**POSSIBLE ACUTE MYOCARDIAL INFARCTION AND HYPOTENSION: THE UTILITY OF ECHOGRAM**

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**Case**: A 63-year-old hypertensive former smoker presented to the emergency department (ED) with chest pain, acute pulmonary edema and progressive hypotension. Physical exam was notable for the absence of any cardiac murmurs. An electrocardiogram demonstrated a left bundle branch block of unknown chronicity. The cardiac catheterization laboratory was activated for a possible acute myocardial infarction (AMI). Transthoracic echocardiography performed while the patient was still in the ED demonstrated hyperactive left ventricular systolic function with severe mitral valve regurgitation (MR). The patient developed pulseless electrical activity and advanced cardiac life support was initiated with return of spontaneous circulation. The patient was emergently taken to the operating room by the cardiothoracic surgical team and extracorporeal membrane oxygenation was placed. A transesophageal echocardiogram confirmed papillary muscle rupture and the mitral valve was successfully replaced. Subsequent post-operative coronary angiography demonstrated 99% stenosis of a large obtuse marginal branch and this was successfully treated with deployment of one drug-eluting stent.

**Discussion:** Acute MR is a well-described complication associated with AMI. Papillary muscle rupture (PMR) may necessitate emergent surgical intervention. PMR is most common in the setting of inferior or lateral wall infarction due to occlusion of either the right coronary artery or left circumflex artery. Transthoracic echocardiography should never delay emergent cardiac catheterization in the setting of suspected AMI however in unstable patients it is an excellent tool for evaluating MR in patients with AMI, especially those who have a systolic murmur (which interestingly our patient did not).

**Conclusion:** Transthoracic echocardiography is a useful and rapid noninvasive tool which can provide vital information in AMI patients, especially if PMR is suspected since early mitral valve surgery can be life-saving.