

**Aortic dissection presenting with ST segment elevation myocardial infarction: A diagnostic challenge**

Aortic dissection is a devastating emergency in patients presenting with chest pain. The prevalence of aortic dissection ranged from 0.2 % to 0.8 %. At times, the diagnosis is missed in the emergency room. We present a case of a 45-year-old man with a history of hypertension diabetes, presented with shortness of breath and chest pain. The examination was significant for a heart rate of 44 beats per minute, blood pressure of 140/62 mm Hg, and a holosystolic murmur. An electrocardiogram showed ST-segment elevation in lead aVR and V1. Chest X-ray showed an enlarged cardiac silhouette with widened mediastinum. Due to the ST elevation, a coronary angiogram was done, which showed no coronary disease. A CT scan ruled out pulmonary embolism but showed Type A Aortic dissection. The patient was immediately transferred to surgical service and was treated appropriately. The presence of ST-segment elevation in patients with aortic dissection is uncommon. Diagnostic difficulties exist in the emergency room when faced with such patients. CT scan is a beneficial modality to diagnose aortic dissection but would increase the door to balloon time in patients with ST-elevation myocardial infarction (STEMI), which may be devastating. Physical examination modalities, including blood pressure differences, can be helpful but could be unreliable and easily missed. Bedside echocardiography may show intimal flap in the aortic root. Prior cases of patients with aortic dissection and STEMI usually have coronary occlusion on angiogram. Due to ST-elevation on the ECG, patients are taken to the catheterization laboratory, which can delay the emergent management of aortic dissection, especially in cases of type A dissection. The case signifies the importance of decision-making after a thorough history, physical examination, and diagnostic modalities readily available in the emergency room. All the workup needs to be done quickly to avoid delays in management.