

**Case 24: Questions & Answers:**

**1. STEMI? Yes.**

**2. Territory? Inferior wall STEMI with right ventricle involvement and Left Main (LM) ACS.**

**3. What is the Culprit Vessel? LM ACS with a totally occluded RCA filling distally by collaterals (including right to right and left to right collaterals).**

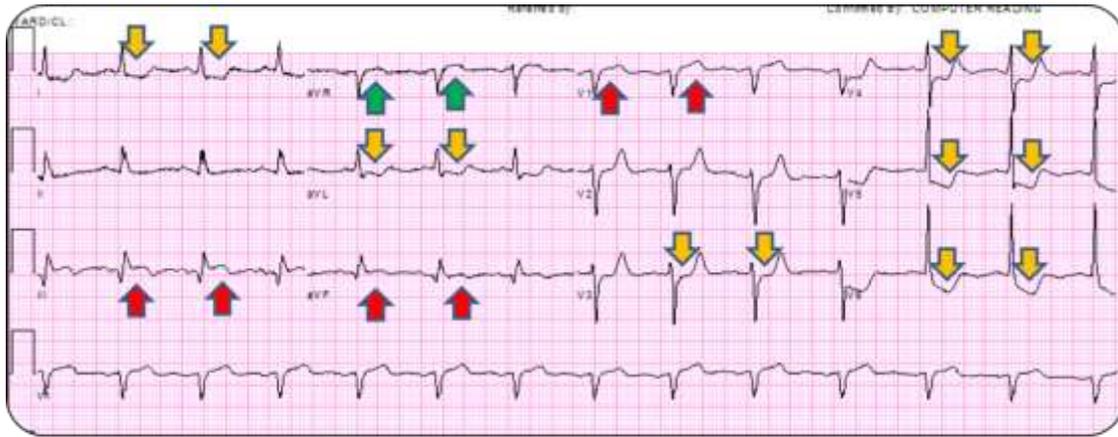
**ECG Findings (refer to ECG traces):**

- ST segment elevations on the inferior leads (L-II & L-aVF) and precordial lead V1 (>1 mm). Old small inferior Q-waves (past-MI scar).
- ST segment elevations on aVR (>1 mm).
- ST segment depressions upon most precordial leads, L-I and aVL.
- Right Sided ECG: with STE on RV4, RV5, RV6 >0.5mm suggestive of RV injury (second ECG).

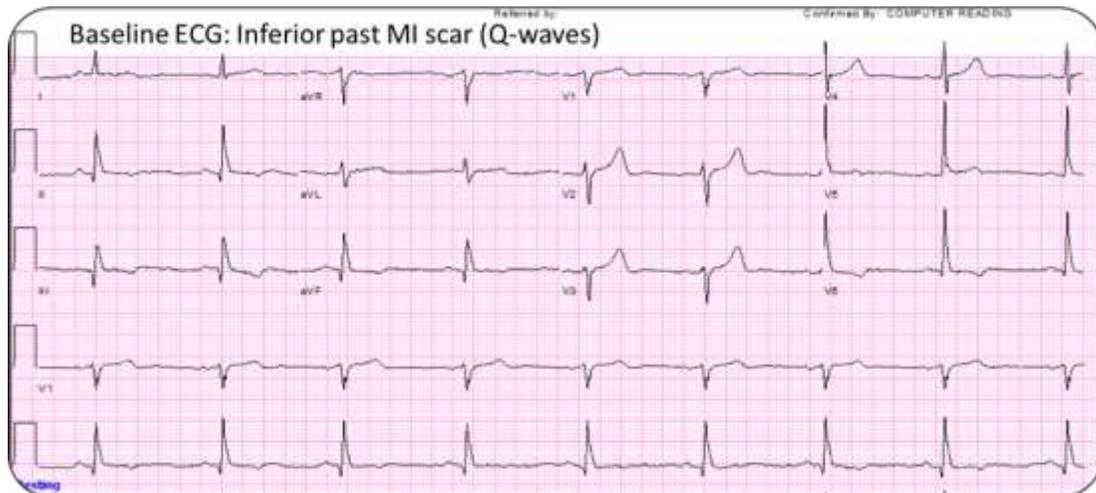
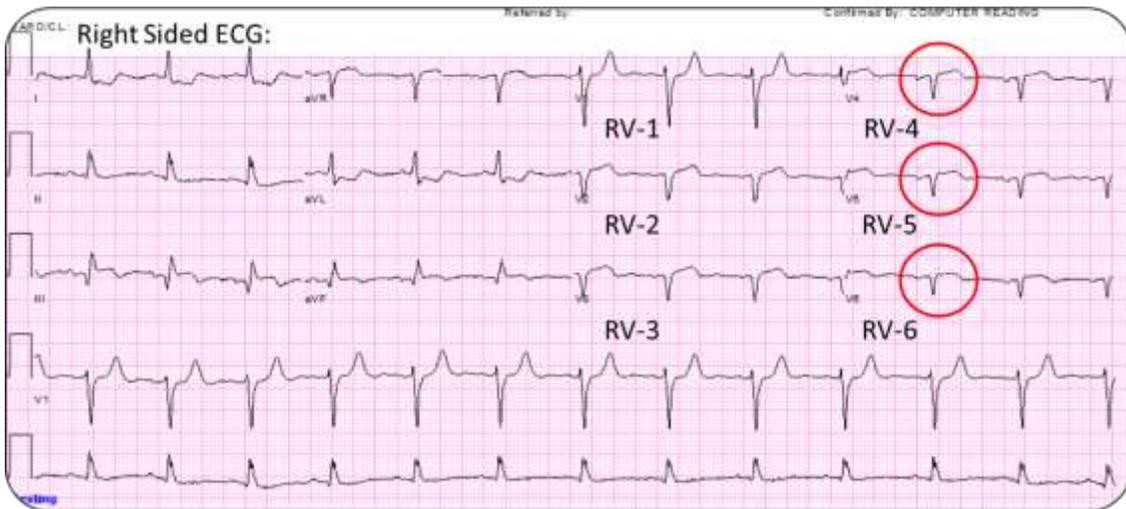
**Teaching Points:**

- Sometimes an acute STEMI may be the presentation of a chronic total occluded artery that was chronically perfused by collateral circulation that may have suddenly been compromised by a new severe obstruction to the vessel providing the collateral circulation.
- ACS patients with ST depression (> 1 mm) in six or more leads, maximal in leads V4 to V6, especially when associated with inverted T waves and ST elevation in lead aVR (> 1 mm; not indicative of STEMI, but more like reciprocal changes to the subendocardial ischemia), should have high priority for urgent invasive evaluation because of high probability of severe angiographic CAD (including high grade stenosis of the LM).
- The probability for severe CAD is higher if the patient's baseline ECG is normal and the changes are dynamic.
- Avoidance of the ADP receptor antagonist should also be considered in case emergent surgical revascularization is needed.
- After an emergency "Heart Team" approach discussion, involving the CT surgeon and the interventional cardiologist, it was decided that PCI to the LM was the most appropriate intervention (in view of significant surgical risk factors that included advanced age, frailty, cerebrovascular disease, warfarin anticoagulation, PAD and with a porcelain aorta).
- After the intervention his CP resolved with full resolution of all his ST segment changes. He was eventually d/h after 4 days of care and without cardiovascular complication.

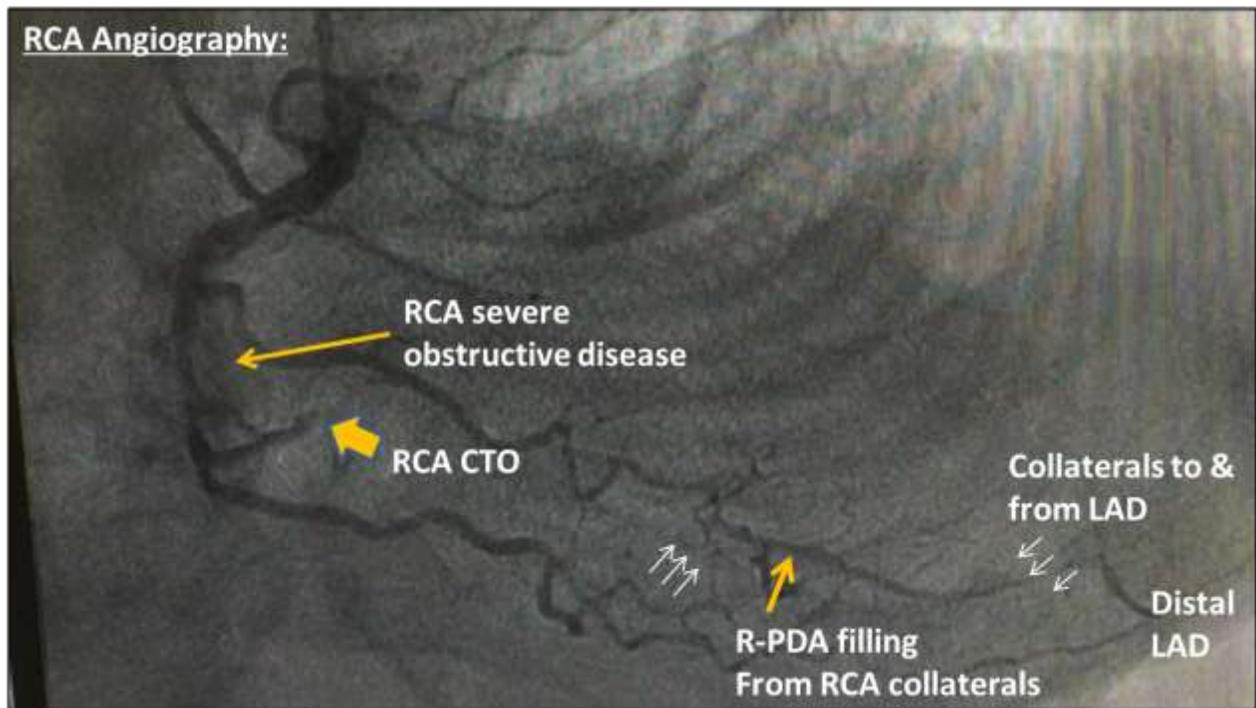
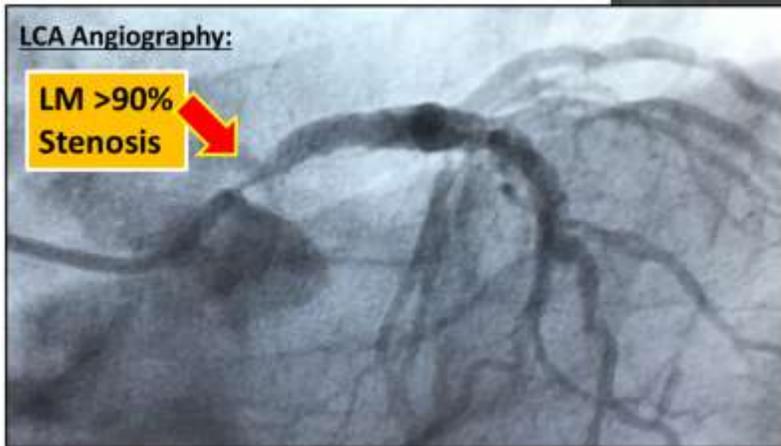
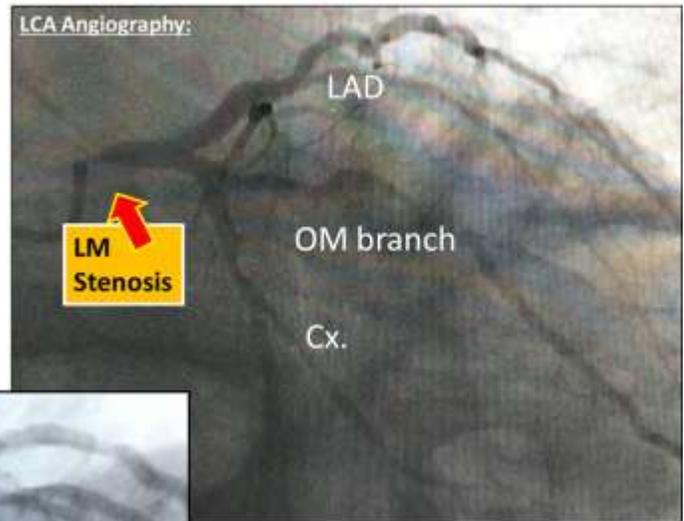
**12 Lead ECG Traces (first two are his arrival ECG's):**

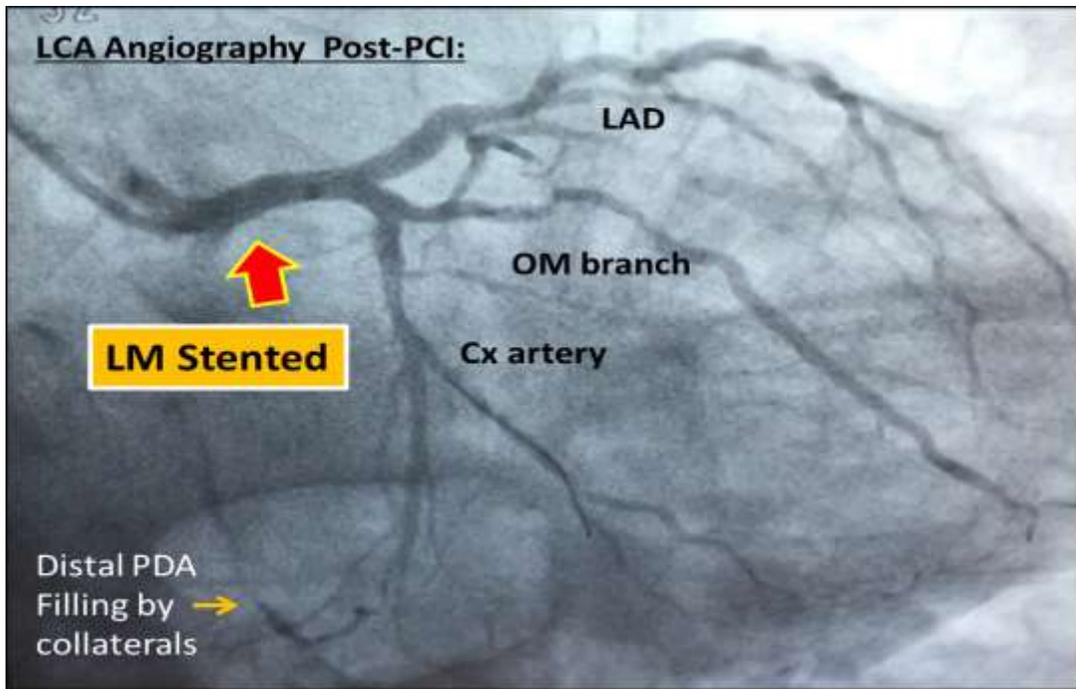


↑ STE of injury    ↑ STE from severe 3VD/LM ischemia    ↓ STD of ischemia



## Coronary Angiography Findings:





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