A Rare Case of Gigantic Ascending Aortic Arch Thrombus

Srujana Dasari MD, Akhil Reddy Gade MD, Nethuja Salagundla MD, Chandralekha Ashangari MD, Rashonda Carlisle MD

Medical City Fort Worth

Background

An ascending aortic arch thrombus (ACT) is a rare finding in an anatomically normal aorta. It can be seen with aortic dissection or aneurysm. Complications of large thrombus like stroke or systemic emboli are less likely when found in the normal aorta. Even with the low-risk embolic events, it is even less likely if patients are on therapeutic anticoagulation. Here we discuss this rare case in detail.

49 y/o with PMHx of HTN, HLD, COVID-19, DVT s/p thrombectomy, noncompliant with warfarin, ICH from fall presents with left-sided weakness and blurry vision. MRI head showed scattered acute infarction along the right PCA with occlusion, an old right ACA infarct, and left cerebellar hemorrhage. The patient was not a candidate for intervention or IV alteplase.

Results

TTE showed normal LVEF, a large mobile ACT. TEE showed an 8.7 cm pedunculated heterogeneous ACT, traversing into the aortic arch. No evidence of AFib activity on telemetry. CTS and hematology were consulted. The patient was negative for inherited hypercoagulable disease or malignancy.

The ACT was attributed to the history of COVID-19, and the patient was medically managed on coumadin. Shortly after, they presented to ED with recurrent stroke-like symptoms. CTS resected ACT and did hemiarch repair. The mass was sent for pathology, which confirmed an organized thrombus. The patient was discharged on Apixaban given the development of stroke on warfarin.

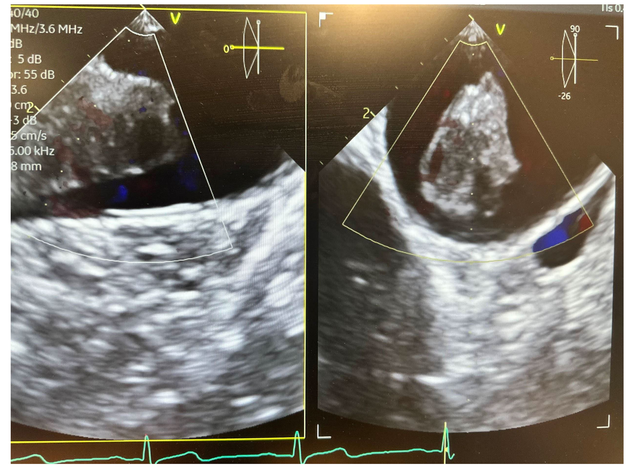

Figure 1: 8.7cm ascending aortic arch thrombus

Discussion

There is limited evidence on the optimal management of an ACT. Treatments include medical management with anticoagulation or in combination with surgical interventions. Anticoagulation alone has a risk of clot dissolution and deadly embolic events. Factors favoring the surgery include patient history, size, location, mobility of thrombus, or an inability to distinguish ACT from mass on imaging. A combination is recommended postoperatively.

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