ECC
ENDOVASCULAR
CARDIAC
COMPLICATIONS

June
18-19
2021
Lausanne
Switzerland

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A Tear For Fear

An unexpected life-threatening complication during routine fractional flow reserve assessment

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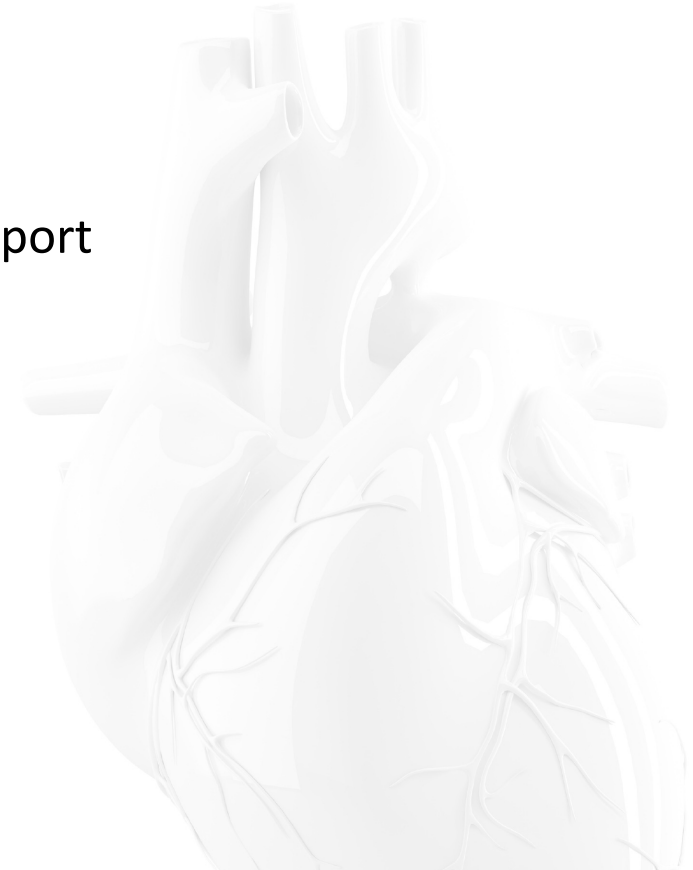
Speaker's name: **Davide Cao, MD**

I do not have any potential conflict of interest to report



CLINICAL PRESENTATION

Female, 73 yrs old
H: 157 cm, W: 55 kg

Medical History

- **CV risk factors: hyperlipidemia**
- **No prior CV events**

Symptoms

- **Stable angina for >1 year**

Tests

- **Stress Echo: negative**
- **Coronary angiography CT: stenosis of the mid left anterior descending (LAD)**

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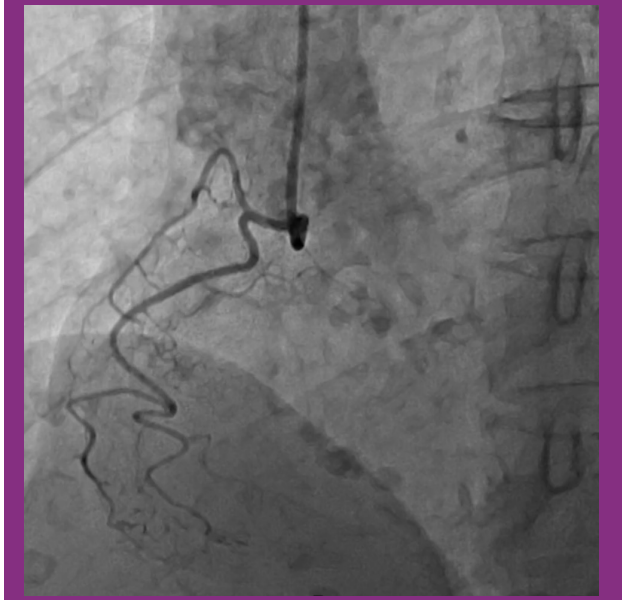
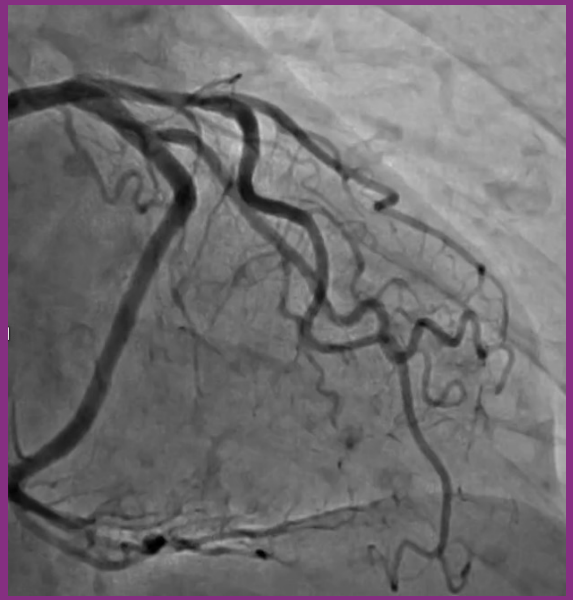
CORONARY ANGIOGRAPHY

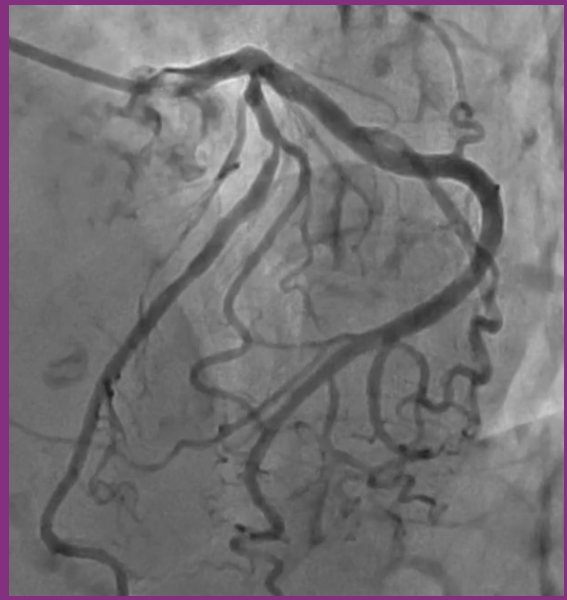
RCA



LCX



LAD



Tandem lesions of the LAD: ostium + mid segment (medina 0.1.0)

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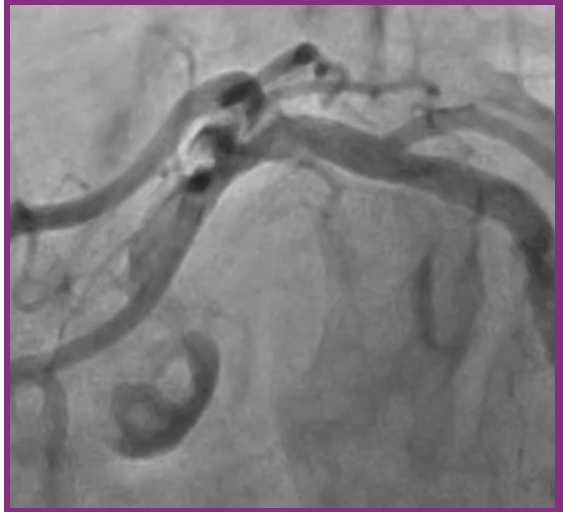
Fractional Flow Reserve (FFR)

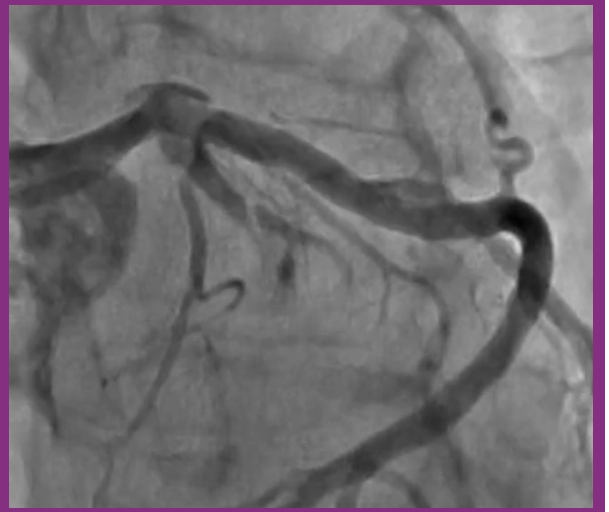
- 5 Fr right radial access
- Guiding catheter EBU 3.5
- Nitrates 1 mg IC
- FFR of the LAD

1. PressureWire™ X Guidewire (Abbot)
2. COMET™ FFR Guidewire (Boston)

Failure to wire the LAD

Something went wrong...





Worsening chest pain, anterior ST-segment elevation... but hemodynamically stable

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WHAT'S NEXT?

Decision #1

1. Venous and arterial femoral access for 'provisional' ECMO
2. Immediate mechanical circulatory support with IABP or Impella

Decision #2

1. Wiring LCx + ad hoc left main PCI via 5 Fr to avoid propagation of the dissection
2. Wiring LCx + upgrade from 5 to 6 Fr and reattempt wiring of the LAD
3. Wiring LCx + 2nd controlateral radial access + 2nd ipsi-arterial guiding catheter to wire the LAD
4. Transfer to the operating room for emergency CABG

PING PONG TECHNIQUE

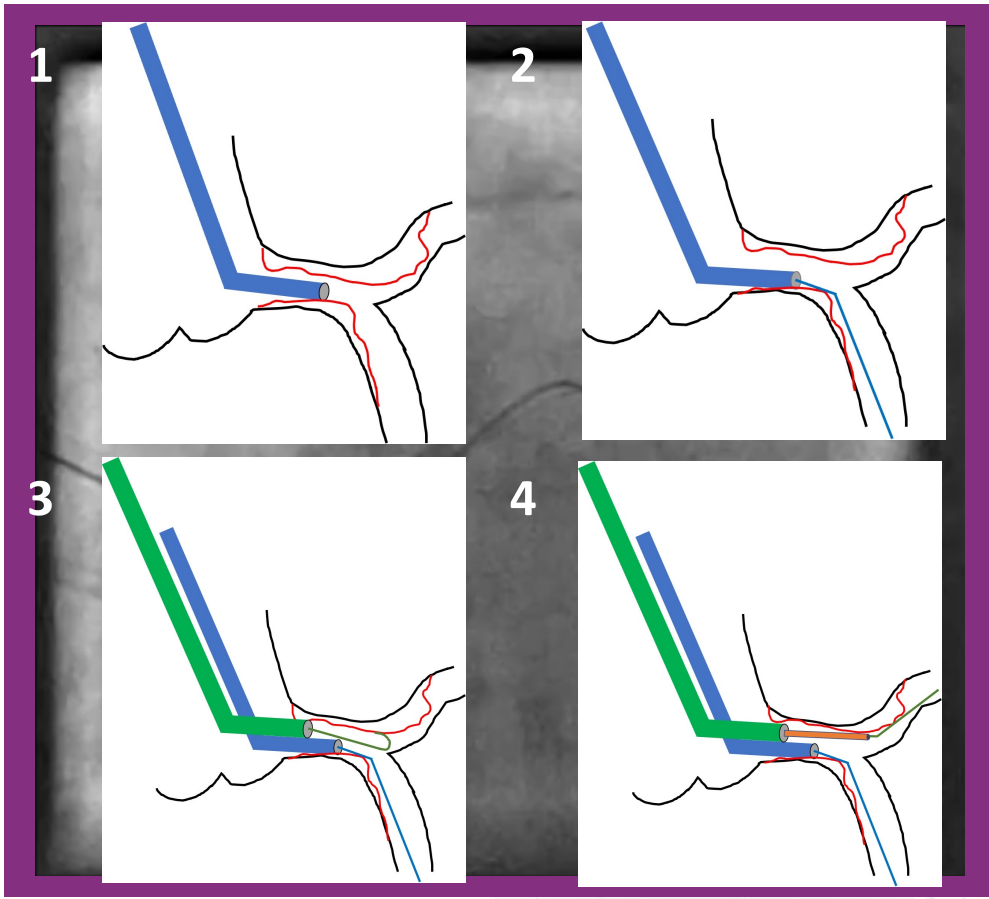
5 Fr right radial access

- **Guiding #1: FFR wire in the LCx**

5 Fr left radial access

- **Guiding #2: Microcatheter (Caravel) + PT2 wire to the LAD**

- **Venous + arterial 6 Fr femoral access**
- **ICU stand-by**



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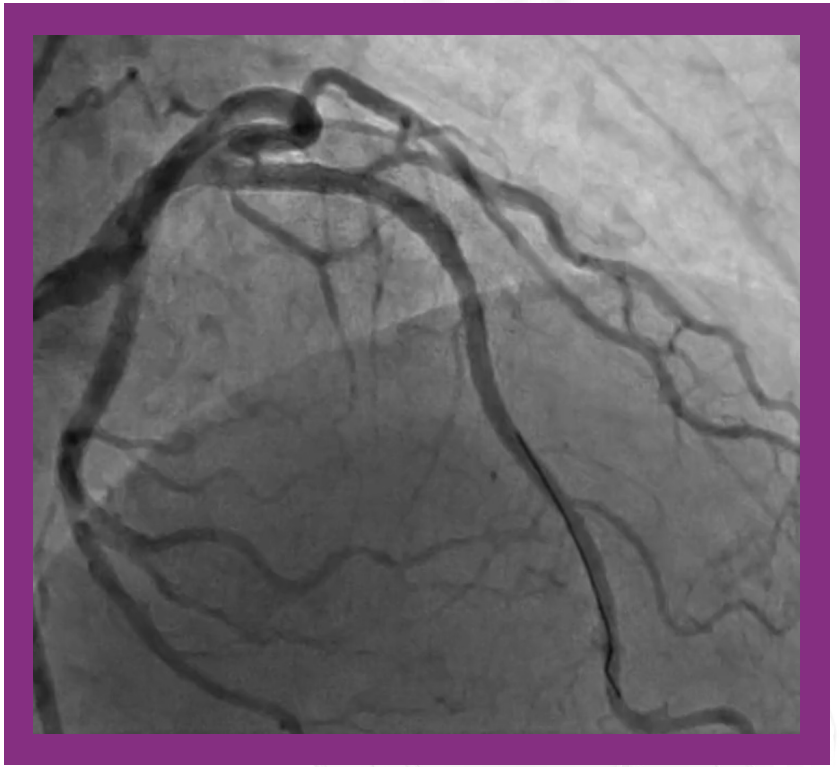
Final Result

- **Mid LAD: Synergy 3.0 x 16 mm**
- **LM > Prox LAD: Synergy MEGATRON 3.5 x 28 mm**
- **POT-side-rePOT: Compliant ballons**
  - **4.0 x 12 mm (LM)**
  - **3.0 x 12 mm (LCx)**
  - **4.5 x 12 mm (LM)**



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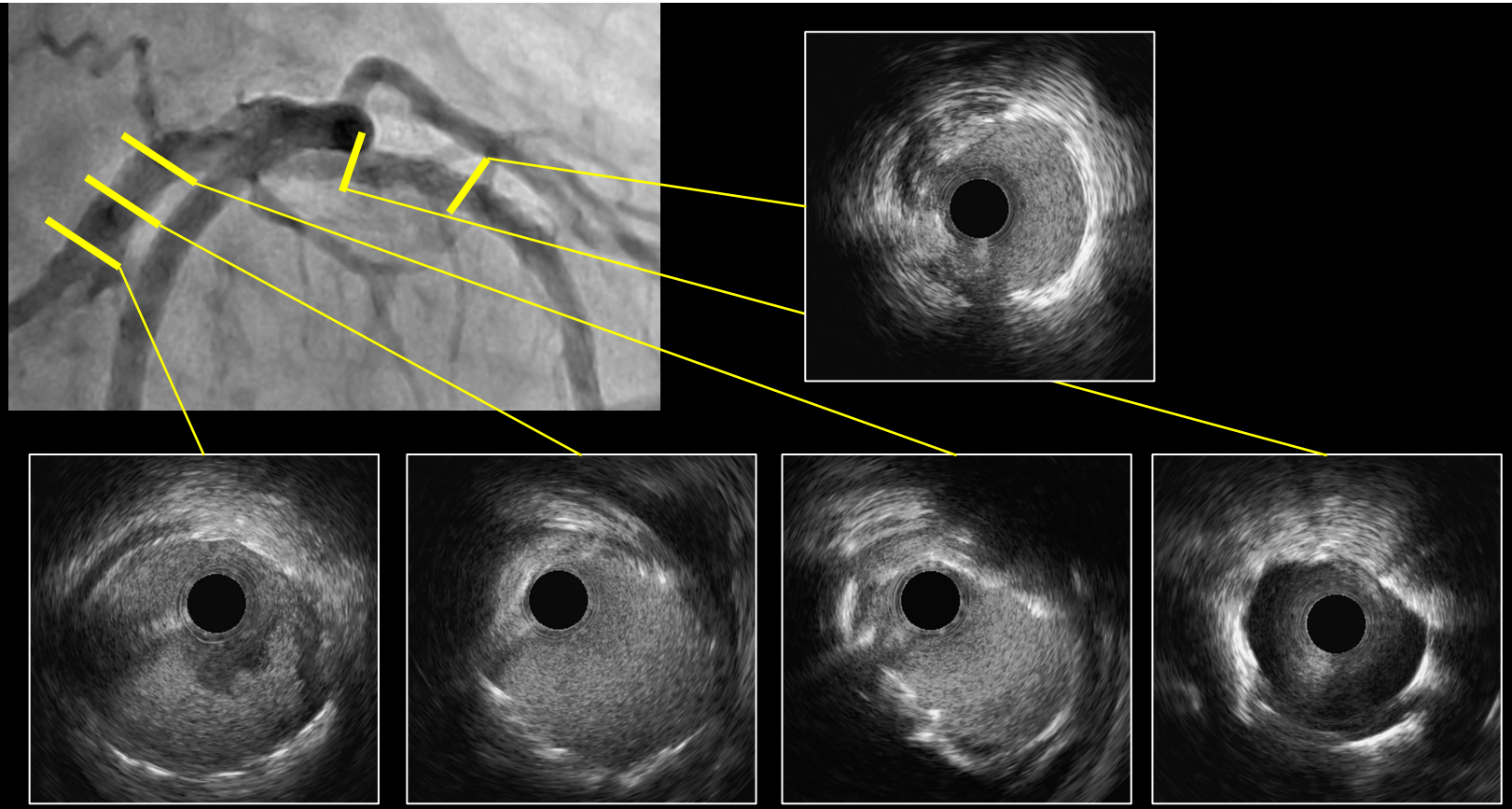
INTRAVASCULAR ULTRASOUND



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TAKE HOME MESSAGES

- **Any invasive intravascular procedure (even diagnostic) is potentially harmful: appropriate indications are key.**

- **Ping-pong technique to wire the ‘side’ patent branch and prevent propagation of the dissection: secure the patient first.**

- **Don't panic and keep an eye on the patient!**