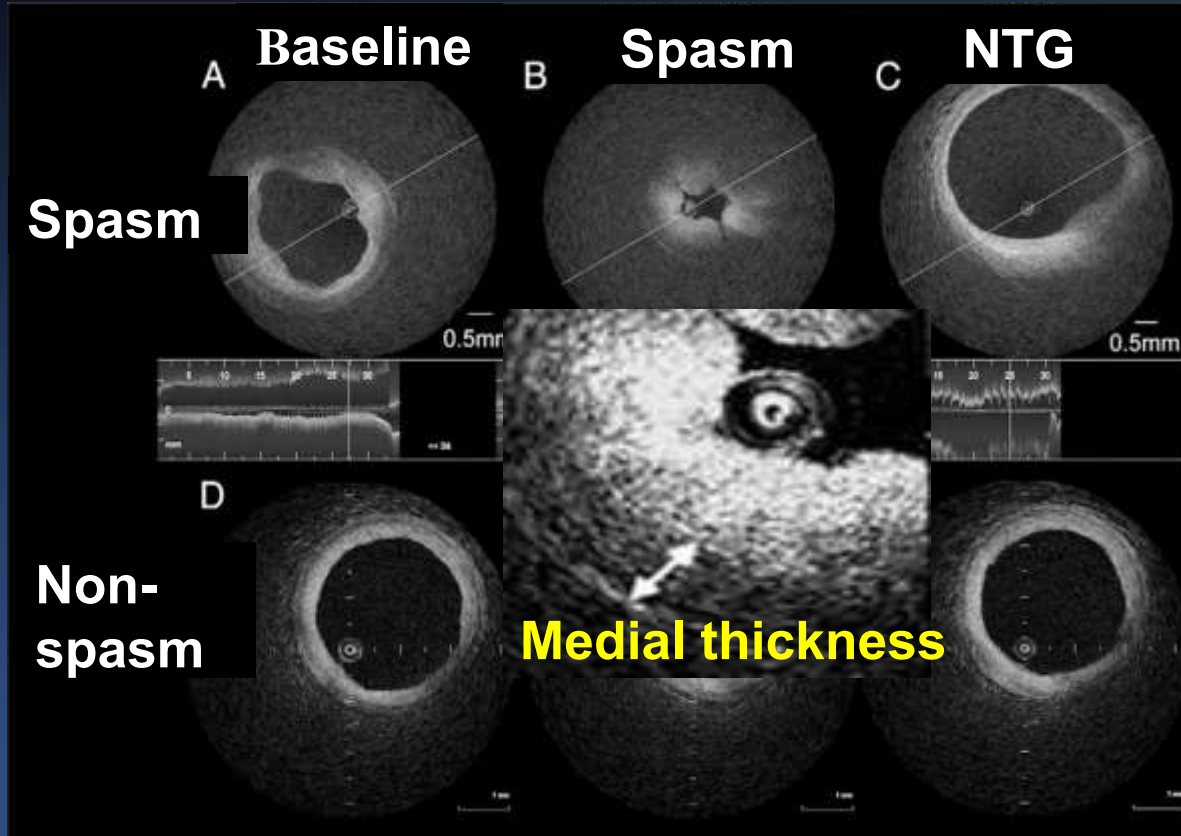
✓ Final angiography showed that organic lesion was adequately dilated and coronary flow was good.

Discussion Points

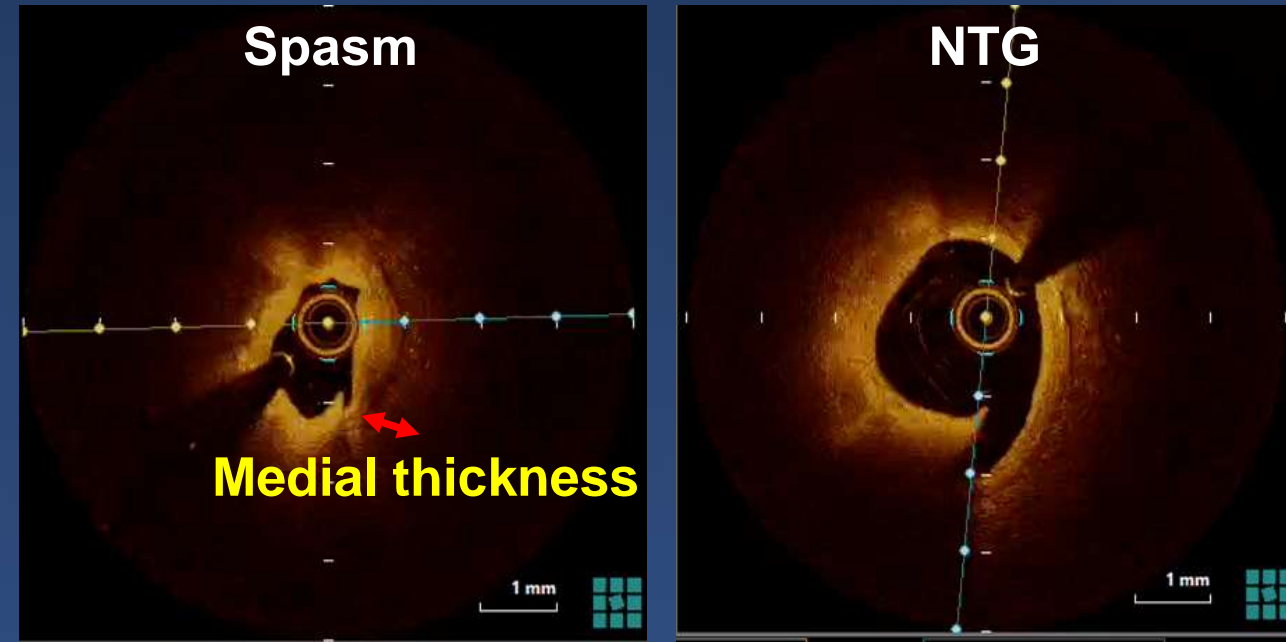
1. We'd like to share the OCT finding of coronary spasm.
2. What additional clinical information can OCT provide beyond by angiography alone? And can OCT change the strategy of intervention?

Discussion

- OCT provides additional clinical informations such as morphological characteristics of lesion and helps us to make appropriate strategies.



Our case



- In this case, we could diagnose the cause of severe stenosis as coronary spasm by OCT and avoid unnecessary stenting to spasm induced lesion.

Conclusion/Take-home Message

- The OCT examination was effective to reveal the mechanism of newly developed coronary stenosis after balloon dilation, and to indicate an optimal treatment.