

# 24<sup>th</sup> Annual Resident Poster Day

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## Left Ventricular Free Wall Rupture in a patient Anaplasmosis

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There are three major mechanical complications following myocardial infarction (MI), left ventricular free wall rupture (LVFWR), ventricular septum rupture, and acute mitral regurgitation. LVFWR is a dramatic and dreaded complication following MI often observed within the first week of symptom onset. Advances in percutaneous intervention and fibrinolytic therapy has dramatically decreased the incidence of LVFWR, although mechanical complications following MI remain fatal. Here we present a case of LVFWR following a ST-elevation MI (STEMI) in a patient initially hospitalized for anaplasmosis. A 77-year-old male with multiple cardiovascular risk factors presented with several days of fever, fatigue and myalgias in the setting of recent outdoor exposure in the northeastern United States. A tick-borne pathogen was initially suspected and was confirmed by positive PCR for *Anaplasma phagocytophilum*. Despite proper antibiotic therapy he continued to deteriorate and eventually suffered a cardiac arrest but was successfully resuscitated. However shortly following resuscitation he developed a STEMI and was noted to have a complete occlusion of the distal right coronary artery (RCA) and a free wall deficit. The patient was initially stabilized with extracorporeal membrane oxygenation (ECMO) and mechanical support but passed after care was withdrawn. LVFWR remains a deadly and rare complication of MI. The rarity of LVFWR makes it important to review each case in detail. In fact, patient's fear of covid-19 may be increasing the incidence of these rare mechanical complications due to later presentations to hospitals. Anaplasmosis is typically not associated with cardiovascular events and therefore we believe it did not play a direct role in the formation of this patient's free wall deficit.