

# **A case of inferior ST elevation myocardial infarction associated with a posterior descending artery chronic total occlusion both treated with retrograde approach during primary percutaneous coronary intervention**

Dott. A. Bernardi<sup>1</sup>, Dott. S. Albani<sup>1,2</sup>, Dott. F. Pisano<sup>1</sup>, Dott. P. Scaccaitella<sup>1</sup>

<sup>1</sup>Ospedale Regionale "U. Parini" della Valle d'Aosta, Aosta, Italia. <sup>2</sup>Institut Cardiovasculaire Paris Sud, Paris, France.

# Case Presentation

## History and Examination Findings

- **77-year-old lady**
- **Multiple cardiovascular risk factors**
- **Presented at the emergency department (ED) with signs and symptoms of acute heart failure**

# Case Presentation

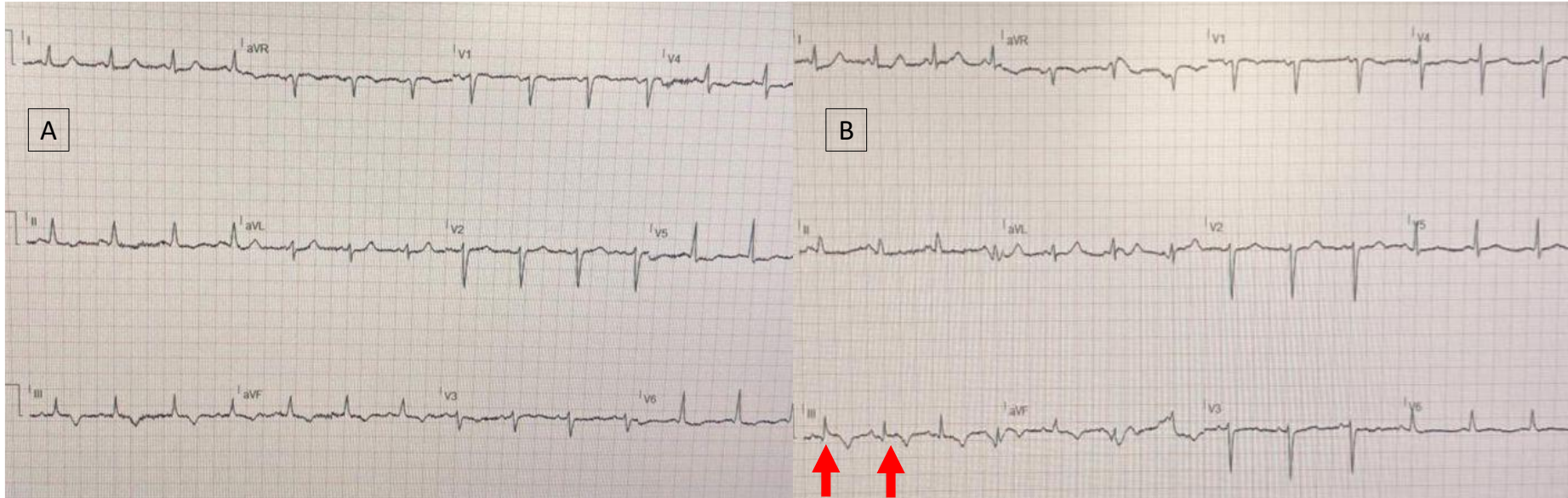
## History and Examination Findings

- The electrocardiogram showed lateral T wave inversion
- Doppler echocardiography detected a moderately reduced ejection fraction (EF) at 42% with inferior and infero-septal wall motion abnormalities, severe mitral regurgitation and severe pulmonary hypertension.
- After initial stabilization with diuretics and continuous positive airway pressure (C-PAP) ventilation, a transient ST elevation in inferior lead associated with chest pain occurs.

# Case Presentation

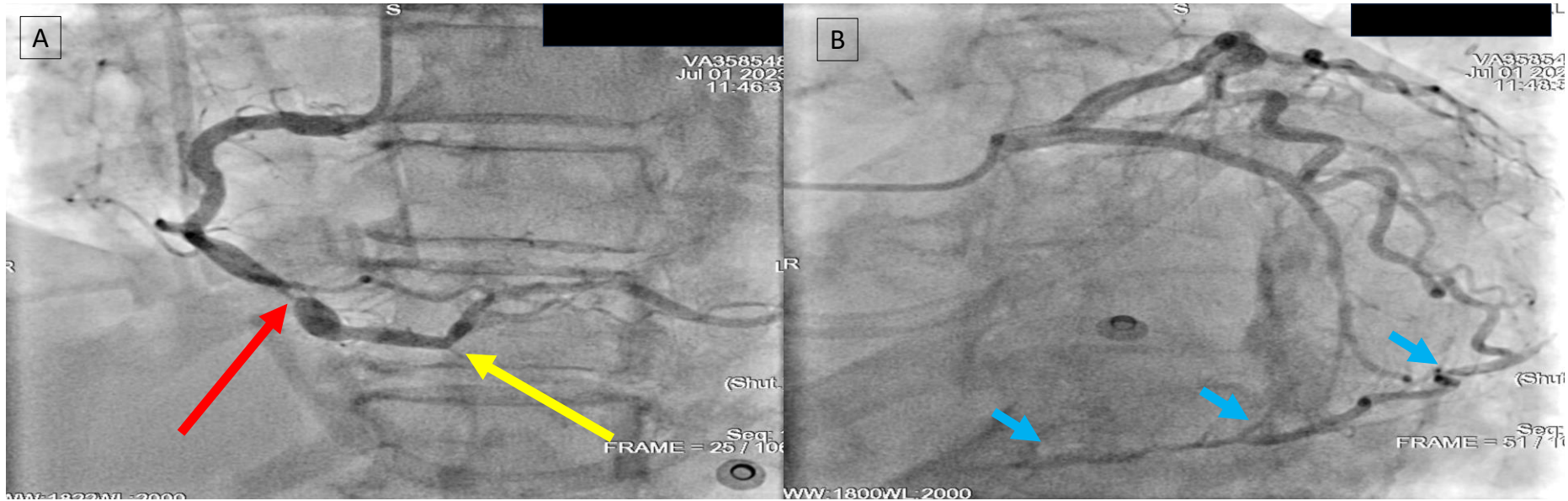
## 12-leads electrocardiogram

4



# Case Presentation

## Coronary angiography



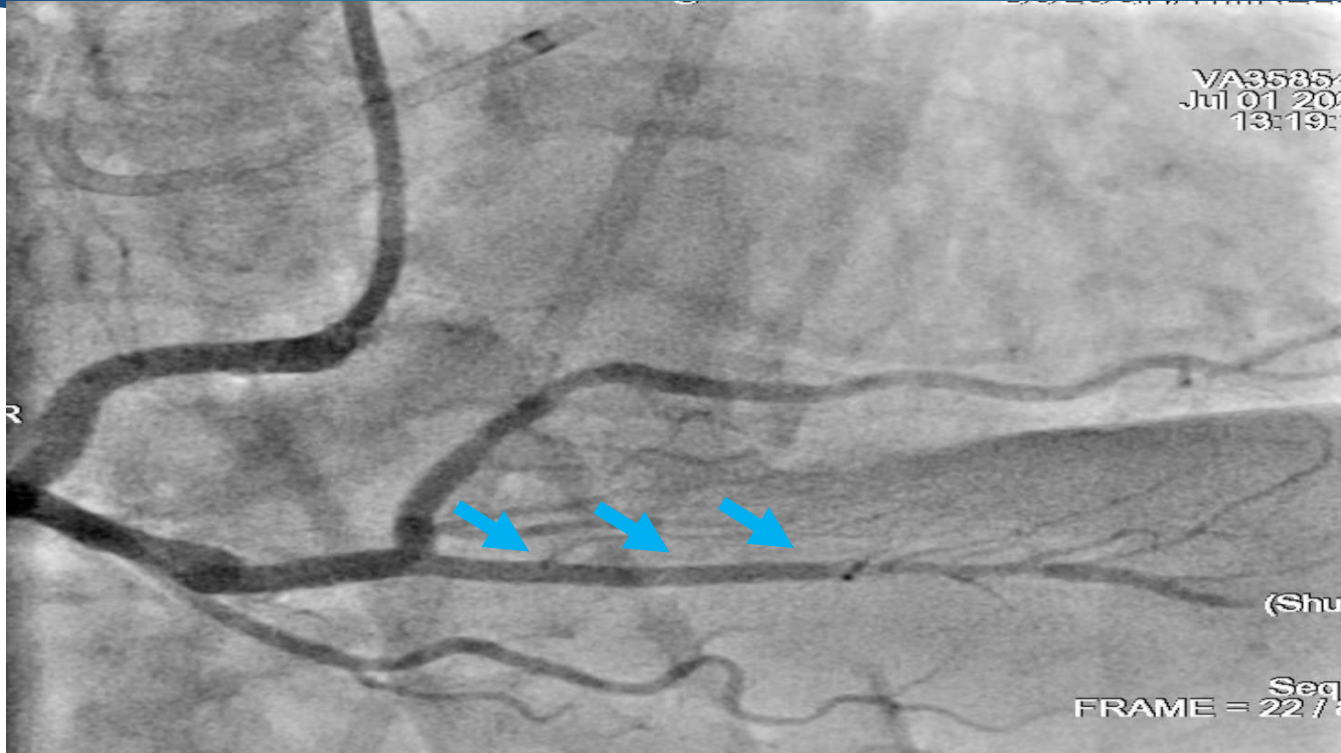
## Diagnostic angiogram:

Critical stenosis of distal right coronary artery (RCA) with ulcerated atherosclerotic plaque associated with a significant thrombotic burden associated with a total chronic occlusion (CTO) of the posterior descending coronary artery (PDA) were detected.

# PCI development:

- ▶ Due to the presence of a blunt stump at the level of the PDA a retrograde approach was performed through the epicardial collateral.
- ▶ A 7 F right femoral artery was provided. Finecross 150 microcatheter was advanced over a Suoh 03 guidewire used to navigate the epicardial collateral.
- ▶ Gaia II guidewire was used to pass the distal cap. Subsequently the Suoh 03 successfully allowed the microcatheter to reach the RCA guiding catheter. A RG3 guidewire was used to provide adequate support for antegrade stenting.
- ▶ Three Supraflex Cruz drug-eluting stents 3.5 x 40 mm + 3.5 x 40 mm + 2.5 x 32 mm were successfully implanted from mid RCA to the PDA
- ▶ Right radial access was closed with a TR-Band placement whereas a 7 F AngioSeal was used to successfully close the right femoral access.

# After PPCI (primary percutaneous coronary intervention)





# LEARNING POINT

- ▶ 1) treating the culprit lesion using an antegrade approach would compromise CTO revascularization (blunt stump of the PDA) that was certainly required due the detection of severe ischemic mitral regurgitation;
- ▶ 2) IVUS (intravascular ultrasound) guided antegrade approach was judged at risk to provide no-reflow related to the probe advancement in thrombotic material and compromise blood flow in the presence of ulcerated plaque;
- ▶ 3) the epicardial collateral had a large diameter ( $> 1$  mm), therefore wiring and surFing it was judged easy and safe.