Ascending Aortic dissection: A rare complication of CABG

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Introduction:

Aortic dissection (AD) is a relatively uncommon, though catastrophic disease which requires early diagnosis and treatment [1]. Iatrogenic aortic dissection due to cardiac surgery is very rare accounting for only 0.04% of cases of AD. Iatrogenic AD also appears to carry worse outcomes than spontaneous aortic dissection.

The most common presenting symptom of and ascending AD is “tearing chest pain” with radiation to the back. However clinical presentation can be variable and may mimic other more common conditions such as acute coronary syndromes, pulmonary embolism, and heart failure. Without a high clinical index of suspicion this may lead to misdiagnosis and delay in treatment [2,3]. We present a case of a Stanford Type A, DeBakey Type II aortic dissection presenting with atypical symptoms five months after coronary artery bypass grafting (CABG)

Case presentation:

A 76 year old male with past medical history of coronary artery disease, CABG, severe Ischemic cardiomyopathy (EF of 20%), and suprarenal abdominal aneurysm with repair was sent to the emergency department after his home nurse found his SpO2 to be 82% by pulse oximetry. The patient’s chief complaint was worsening dyspnea on exertion, and associated dry cough. He denied any chest pain. He reported that since his CABG five months prior, his functional status had been progressively declining. Despite increasing his diuretics, he continued to have worsening of his shortness of breath. Vital signs on presentation where: SPO2 80% on room air, blood pressure 130/90, and pulse 72. On exam, the patient was comfortable and in no acute distress. Jugular venous distention was noted as well as bibasilar crackles. His skin turgor was poor and there was no lower extremity edema present. The presumed diagnosis on admission was acute decompensated heart failure. An echocardiogram was performed which showed a Type A aortic dissection with intimal flap visualized in the ascending aorta measuring 6.5 cm. A CT Angiogram of the chest demonstrated aneurysmal dilatation of the ascending thoracic aorta measuring up to 7cm. The ascending AD was noted to spare the right brachiocephalic, left common carotid artery, and left subclavian artery. The decision was made to refer the patient to a tertiary care center for endovascular repair given the complexity of the case.

Discussion:

Aortic dissection after CABG is a rare but potentially fatal condition. Those with preexisting aortic wall pathology and history of cardiac surgery appear to be at higher risk to AD due to intimal damage at sites of mechanical trauma. This case supports the idea of postoperative monitoring for the development of aortic dissection, as it can prevent a potentially catastrophic outcome.