



8th
IMAGING &
PHYSIOLOGY
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A case of acute myocardial infarction with thrombus in left main coronary artery induced by anaphylaxis

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Case 61y.o. male

Chief complaint : Chest pain

Present history :

- ✓ One hospitalization because of anaphylactic shock in past
- ✓ After eating wheat noodle at lunch, he lost consciousness, and skin rash appeared on his body.
- ✓ He was admitted to our hospital, and he was diagnosed as anaphylactic shock.
- ✓ His rash was improved by intramuscular injection of epinephrine.
- ✓ A few minutes later, he complained chest pain, and his electrocardiogram revealed ST elevation.

Coronary risk factor : HTN、Smoking

Data on admission

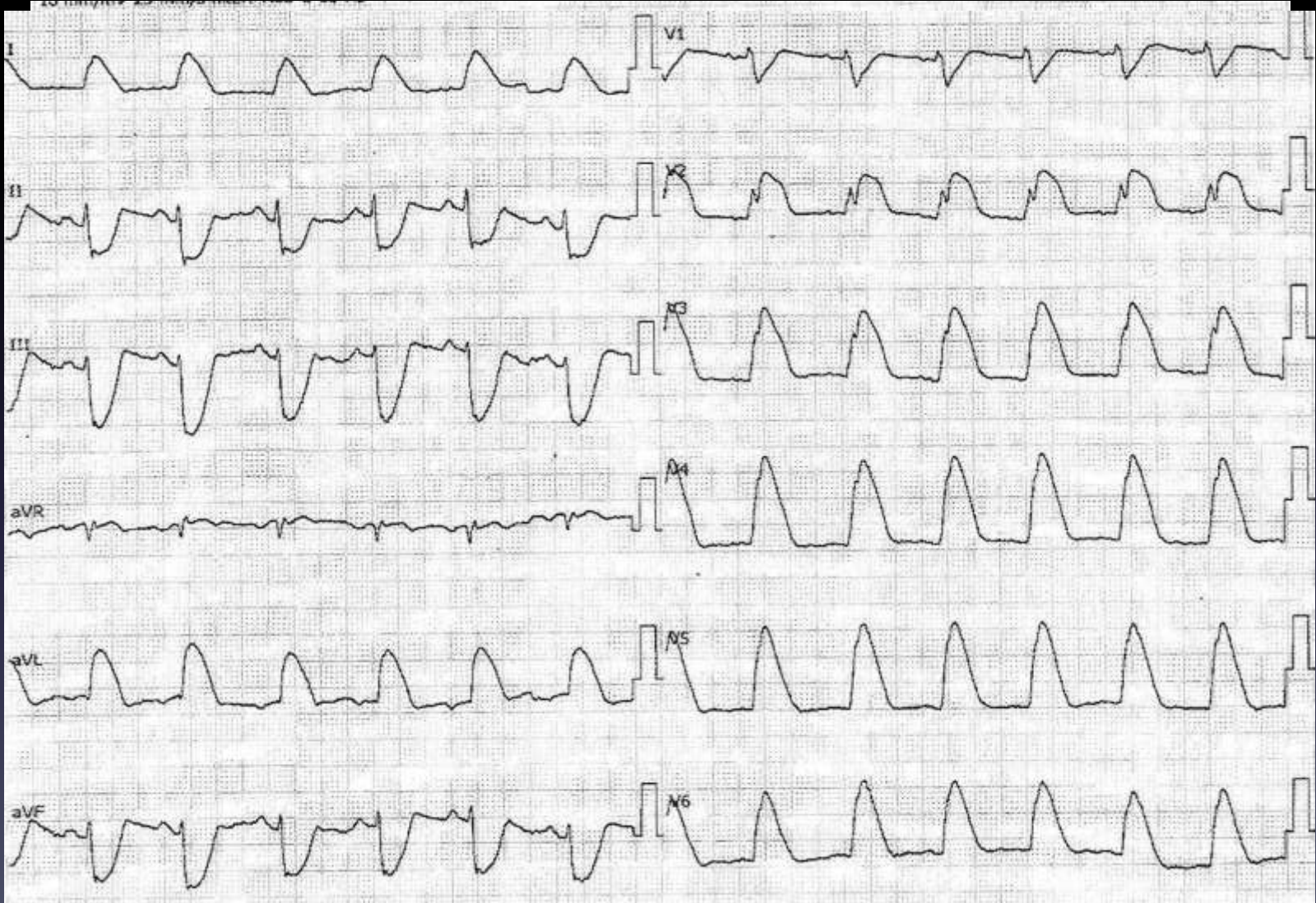
【Vital sign and Physical assessments】

Cons : GCS E3V4M6
BT : 36.3 °C
HR : 96bpm
BP : 80/44mmHg
SpO2 : 100% (O2 10L/min mask)
Conj : not anemic/not icteric
HS : S3(-),no murmur
BS : No rale
Abd : Soft,flat,no tenderness
Legs : Edema free

【Laboratory data】

WBC : 9200 / μ L
RBC : 538×10^4 / μ L
Hb : 17.5 g/dL
Plt : 23.5×10^4 / μ L
TP : 6.7 g/dL
CK : 47 IU/L
AST : 26 IU/L
ALT : 13 IU/L
LDH : 199 IU/L
Cre : 0.88 mg/dL
BUN : 7 mg/dL
Na : 141 mEq/L
K : 2.7 mEq/L
Cl : 104 mEq/L
T-bil : 0.5 mg/dL
CRP : 0.06 mg/dL

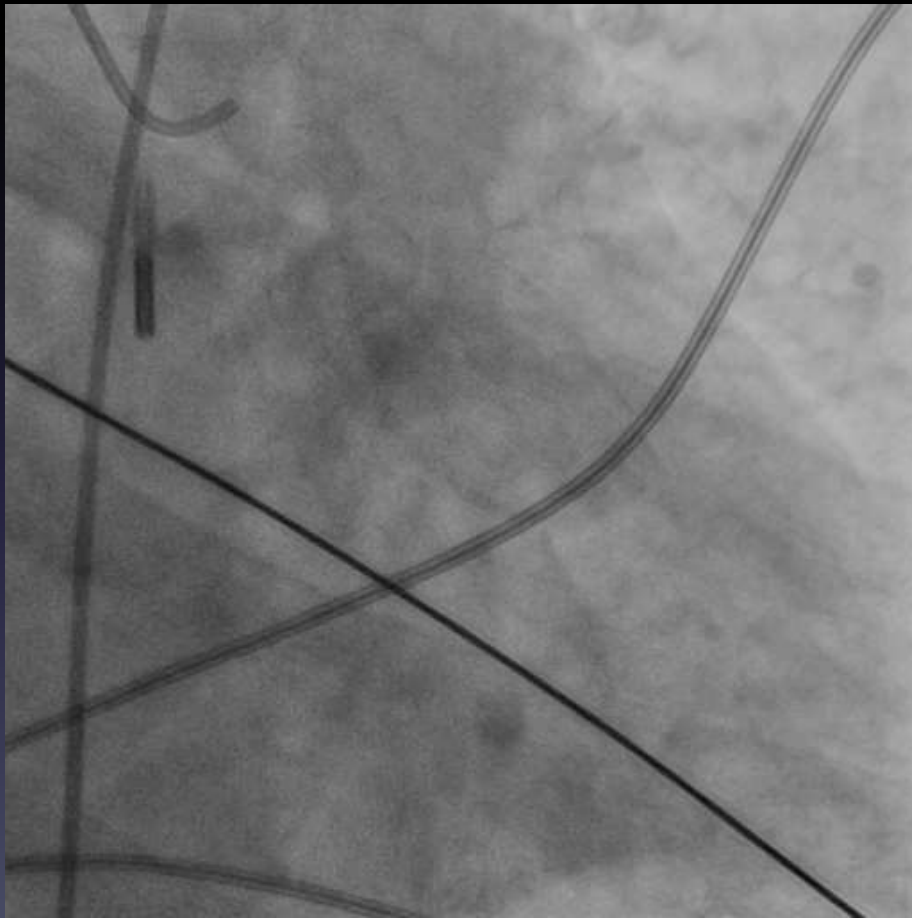
Electrocardiogram



Emergent coronary angiography of LCA

RAO CAU

LAO CRA



Emergent coronary angiography of RCA

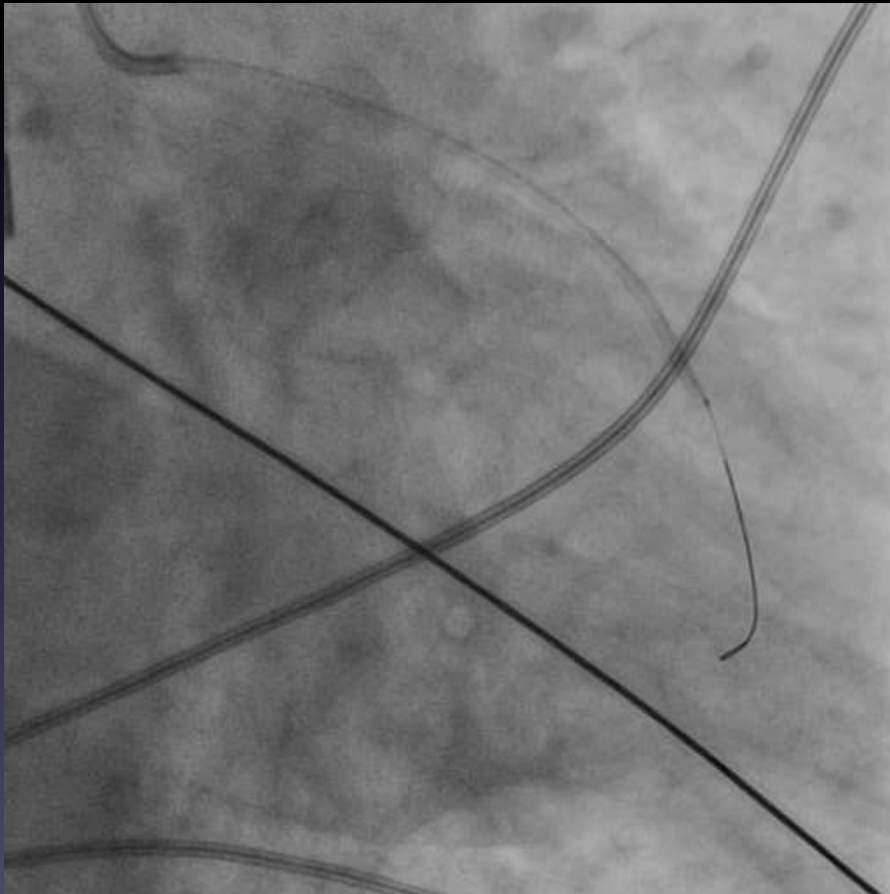
LAO

RAO



Thrombus aspiration for LAD and LCX

LAD RAO CAU



【PCI system】

Approach : left femoral artery

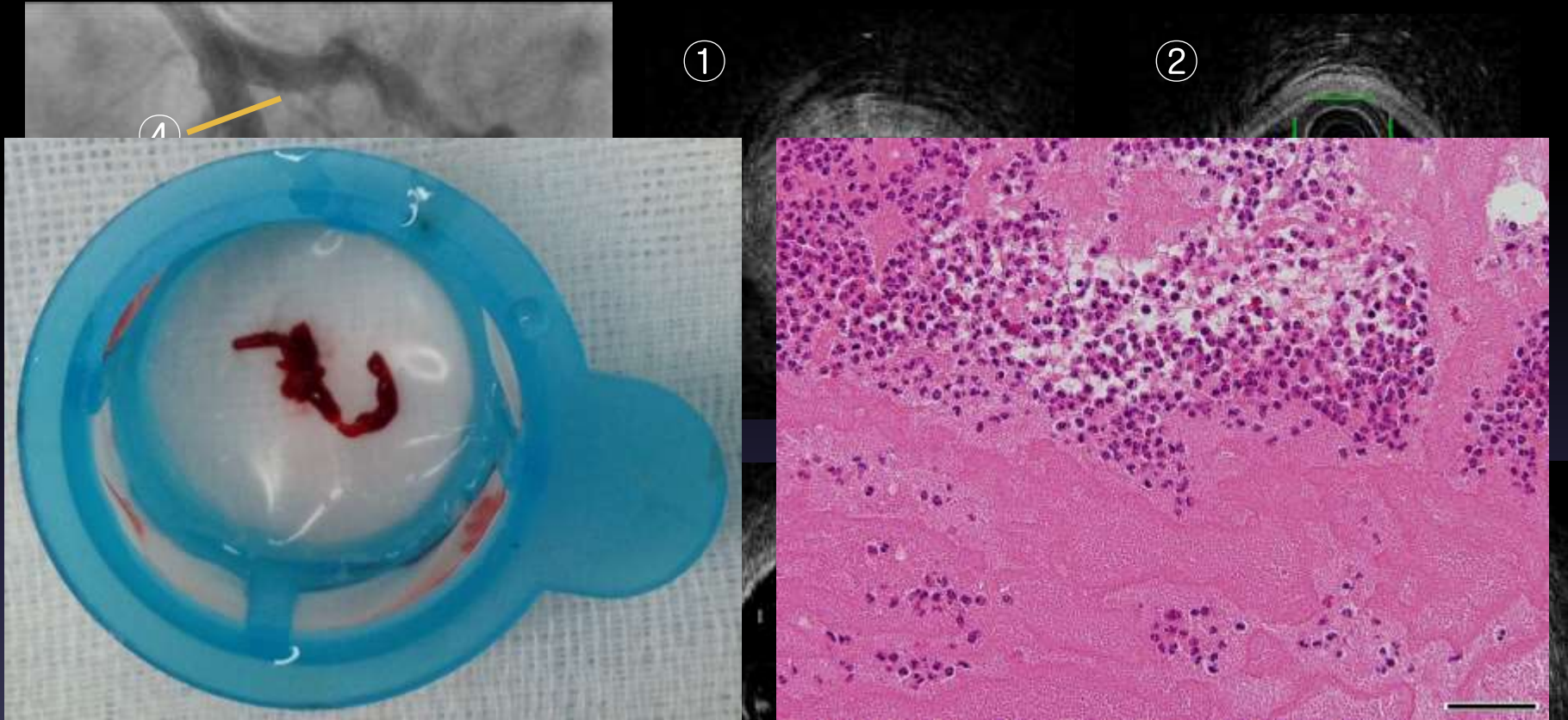
Guiding catheter : JL-4.0 Profit 6Fr

Guide wire : SION blue

Thrombus aspiration : Thrombuster GR

Imaging devices : IVUS(Atlantis), OFDI

OFDI images of LAD after thrombectomy



- White thrombus containing a large amount of platelet
- No organized thrombus

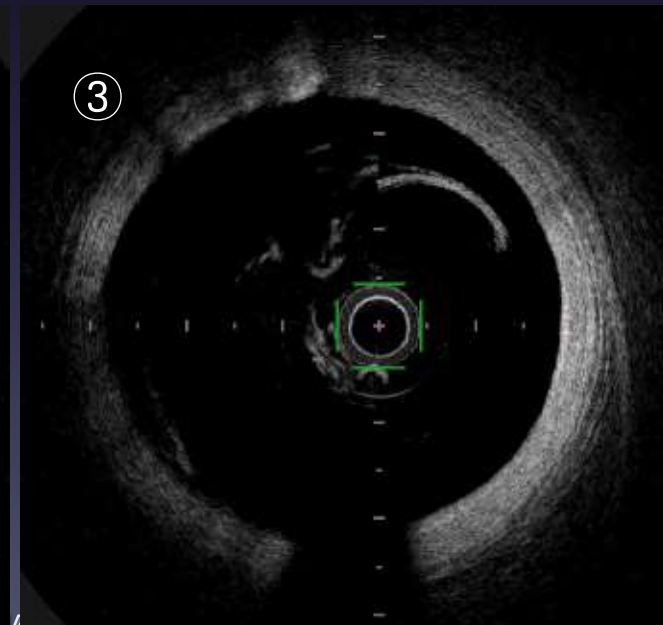
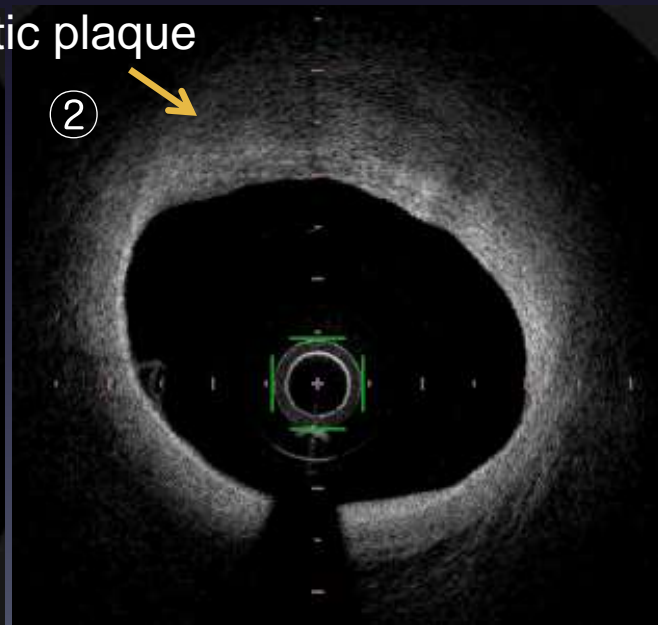
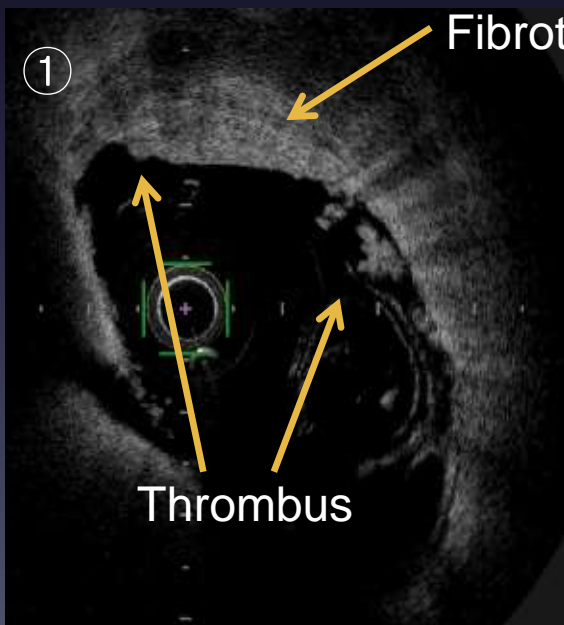
Without plaque rupture

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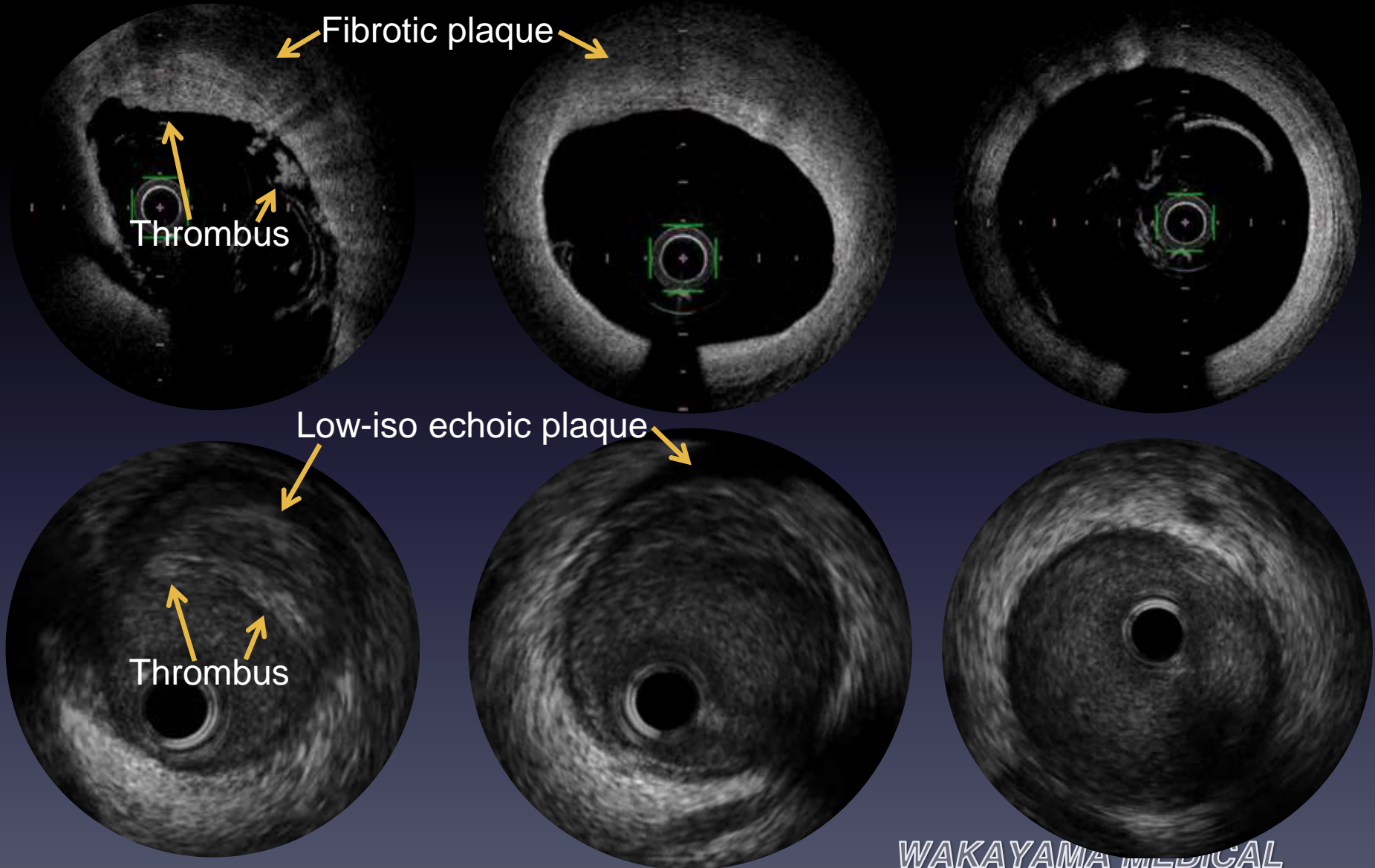
OFDI images of LMCA



- ✓ Fibrotic plaque on LMCA
- ✓ Thrombus on the plaque
- ✓ Without plaque rupture



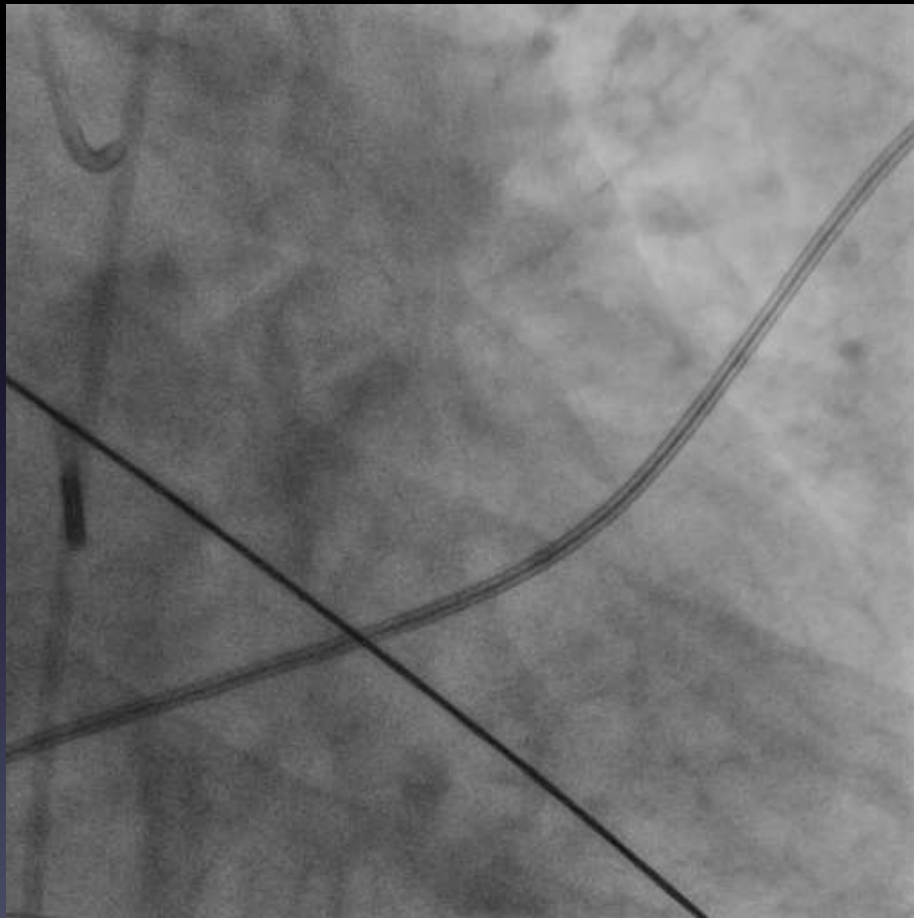
Comparison between OFDI and IVUS images of LMCA



Final coronary angiography of LCA

RAO CAU

LAO CRA



Allergic myocardial infarction

There were four features in this case.

- 1) Acute myocardial infarction after anaphylactic shock
- 2) Multi vessels occlusion only in LCA
- 3) Thrombus on fibrotic plaque of LMCA
- 4) Without plaque rupture



allergic myocardial infarction

Allergic myocardial infarction is divided into two types:

- 1) *Coronary spasm* without significant stenosis of target coronary artery
- 2) *Coronary plaque rupture or erosion* on quiescent pre-existing atheromatous disease of target coronary artery

Follow-up coronary angiography of LCA

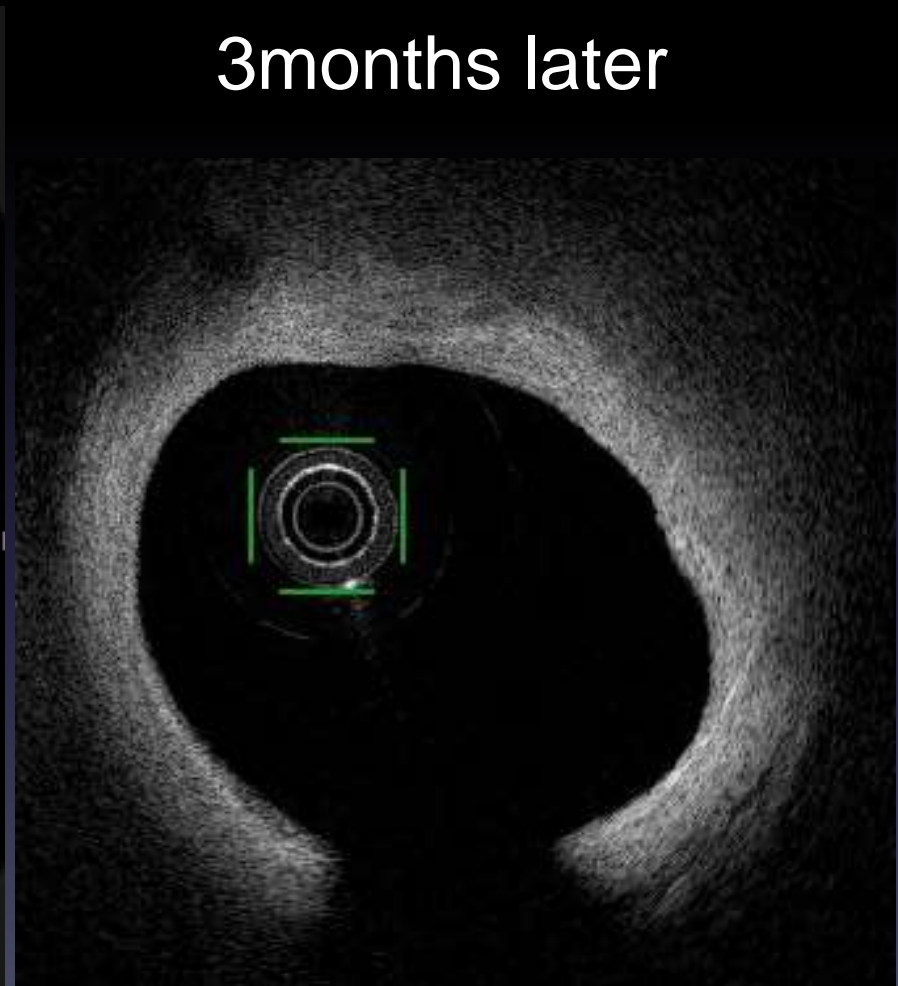
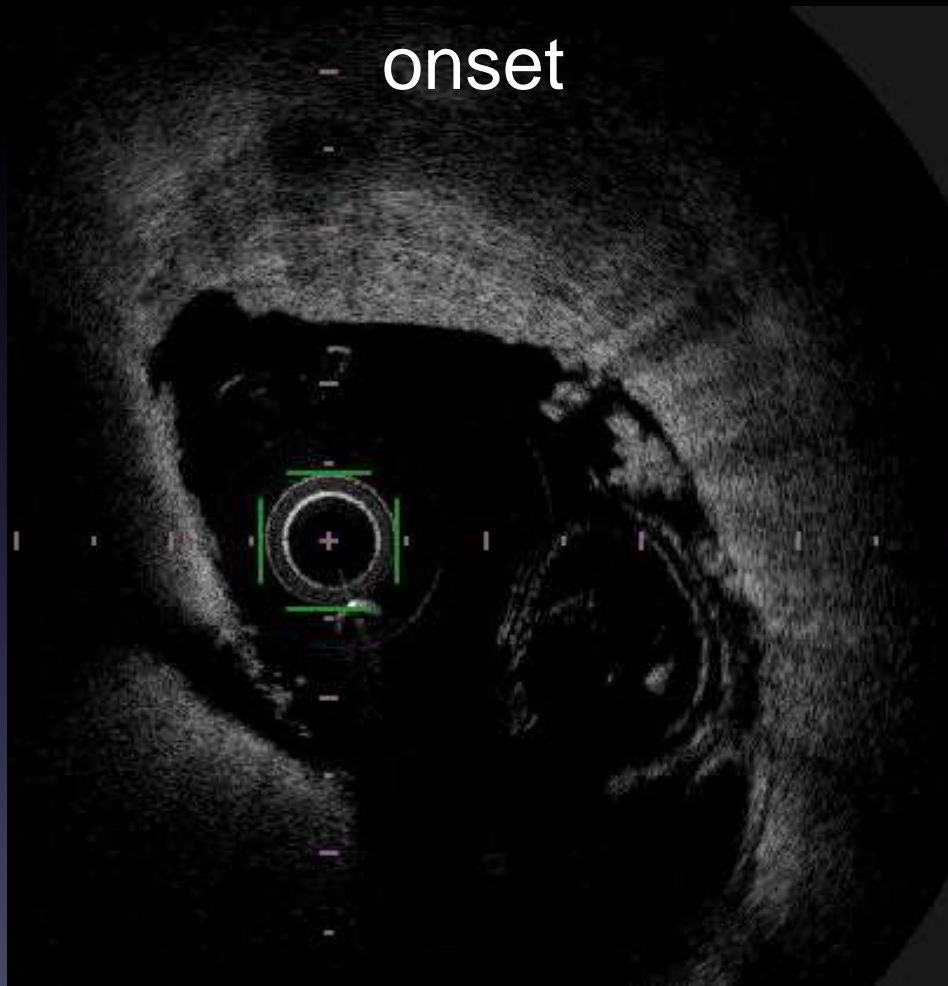
RAO CAU



LAO CRA



OFDI image of LMCA



Summary

- ✓ This case was acute myocardial infarction after anaphylactic shock for wheat.
- ✓ His coronary angiography revealed multi vessels occlusion only in LCA, but there was not plaque rupture in his LCA.
- ✓ This case was considered that erosion of fibrotic plaque in LMCA induced by secretion of mast cell associated with anaphylactic shock formed thrombus and migration of thrombus triggered acute myocardial infarction.