PHEOCHROMOCYTOMA ASSOCIATED CARDIOMYOPATHY MIMICKING ACUTE ST-ELEVATION MYOCARDIAL INFARCTION

Moderated Poster Contributions
Pulmonary Hypertension and FIT Clinical Decision Making Moderated Poster Theater, Poster Hall B1
Monday, March 16, 2015, 10:15 a.m.-10:25 a.m.

Session Title: FIT Clinical Decision Making: Moderated Poster Session IV
Abstract Category: Non Invasive Imaging
Presentation Number: 1268M-07

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Background: Pheochromocytoma is a rare neuroendocrine tumor that may lead to cardiac sequelae via secretion of high levels of catecholamines. While associated with fluctuations in blood pressure, the excess serum catecholamine levels may lead to varying degrees of left ventricular (LV) dysfunction. We present the case of a patient who had chest pain and electrocardiographic evidence of acute ST-elevation myocardial infarction (STEMI). An intra-abdominal mass was detected on cardiac MRI suspicious for a pheochromocytoma.

Case: A 39-year-old man with no reported cardiac history presented with severe typical chest pain and headache to the emergency department with an ECG suggestive of anterior-wall STEMI. Cardiac biomarkers were found to be elevated.

Decision Making: As a result of the clinical presentation, the patient underwent urgent cardiac catheterization. The catheterization revealed no coronary artery disease (CAD) but severe LV dysfunction with an akinetic septum and all other segments deemed hypokinetic. With newly diagnosed LV dysfunction and no obstructive CAD, the patient underwent cardiac MRI which revealed no delayed hyperenhancement to suggest underlying myocardial scarring or fibrosis. However, a large 8.4 x 7.4 x 8.8 cm adrenal mass with associated adrenal hemorrhage was found. Serum studies revealed extremely high serum metanephrine levels, and upon surgical resection, the mass was confirmed to be pheochromocytoma.

Conclusion: While rare, pheochromocytoma can lead to a multitude of cardiovascular sequelae. This case demonstrates the potential for catecholamine-mediated processes to masquerade as ST elevation myocardial infarction with concurrent LV dysfunction. Prior studies of pheochromocytoma have shown typical and inverse takotsubo pattern, however this is the first case to manifest a unique particular pattern of LV dysfunction. In addition, while we usually focus upon primary myocardial causes, it is imperative to consider other etiologies, particularly with regard to myocardial imaging procedures as demonstrated by this case in which the cause of the patient’s clinical syndrome was discovered in the abdomen on a study primarily focused upon the myocardium.