

Thrombosed Left Circumflex Artery Aneurysm presenting with Syncope

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Image Article

A 79-year-old man with history of coronary artery bypass graft (CABG), atrial fibrillation and recent abdominal aortic aneurysm repair presented after a sudden loss of consciousness. Examination revealed a blood pressure of 130/95 mm Hg, heart rate 84 beats per minute and respiratory rate 18 per minute without any distress. On physical exam he had bilateral riles, elevated jugular venous distension, and bilateral pitting edema. Labs were significant for Troponin T increased from 0.060 to 0.120 ng/mL (Normal \leq 0.010 ng/mL) and Pro BNP of 3,008 pg/mL (Normal range: 1-450 pg./mL). Clinically patient's presentation was consistent with acute decompensated heart failure.

EKG was obtained showed atrial fibrillation with no specific dynamic changes. Echocardiogram revealed reduced ejection fraction and left ventricular diastolic dysfunction, bicuspid aortic valve and moderately dilated aortic root and mild dilation of the ascending aorta. Further imaging of the thoracic aorta was recommended. Contrast tomography angiography of the chest revealed coronary artery aneurysm of the left circumflex artery with mural thrombus measuring 3 cm x 3.8 cm (Figure 1). Surgical intervention was deemed risky given his overall condition. To our knowledge there has been no previously reported cases of thrombosis aneurysm in the left circumflex contributing to symptoms of heart failure or syncope as all other causes of syncope have been ruled out.

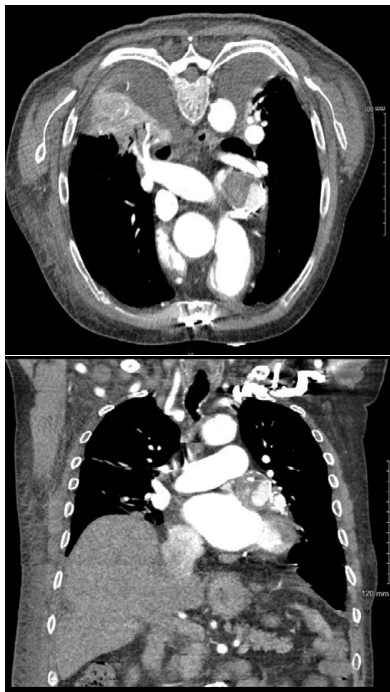


Figure 1: Atrial fibrillation with no specific dynamic changes.

Left Circumflex aneurysm thrombosis

Left circumflex artery aneurysm is an extremely rare clinical condition which requires careful evaluation of the coronary anatomy [1]. They are seen in 1.1% to 4.9% of patients undergoing coronary angiography and in about 0.02-0.04% of the general population [2]. They are commonly located in the right coronary artery. The techniques for diagnosing include non-invasive and invasive methods, such as echocardiography, CT, magnetic resonance imaging and coronary angiography. There have been no clinical trials to determine the best therapy for these patients with thrombus formation. The pathophysiology is still unclear, and the optimal treatment remains debatable. In some cases, surgical intervention is preferred. There is lack of consensus regarding the optimal management of coronary artery aneurysm; however, guideline directed medical therapy is preferred and dual antiplatelet therapy is considered if thrombosis/embolism is a concern [3].

References

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