**CULPRIT IN A CARDIAC ARREST: RIGHT CORONARY ARTERY OR LEFT ANTERIOR DESCENDING**

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*Background*: Acute myocardial ischemia/infarction (MI) is a frequent cause of cardiac arrest. We present a case of chronic right coronary artery (RCA) stenosis masking a culprit left anterior descending artery (LAD) stenosis as a cause of acute inferior wall MI leading to cardiac arrest.

*Case Report*: A 45-year-old man with a medical history of hyperlipidemia was brought to the emergency department (ED) after ventricular fibrillation cardiac arrest. Patient lost consciousness after running a mile and bystander cardiopulmonary resuscitation was initiated. Enroute to hospital he returned to spontaneous circulation after defibrillation. Initial electrocardiogram (EKG) revealed subtle ST-elevation in inferior leads that returned to baseline on repeat EKG. The transient inferior wall ischemia was the suspected etiology of cardiac arrest and he was taken to the catheterization laboratory. Coronary angiography revealed a long segment 99% stenosis of the RCA with TIMI-1 flow and tandem 50% stenosis in the proximal and mid LAD. Percutaneous coronary intervention (PCI) was performed in the RCA, however it behaved like a chronic occlusion instead of acute thrombotic occlusion. Echocardiogram showed inferior wall hypokinesis. Staged PCI was performed on LAD during indexed hospitalization. Two tandem stenosis were assessed for severity by fractional flow reserve (FFR). Initial FFR across tandem stenosis was 0.77 and on pullback above the mid stenosis, FFR remained same. After stent to proximal LAD stenosis, repeat FFR was 0.78 as a result of mid LAD stenosis. Bifurcation LAD, diagonal stent was performed with repeat FFR of 0.93.

*Discussion*: In the setting of chronic RCA stenosis, inferior wall ischemia in this patient is likely as a result of decreased flow to watershed inferior wall from tandem LAD stenosis. *Conclusions*: Finding chronic stenosis in the setting of MI must prompt robust assessment of coronary arteries to identify culprit lesions.