

Clinical-Medical Image

Very Large, Pedunculated and Mobile Plaques in Ascending Thoracic Aorta

Jairo Renteria Roa

Department of Internal Medicine, Group for the Study of Cardiovascular Diseases, GEEC, Cardiology Section, Universidad de Antioquia, Medellin, Colombia

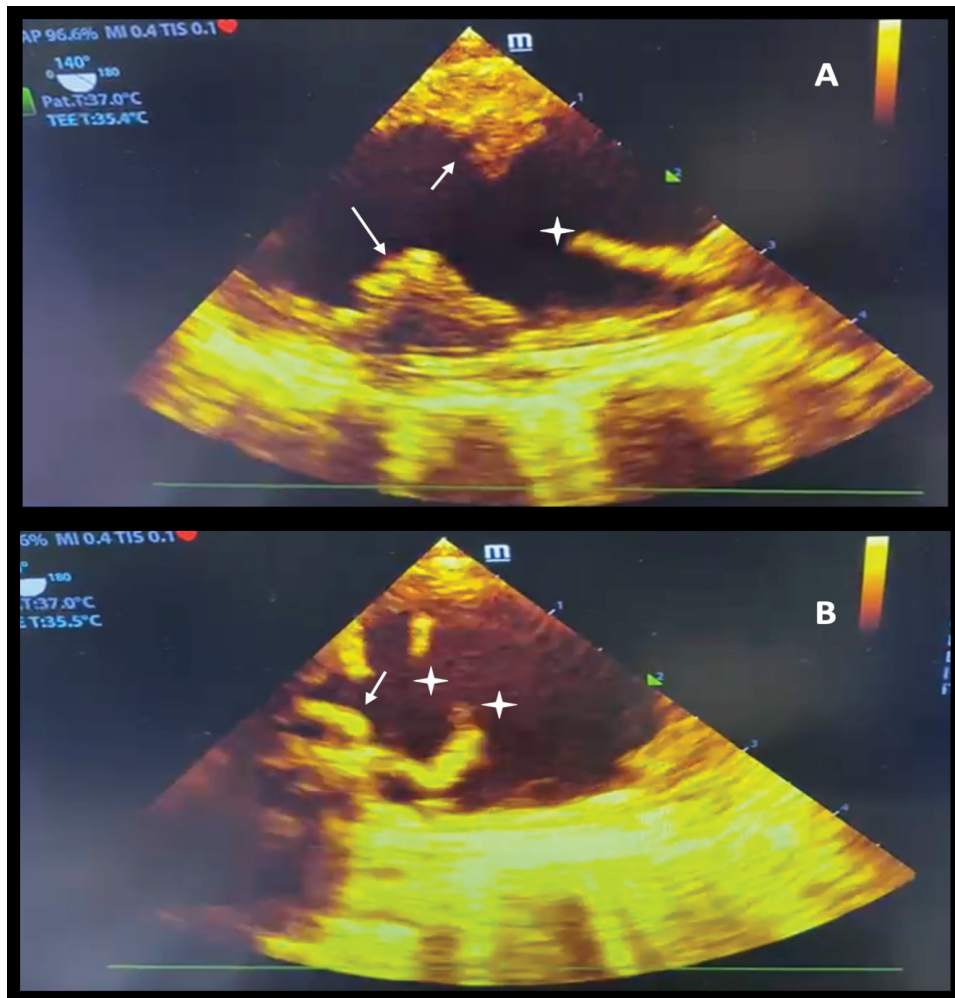


Figure 1: Transesophageal echocardiogram revealing mobile complex atheromatous plaques in the thoracic aorta. (A) Long-axis TEE view and (B) Short-axis TEE view. Thick aortic plaque (Arrow), mobile aortic plaques (White stars).

Clinical Image

Aortic atherosclerotic atheromas usually compromise the descending aorta [1]. Complex or unstable aortic plaques are pedunculated, mobile, ulcerated, or thick (>4 mm) [2]; compared to flat plaques, the first is associated with a higher risk of embolic events [3]. Stroke, transient ischemic attack, and cardiac infarction are the commonest manifestations when the proximal aorta is involved [4].

A 73-year-old woman with a history of hypertension, diabetes mellitus, dyslipidemia and heavy smoking, with documented three-vessel coronary artery disease, presenting as a non-ST acute myocardial infarction. A transesophageal echocardiogram (TEE) revealed a normal ejection fraction, extensive atherosclerosis of the aorta and two pedunculated plaques in the ascending thoracic aorta (Figure 1). Off-pump coronary artery bypass grafting was considered, but the patient was reluctant to the intervention so aspirin, clopidogrel, and high dose atorvastatin were started.

*Corresponding author: Jairo Renteria Roa, Department of Internal Medicine, Group for the Study of Cardiovascular Diseases, GEEC, Cardiology Section, Universidad de Antioquia, Medellin, Colombia, Tel: + 573008929643; E-mail: jairo.renteria@udea.edu.co

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Pedunculated aortic plaques pathogenesis is associated with rupture of soft plaques, endothelial injury and organized thrombus formation [2]. Studies report up to a four-fold increased risk of embolic events with a relative-risk of 3.8 (95% CI 1.8-7.8) in the presence of grade 4 or 5 aortic atheromas [1]. TEE allows diagnosis and embolic risk stratification; computed tomography helps in planning surgical intervention [4]. Lipid-lowering and antiplatelet medications are the cornerstone of treatment; smoking cessation, glycemic and hypertension control are mandatory [4]. Surgical procedures are controversial [4], patient eligibility is based on the risk of embolism and recurrence, because mortality associated with complex aortic plaque may be as high as 20% within three years without intervention [1] but immediate embolism to mesenteric, cranial or extremities circulation carries a high risk of death and morbidity [4]. The authors highlight this severe manifestation of systemic atherosclerosis.

Keywords: Mobile plaques; Thoracic aorta

Declaration of Interests

The authors declare that they have no competing interests.

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