

Spontaneous Left Coronary Artery Dissection

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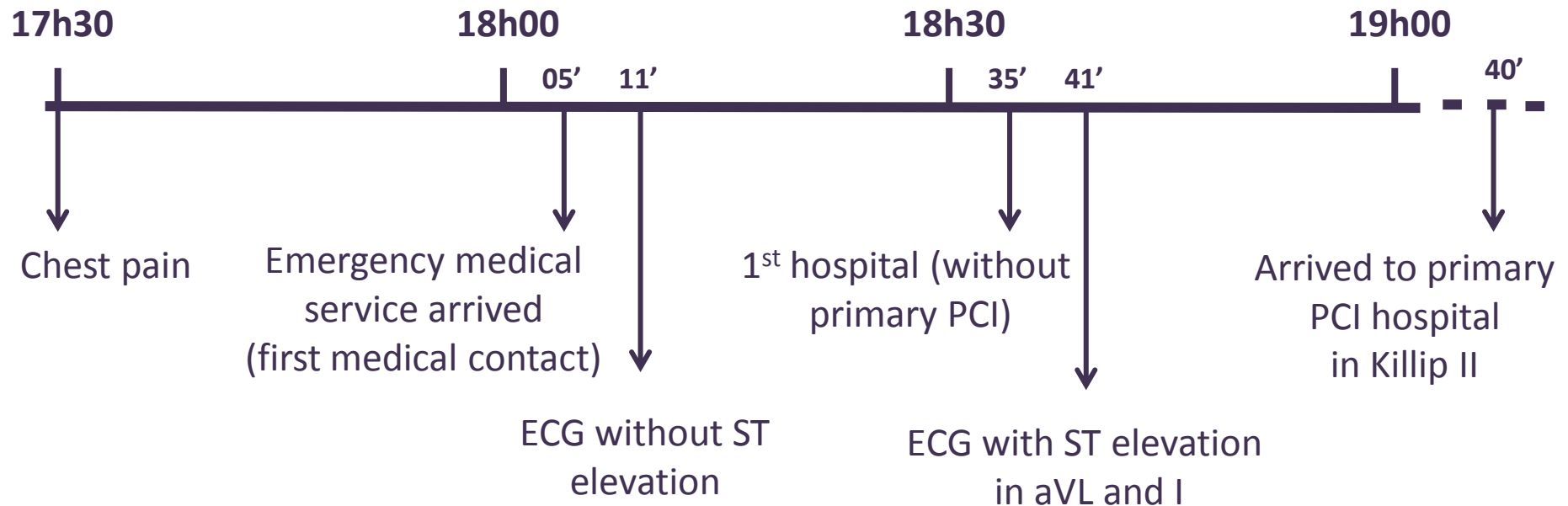
Potential conflicts of interest

Speaker's name: Carlos Galvão Braga

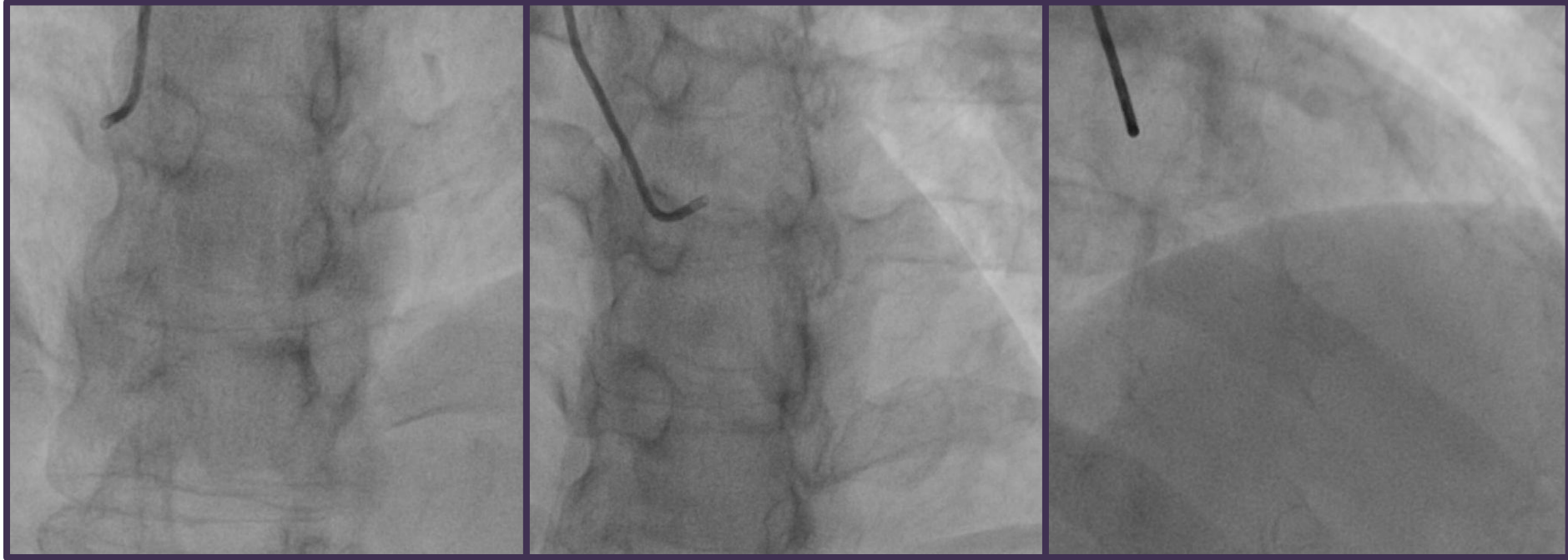
I do not have any potential conflict of interest

Case report

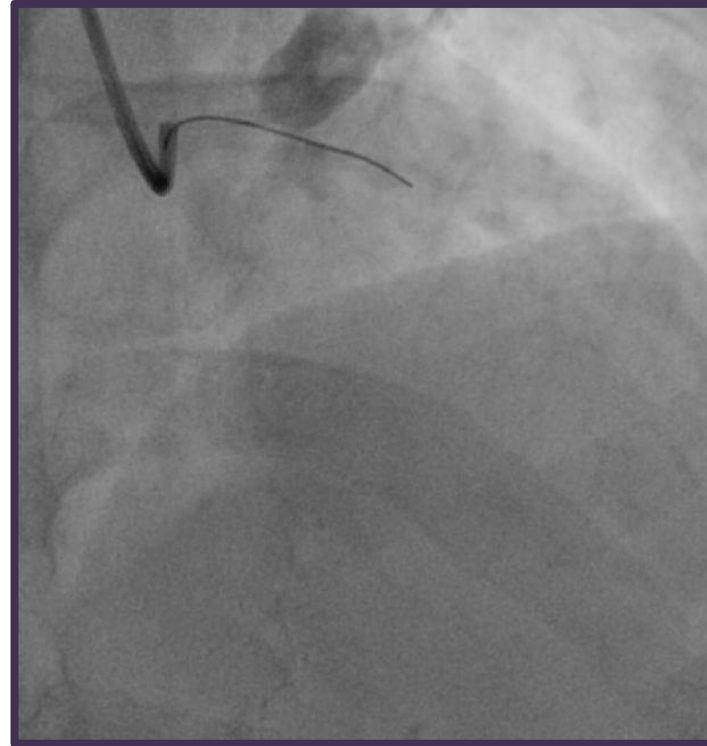
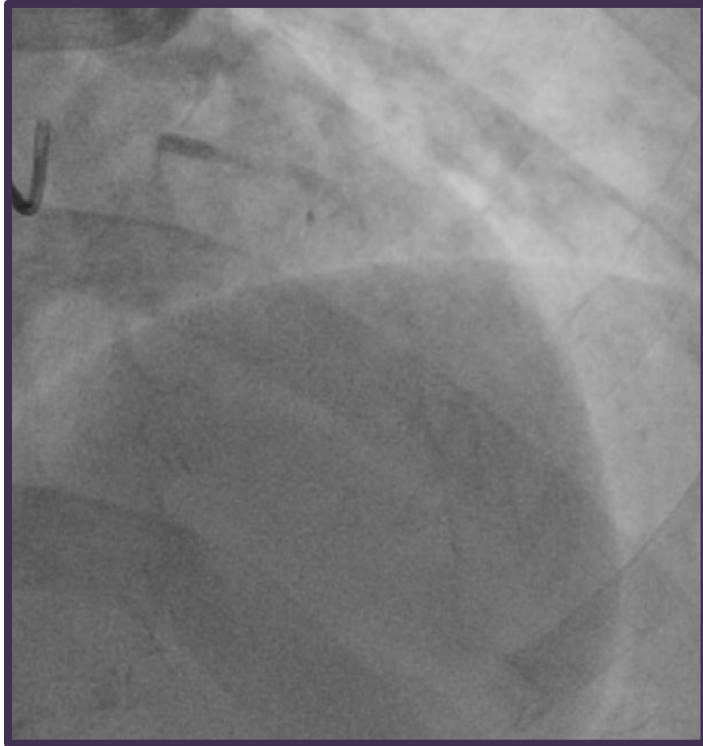
- 35 year old female
- Smoker
- Medicated with oral contraceptive



Coronary angiography

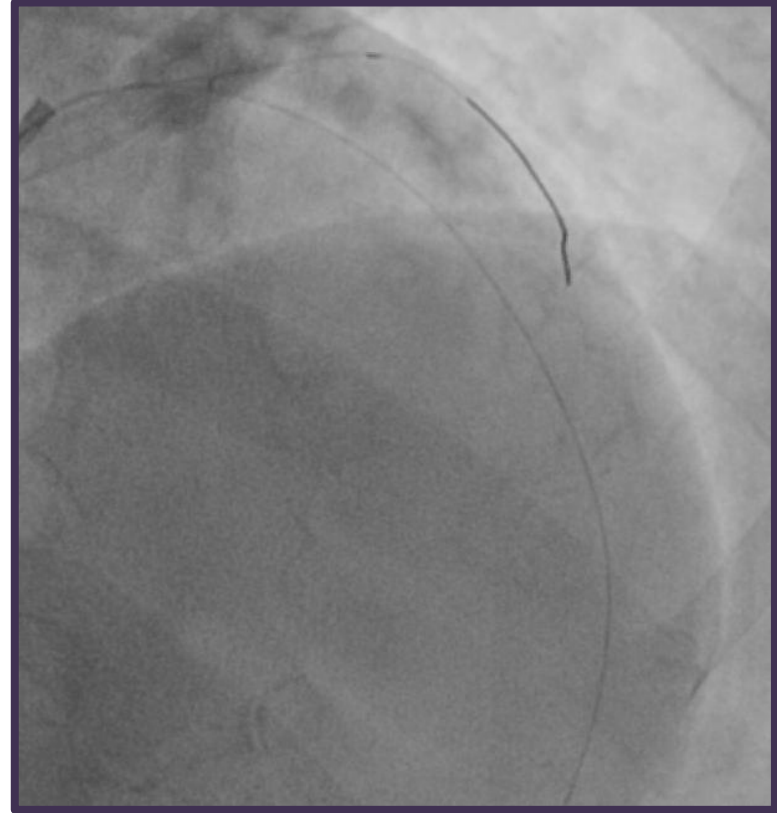
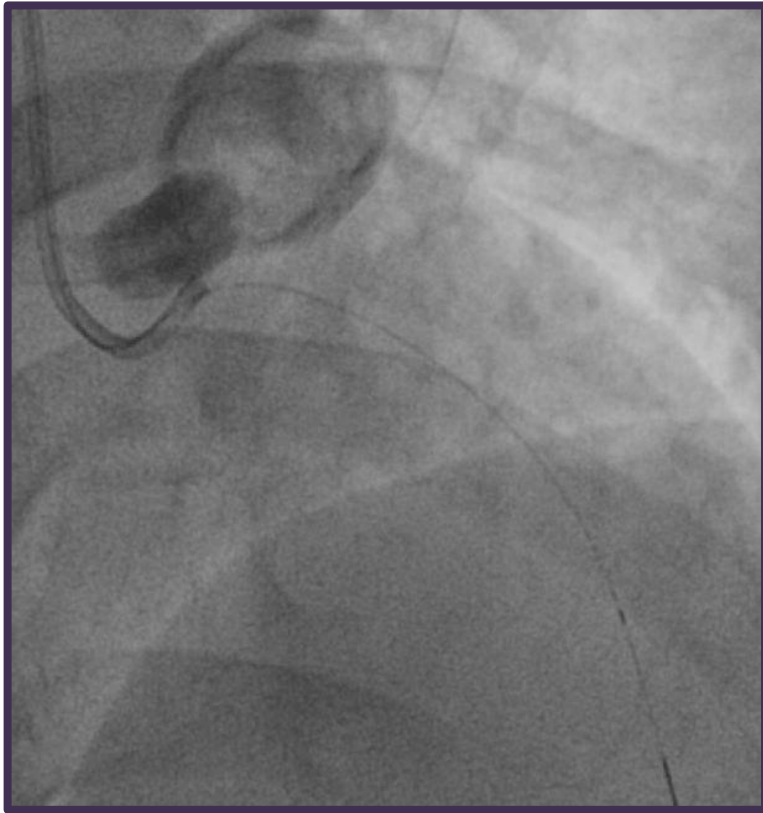


- Radial artery access with a 6F JR 4.0 and a 6F JL 3.5 catheters
- Normal and dominant right coronary artery
- Long dissection extending from the left main to the mid segment of the left anterior descending (LAD)
- Large thrombus on the distal left main and proximal LAD
- The patient was getting worse with hemodynamic compromise
- It was decided to administer 10 mg of tenecteplase intracoronary and Gp IIb/IIIa inhibitors



- Marked dissolution of thrombus was seen a few minutes later, but LAD was still occluded
- BMW® wire was attempted to cross LAD without success (progression through the false lumen); the wire was removed from the left anterior descending and crossed to the circumflex, which was not dissected

Percutaneous coronary intervention



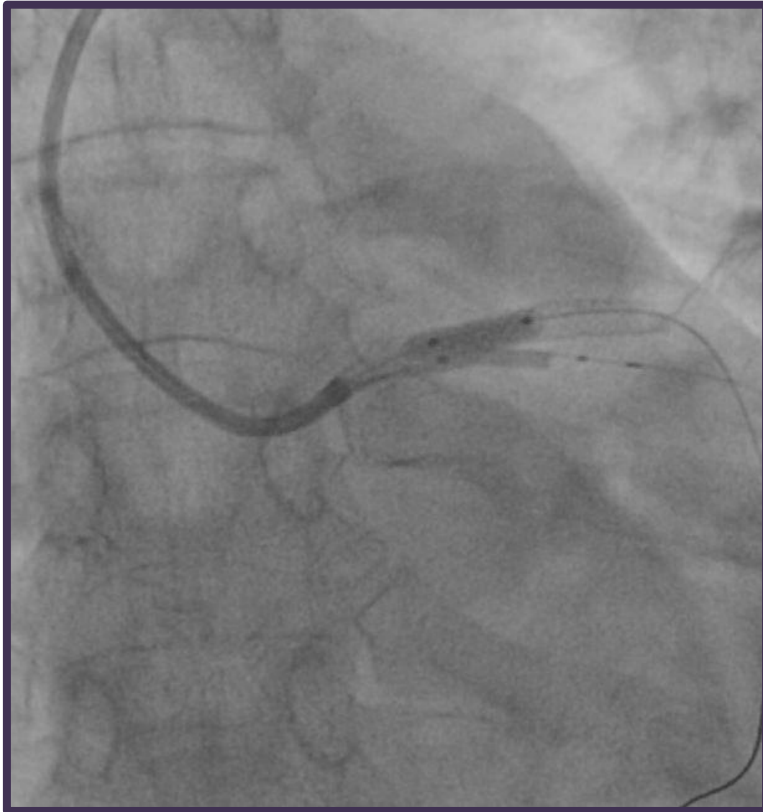
- The BMW® wire was then gently backed up to the distal left main and advanced apparently through the true lumen of the LAD, initially without reperfusion
- Suddenly, the “body” of the wire collapsed the false lumen with immediate reperfusion
- After reperfusion, the patient had 5 episodes of ventricular fibrillation

Percutaneous coronary intervention



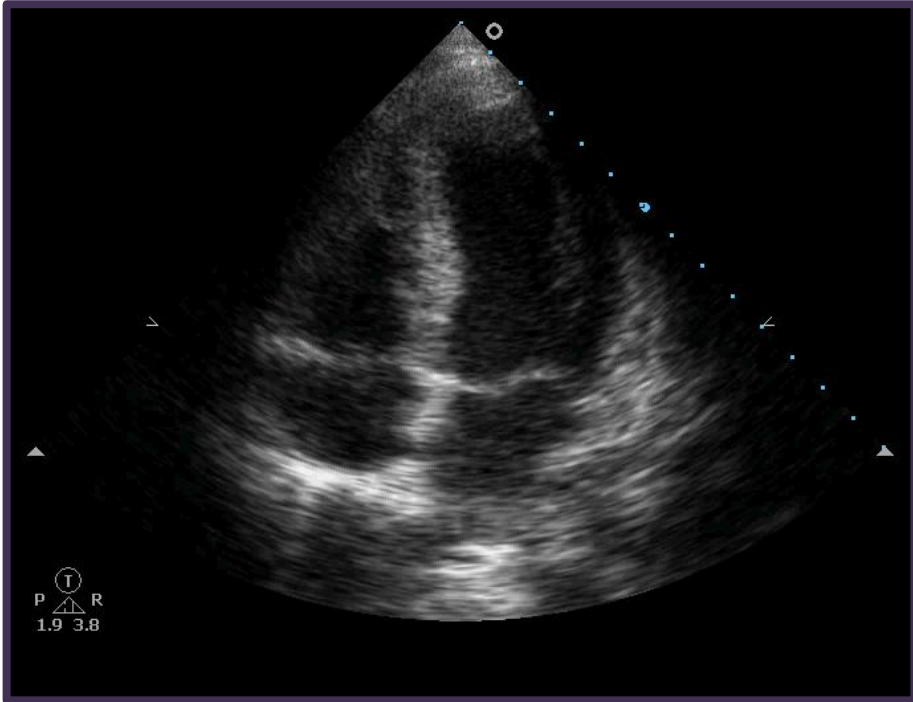
- A second BMW® protection wire was crossed in the circumflex artery
- A drug eluting stent 3.5 x 38 mm was implanted from the ostium of the left main to the mid segment of LAD

Percutaneous coronary intervention

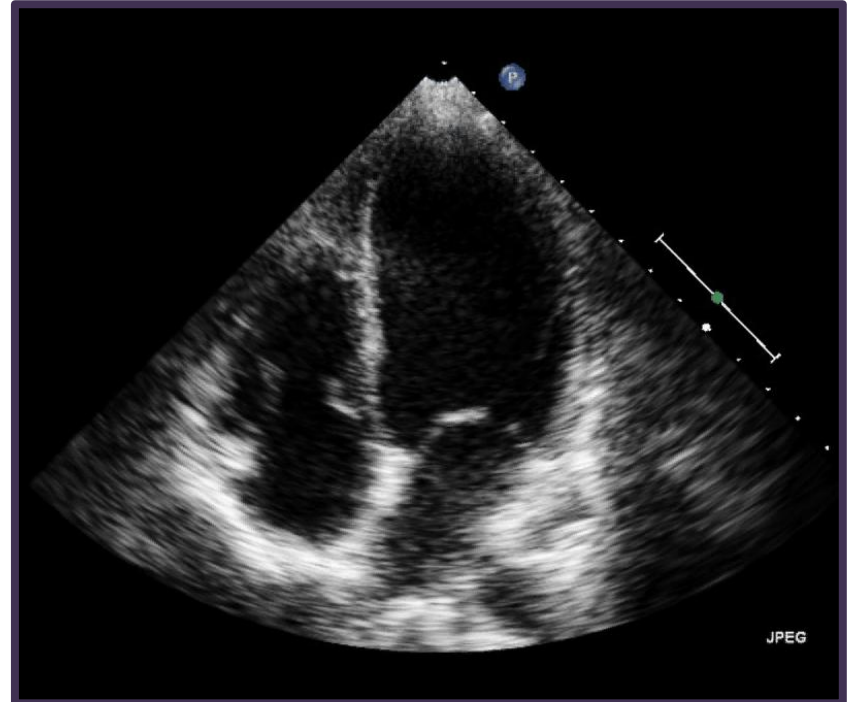


- After doing Proximal Optimization Technique, the wires were recrossed and a kissing-balloon was performed using 2.25 x 15 mm balloon on the circumflex and 3.0 x 12 mm on the LAD
- The final result was excellent with no residual lesion and TIMI 3 flow in all branches

Follow-up



4-chamber view (acute phase)



4-chamber view (30-day echocardiogram)

- The patient had severe left ventricular systolic dysfunction (ejection fraction 30%) and in the 30-day follow-up the echocardiogram showed left ventricular function improvement with ejection fraction of 45%

Conclusion

- “In general, a conservative approach avoiding revascularization for stable spontaneous coronary artery dissection patients is advocated by most experts. However, PCI or CABG may be required in patients with ongoing ischemia or critical anatomy involvement (eg, left main).”

Fernando Alfonso *et al*, Circulation Journal, 2014

- “If a pronounced dissection persists in a major vessel (left main artery, multiple vessel, or complex vessel) or in spontaneous coronary artery dissection causing marked epicardial coronary flow impairment and/or ongoing ischemia, CABG should be considered to be the best choice to restore myocardial perfusion.”

Ye Xin-He *et al*, American Journal of Emergency Medicine, 2013

- “In STEMI patients with a large thrombus burden and failed manual aspiration, administration of low dose intracoronary thrombolysis is safe and reduces thrombus burden, as a result improving in epicardial flow and myocardial reperfusion”.

Boscarelli D *et al*, Eur Heart J Acute Cardiovasc Care, 2014