

# **CONSERVATIVE THERAPY WITH WARFARIN FOR NON-OCCLUSIVE CORONARY THROMBUS**

## **INSIGHT FROM OPTICAL COHERENCE TOMOGRAPHIC IMAGING**

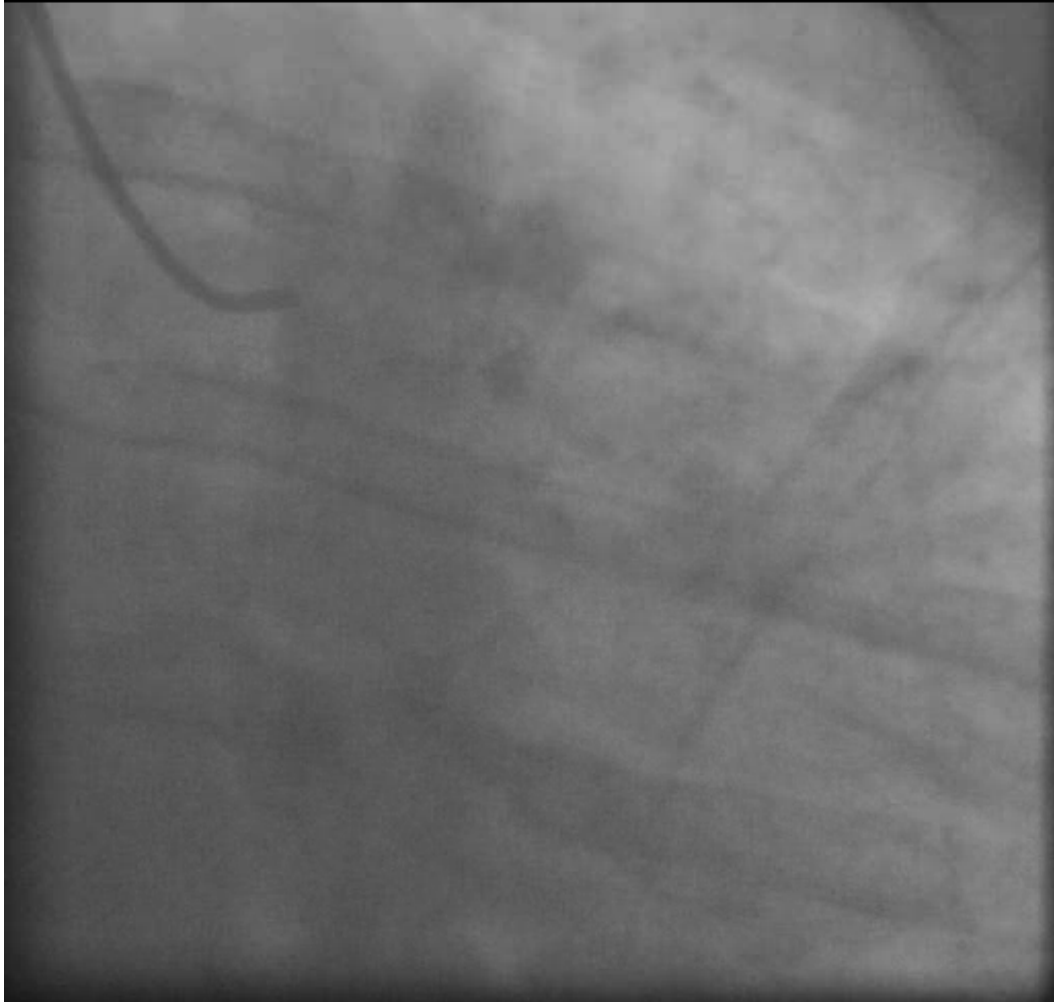
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# Case 1

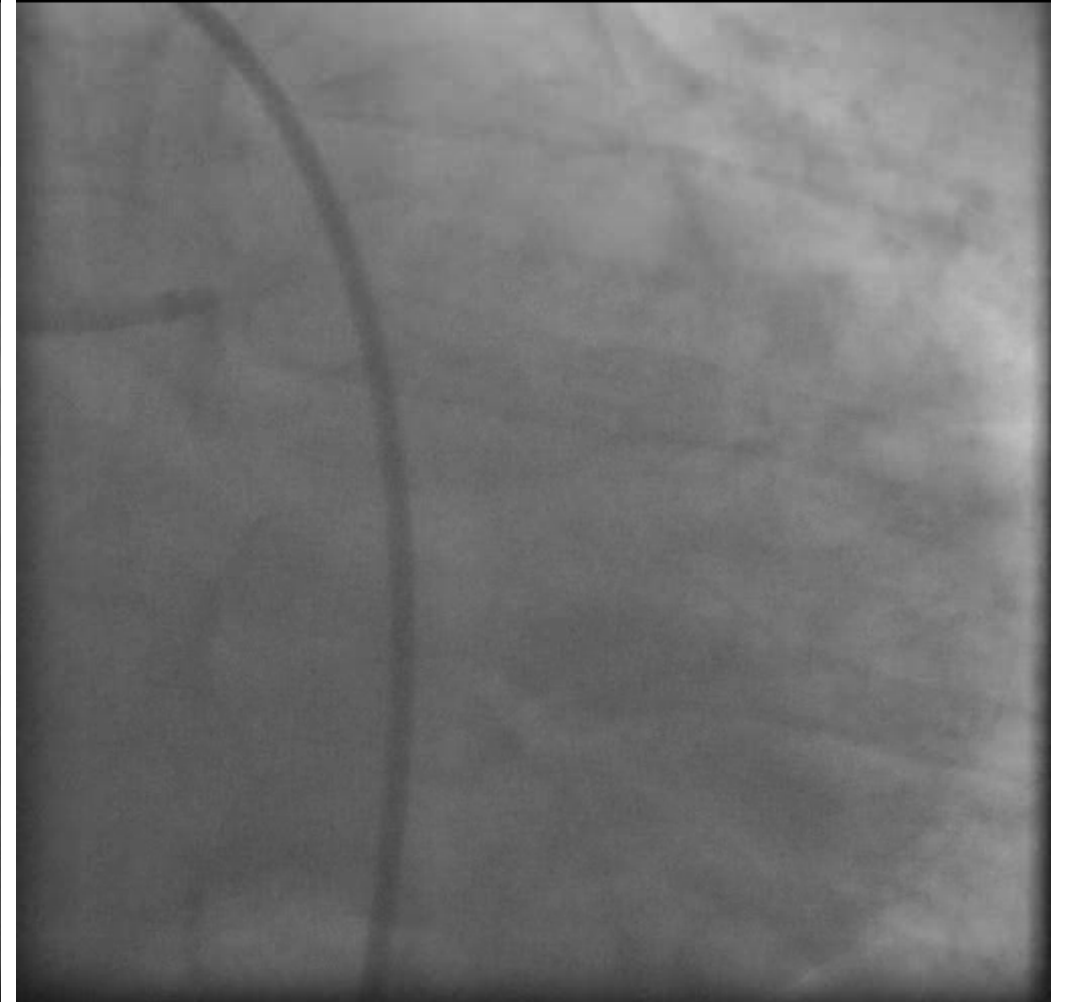
- 33 years old male smoker presented to ED with chest pain
- No ECG changes, No RWMA, good LV function
- Peak cTnI 0.37
- Treated with nitrate, dual antiplatelet therapy and therapeutic subcutaneous enoxaparin
- Improved symptomatically
- CAG next morning

# Coronary angiography

Lossy compression - not intended for diagnosis

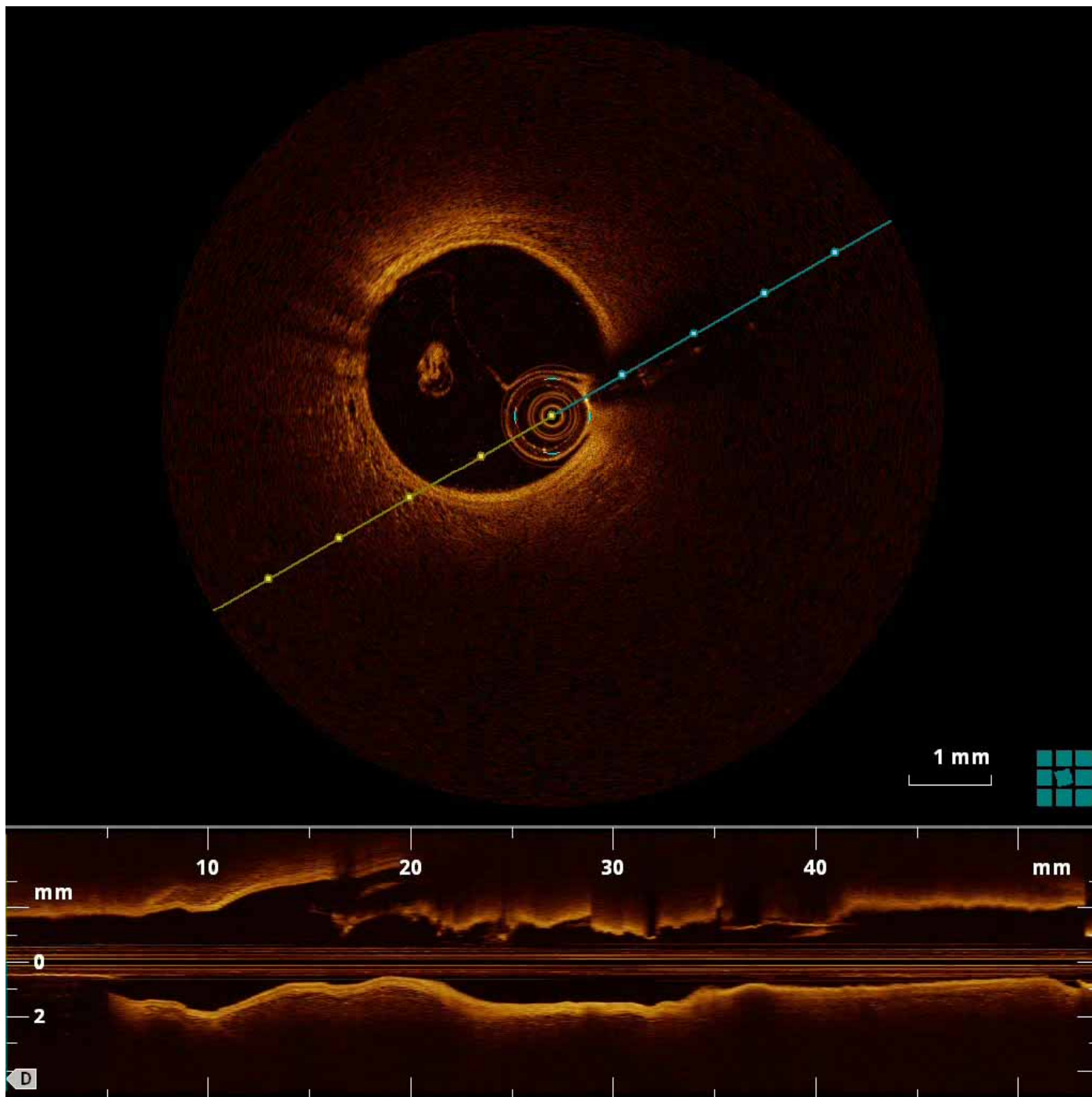


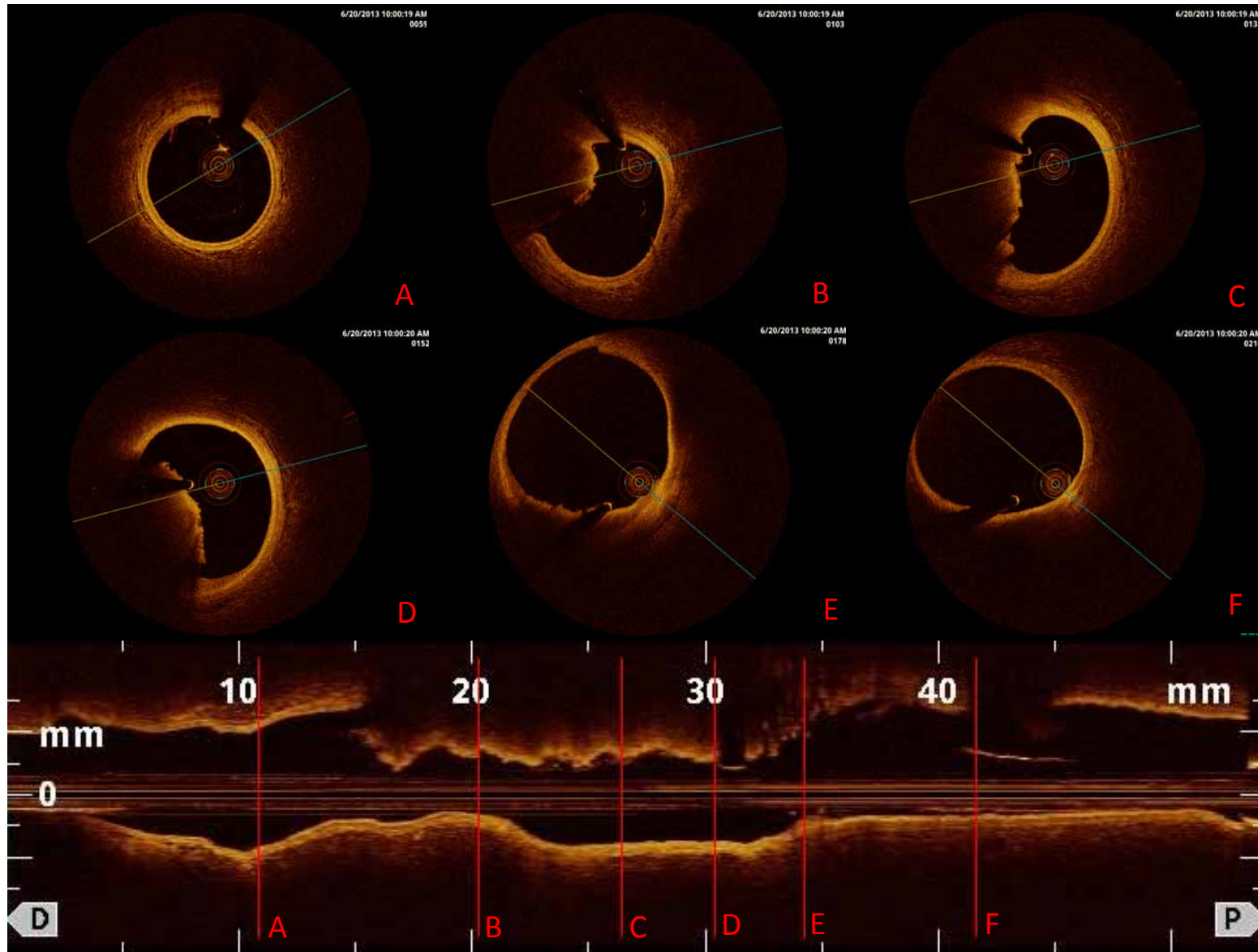
Lossy compression - not intended for diagnosis



# Case 1

- Pain free, hemodynamically stable, high risk intervention
- Tirofiban infusion was added to dual anti-platelet and enoxaparin
- Persistent thrombus in angiography 48 hours later





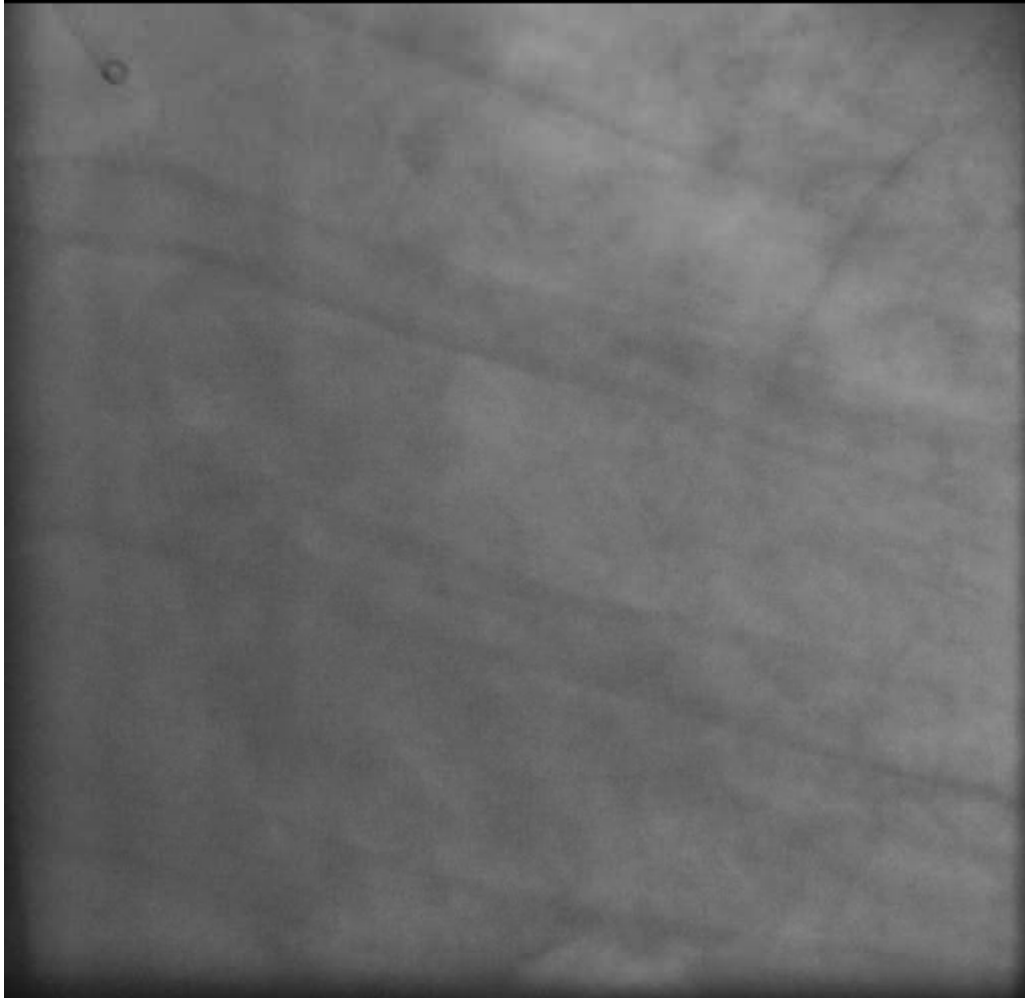
Optical coherence tomography (OCT) showed large but non-occlusive red thrombus (minimal luminal area  $9\text{mm}^2$ ) extending from the proximal LAD into the distal left main trunk

# Case 1

- Given the non-occlusive nature of the thrombus, lack of recurrent ischemia and hemodynamic stability, PCI was deferred
- Warfarin was commenced in addition to dual antiplatelet therapy
- Patient was discharged after therapeutic INR was achieved
- Remained asymptomatic and returned for repeat coronary angiography and OCT 6 weeks later

# Coronary angiography 6 weeks later

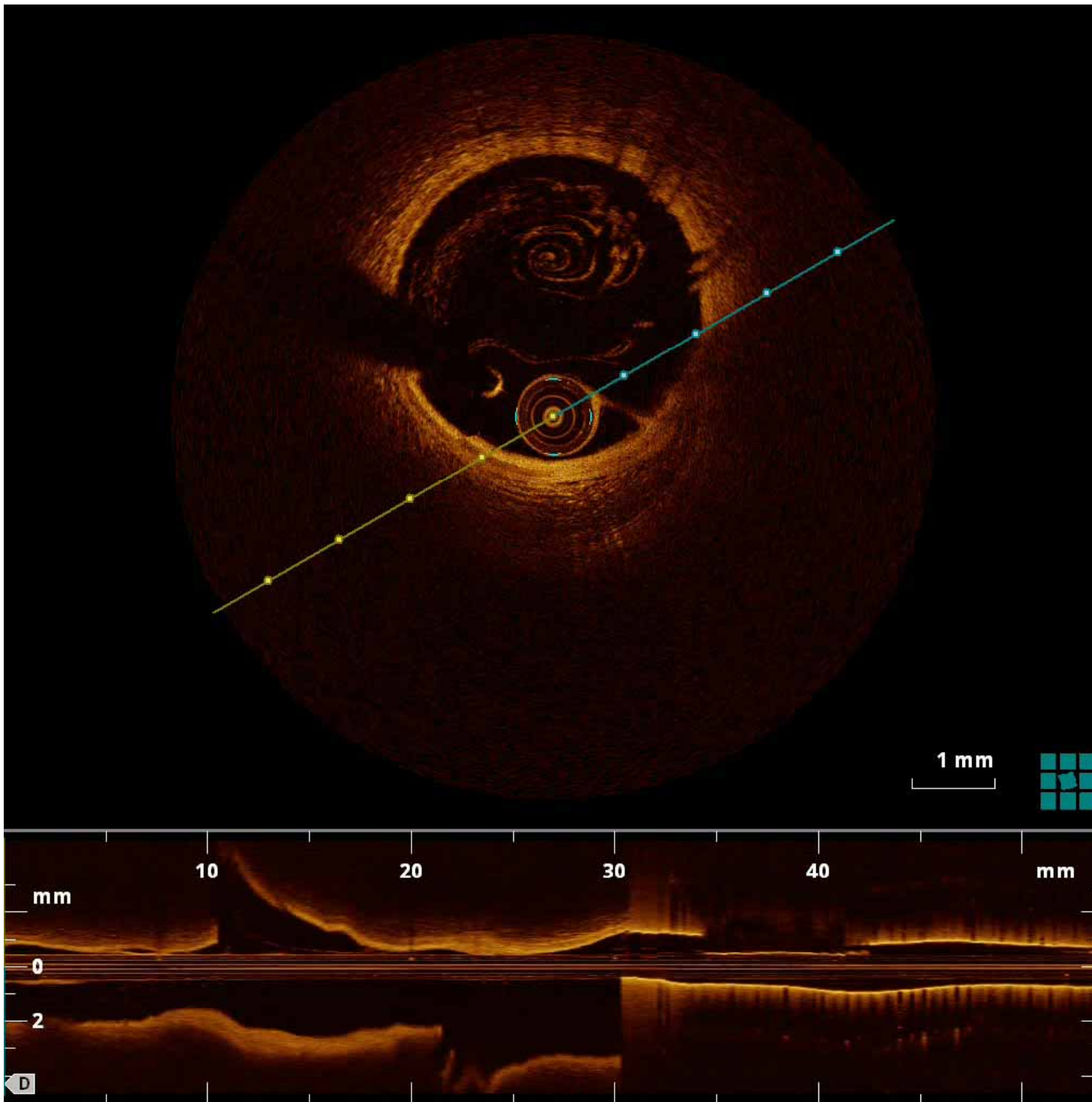
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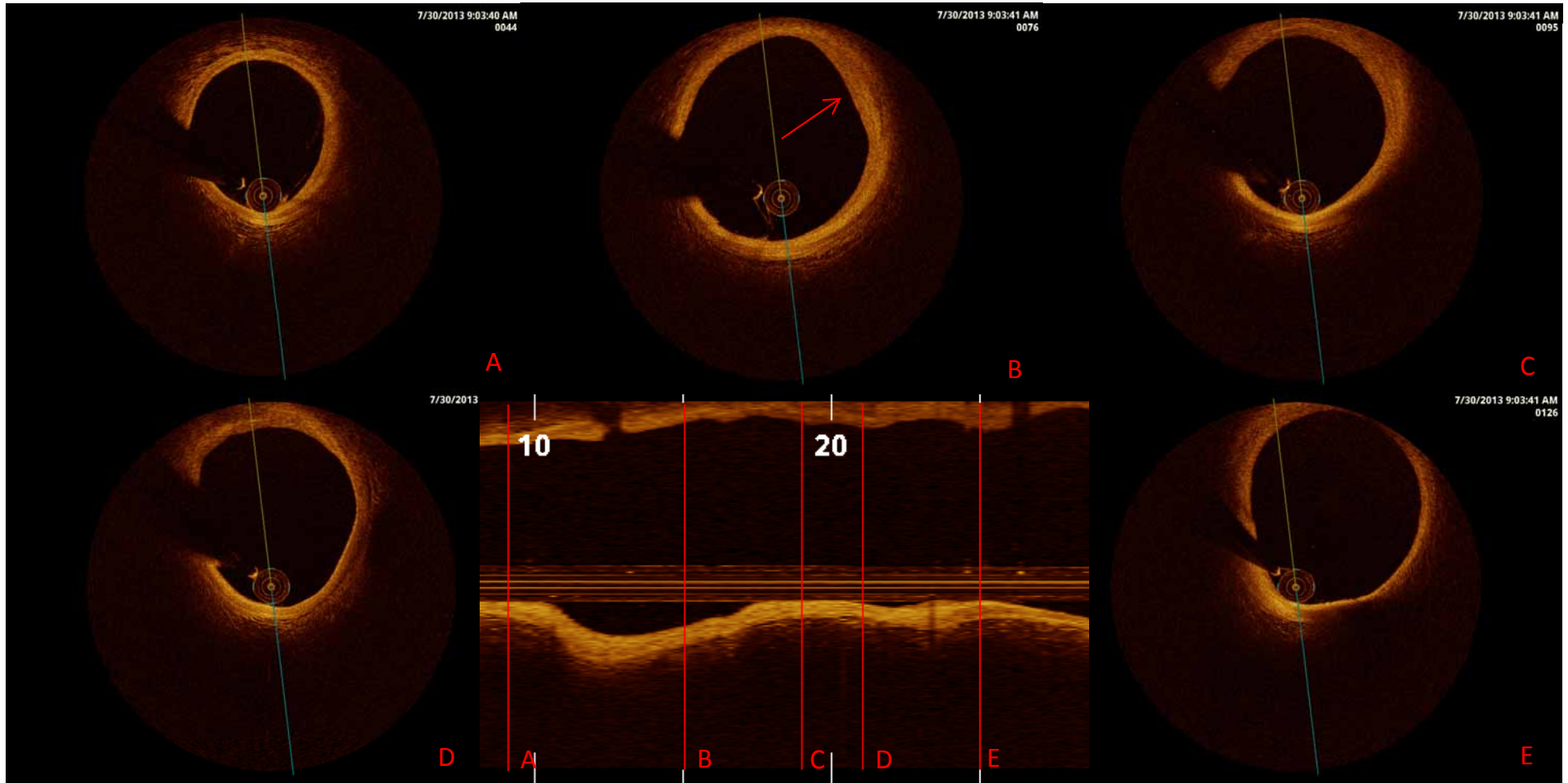
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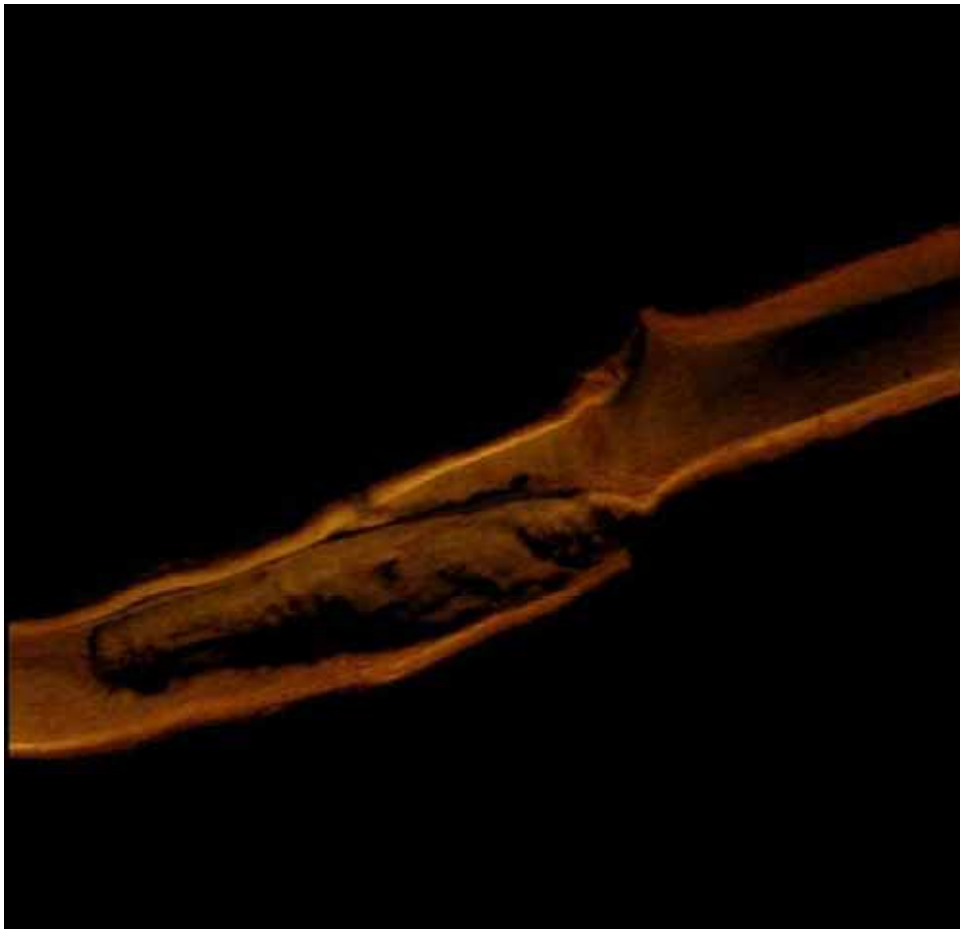


# OCT 6 weeks later



Red arrow – healed plaque

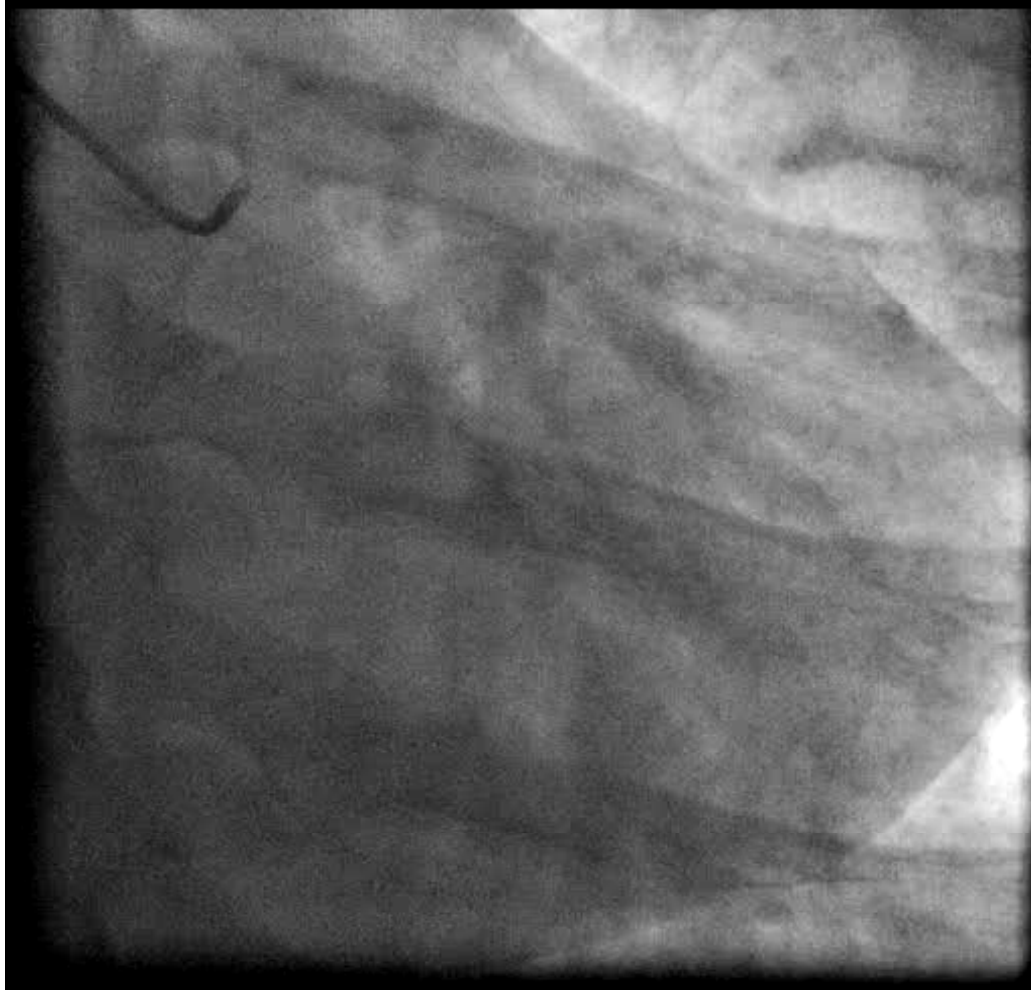
# 3D OCT pre & post



# Case 2

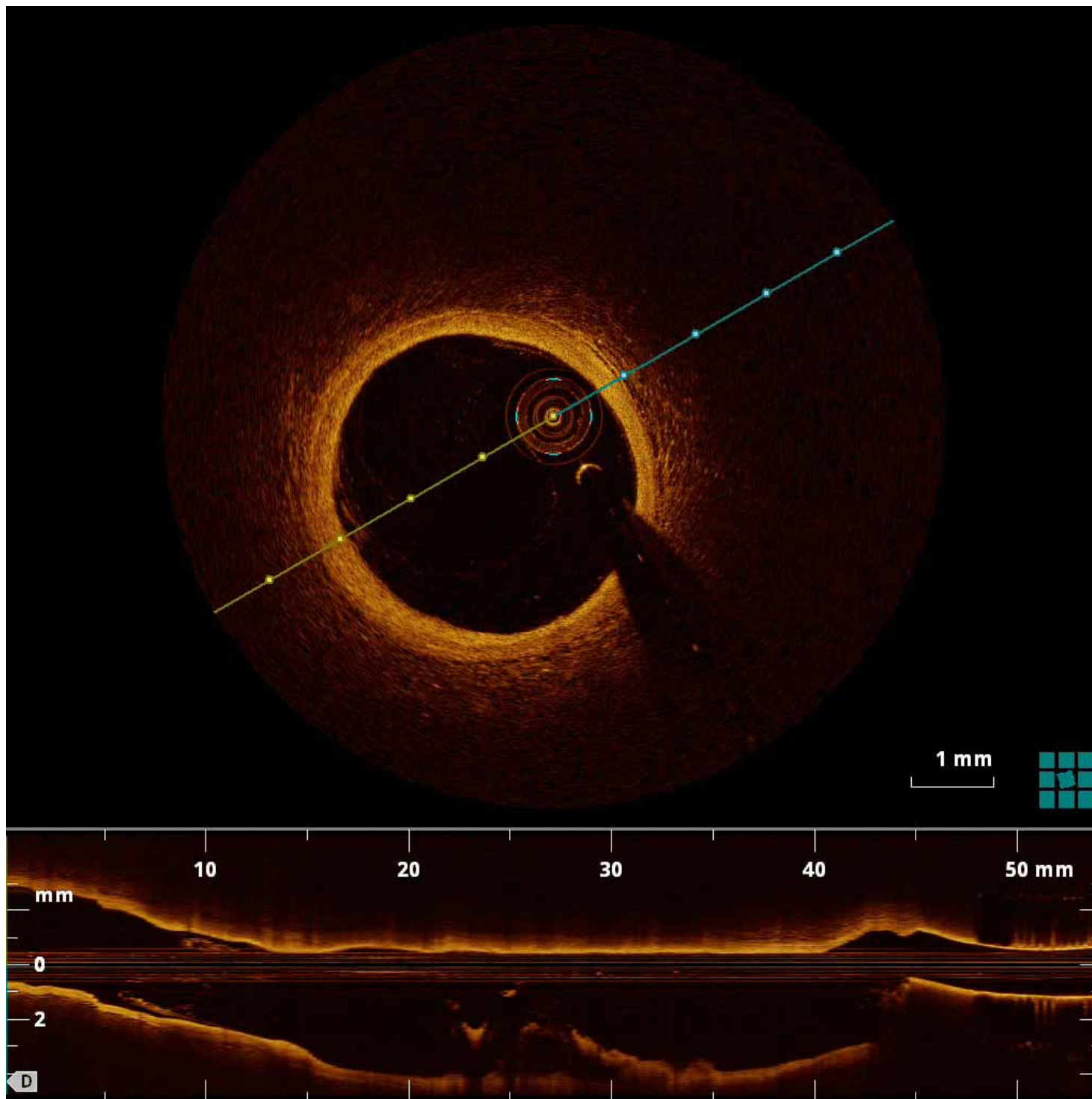
- 42 years old male smoker presented with chest pain to ED
- No ECG changes, No RWMA, Good LV function
- Peak cTnI 3.0
- Treated with nitrate, dual antiplatelet and intravenous heparin
- Improved symptomatically
- CAG next day

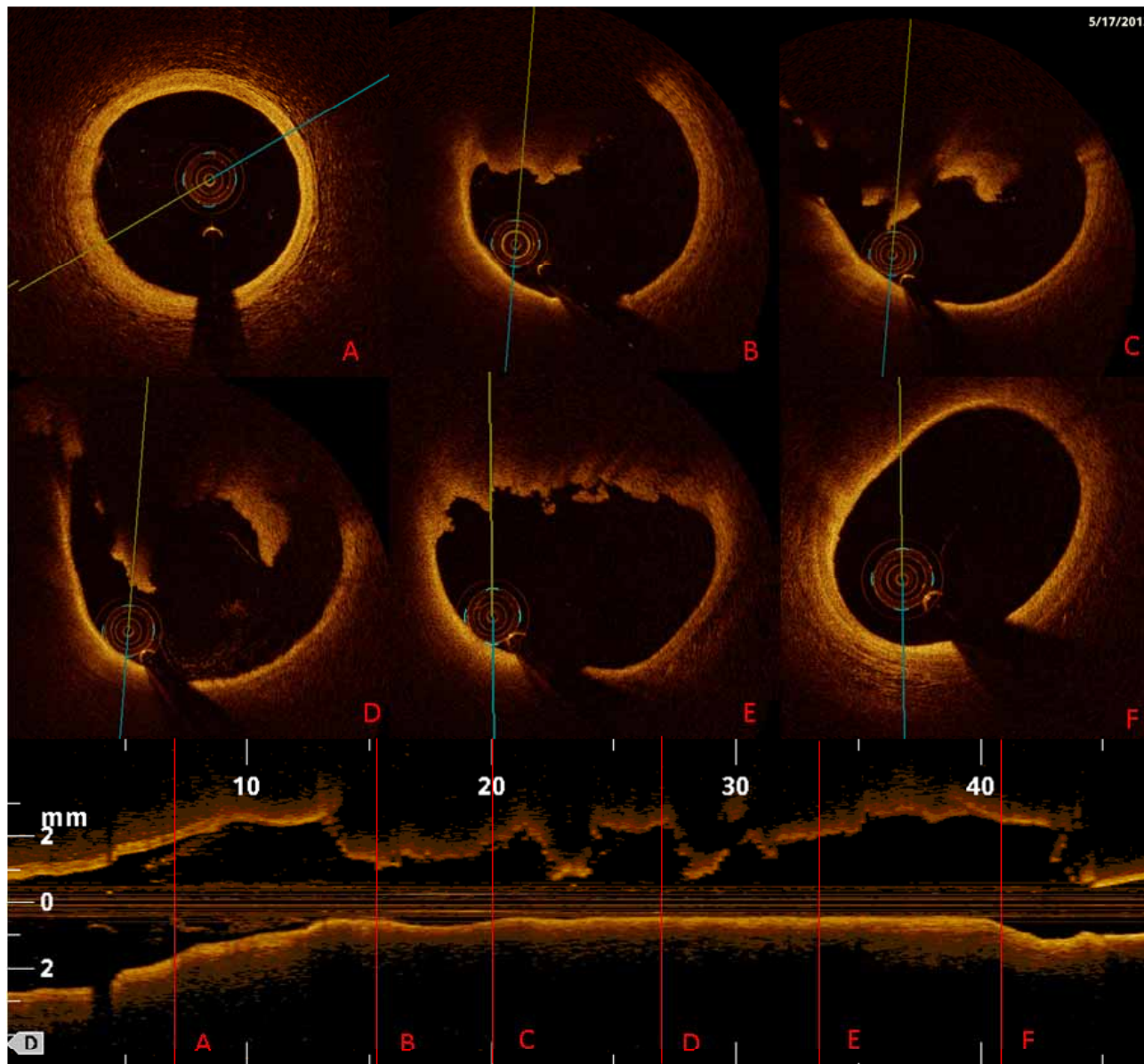
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Optical coherence tomography (OCT) showed large but non-occlusive red thrombus (minimal luminal area 8 mm<sup>2</sup>)

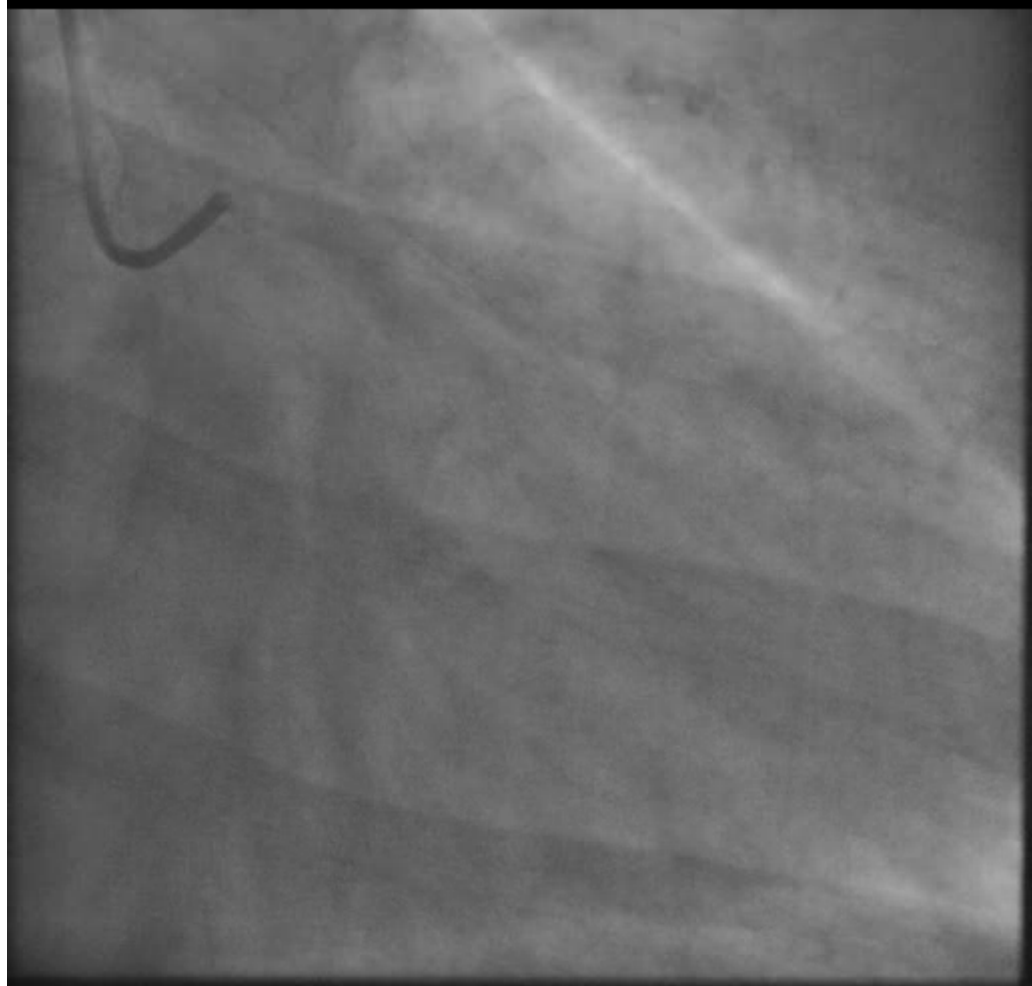
## Case 2

- Warfarin was commenced in addition to dual antiplatelet therapy.
- Patient was discharged after therapeutic INR was achieved.
- Remained asymptomatic and returned for repeat coronary angiography and OCT 6 weeks later

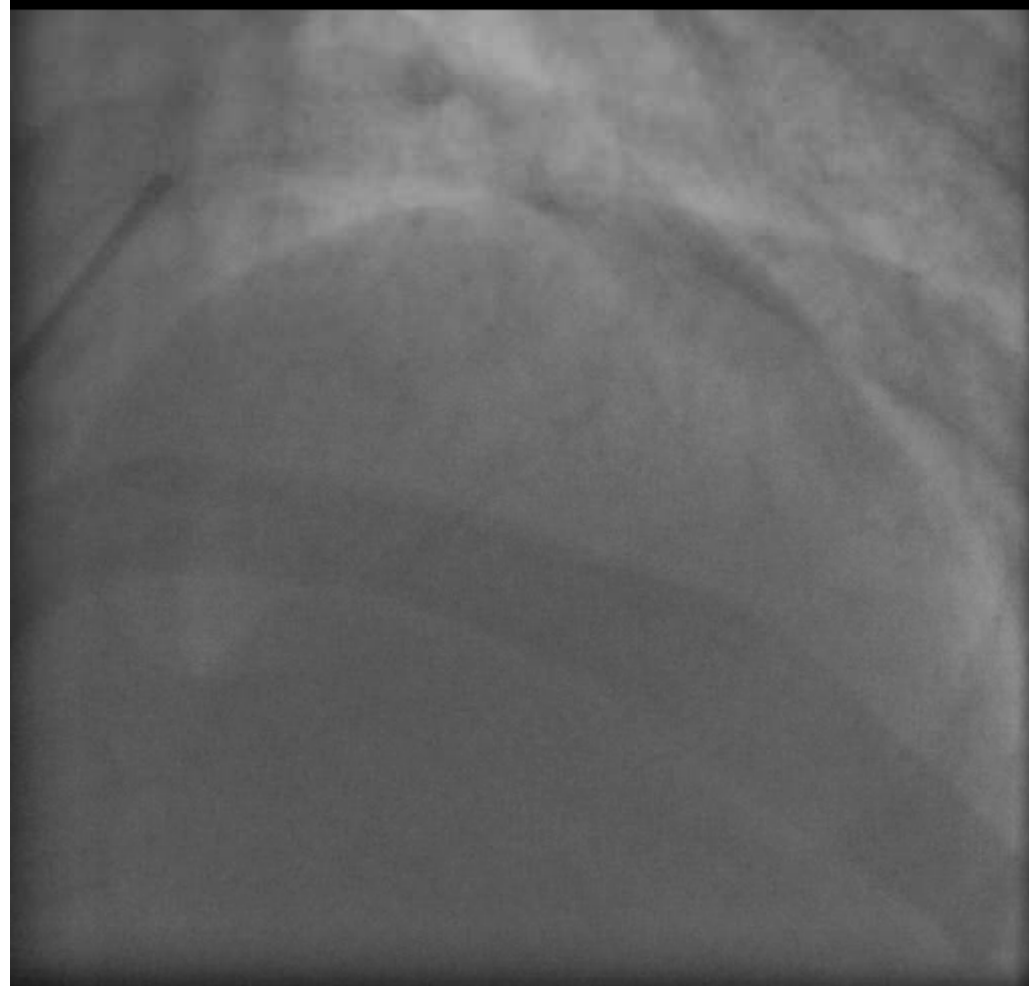


# Follow-up coronary angiography

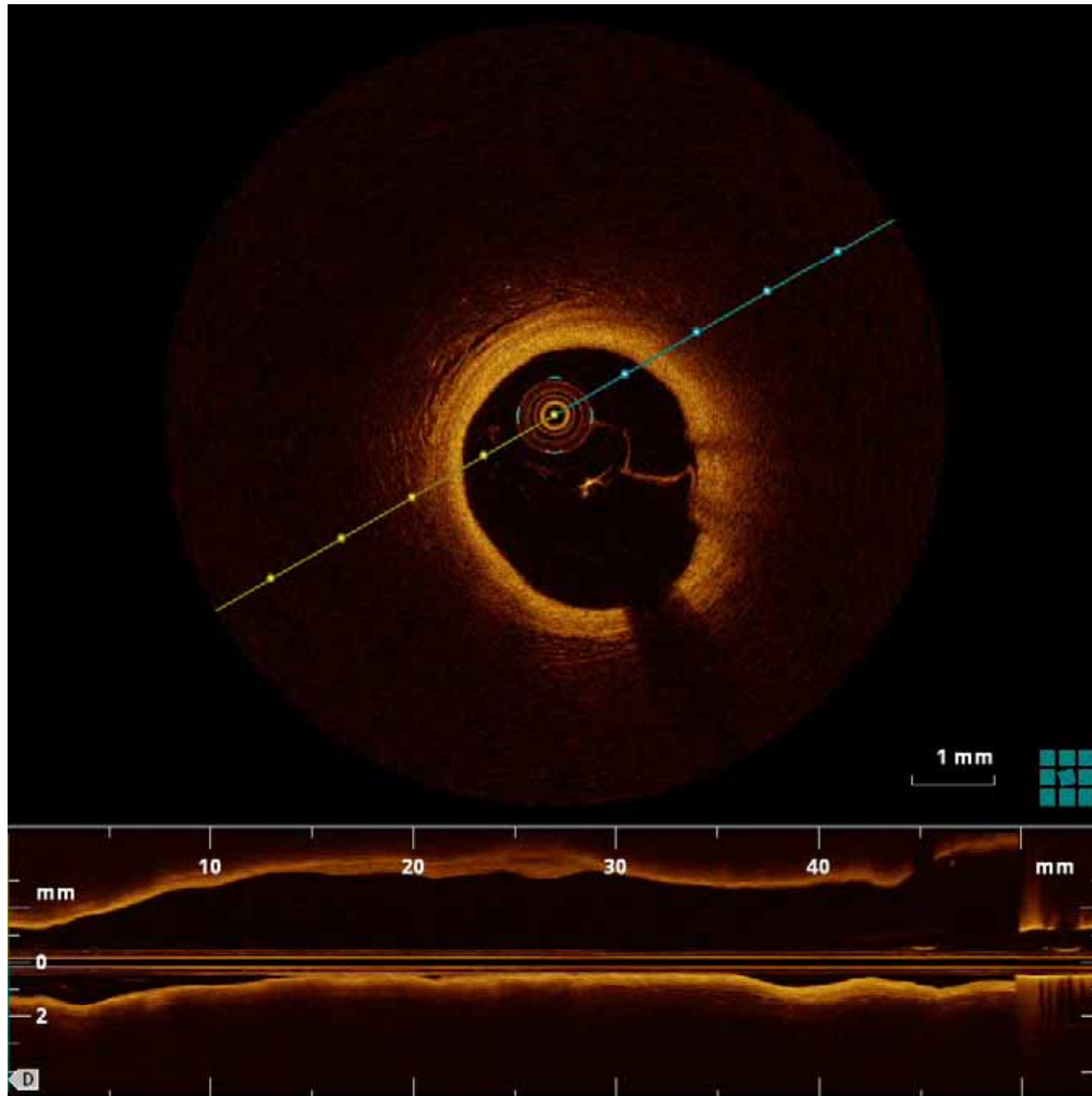
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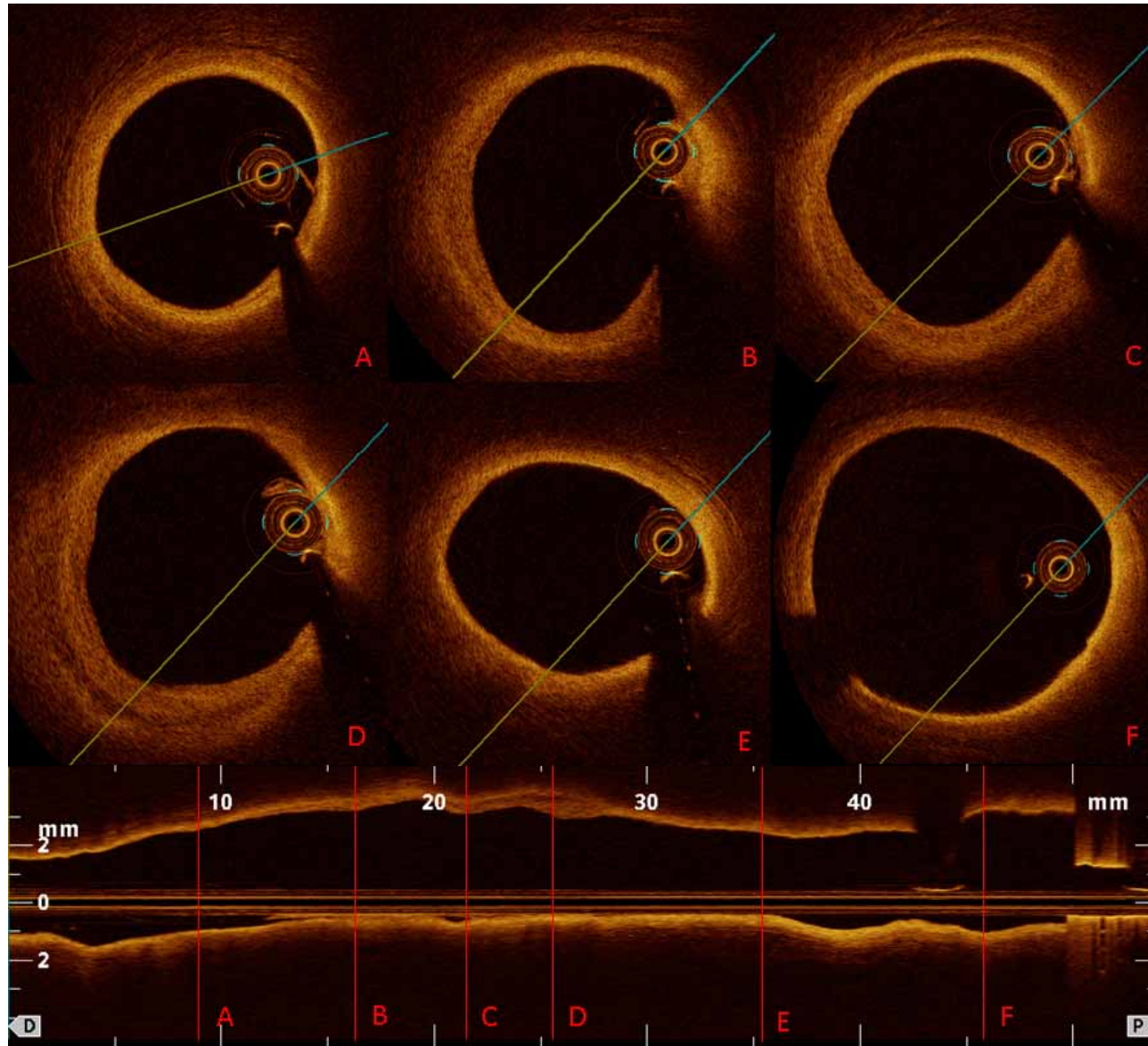
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# Follow-up OCT 6 weeks later



# Follow-up OCT 6 weeks later



# Intracoronary thrombus - Management

## **Mechanical:**

- a. Aspiration thrombectomy
- b. Mechanical thrombectomy (rheolytic thrombectomy to X-Sizer or excimer laser)
- c. Filter
- d. Thrombus capturing stent

## **Pharmacotherapy:**

Systemic - Thrombolysis, GPIIb-IIIa inhibitors

Intracoronary – (Guiding catheter or Clearway) GPIIb-IIIa, thrombolysis

**? Oral - Warfarin**

# Intracoronary thrombus - Management

- Non emergent situation – patient is pain free and hemodynamically stable, minimal troponin leak, good LV function and no RWMA
- Large non-occlusive thrombus with large residual lumen area
- TIMI 4 thrombus, few days old
  - Not suitable for manual thrombectomy
  - Very high risk of distal embolization and no-reflow or proximal embolization to LCX
  - risk of malapposition

# Intracoronary thrombus - Management

- IV heparin, GPIIb-IIIa inhibitor and dual antiplatelet therapy
- Not effective
- Dual antiplatelet therapy and *warfarin + High dose statin*
- Controlled lysis of the thrombus and anti-inflammatory therapy
- Complete thrombus resolution and no significant lumen compromise - Avoided stenting and a periprocedural MI

# Conclusion

In selected patients with persistent large non-occlusive thrombus , warfarin maybe considered as a treatment option. This would avoid unnecessary stenting and distal embolisation related myocardial injury.