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Images in Cardiology

Ascending aortic aneurysm in a patient with Marfan syndrome

Aneurisma de aorta ascendente en paciente con síndrome de Marfan

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The aneurysmal disease of the ascending aorta follows abdominal aortic aneurysms in frequency. The most common causes of this thoracic aortic wall weakness include atherosclerosis (more common in arch and descending thoracic aortic aneurysms), which is usually associated with cardiovascular risk factors and is more common in men and older patients; and the degenerative (more common in ascending aortic aneurysms) associated with other diseases such as Marfan, Loeys-Dietz or Ehlers-Danlos syndromes. On this occasion, we show tomographic images of a 35-year-old man of black complexion, with a history of Marfan syndrome and high blood pressure, who presented chest pain and dyspnea on exertion, for which a vascular angiography was performed and aortic root dilatation was detected with involvement of the valvular plane and coronary sinuses, including both coronary arteries (anterior oblique volumetric reconstructions on the multiplanar [MPR]) (**Figure 1**). The anterior oblique volumetric image shows the measurement of the lumen of the ascending aorta with a fusiform aneurysm affecting the valvular plane, the sinotubular junction, and the first half of the tubular segment without affecting the mid-distal segment, the aortic arch or the supra-aortic trunks (**Figure 2**). The natural evolution of an aneurysm is towards a progres-

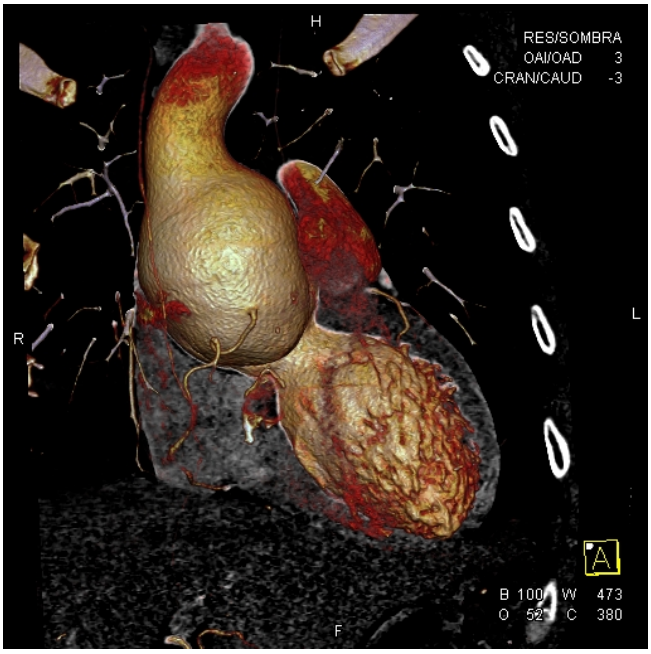

Figure 1.

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sive increase in its diameter, until dissection or rupture. The risk of the latter is directly related to the maximum transverse diameter: 2-3% per year, if it is less than 4 cm and 7% if the diameter is greater than 6 cm. The mean annual growth rate is 0.1-0.2 cm and it is higher in patients with Marfan syndrome or previous aortic dissection. There are several imaging tests that indicate or confirm the diagnosis: simple chest X-ray, echocardiography, multislice computed tomography angiography —which favors a rapid and precise diagnosis of lesions of the large mediastinal vessels— and magnetic resonance imaging.

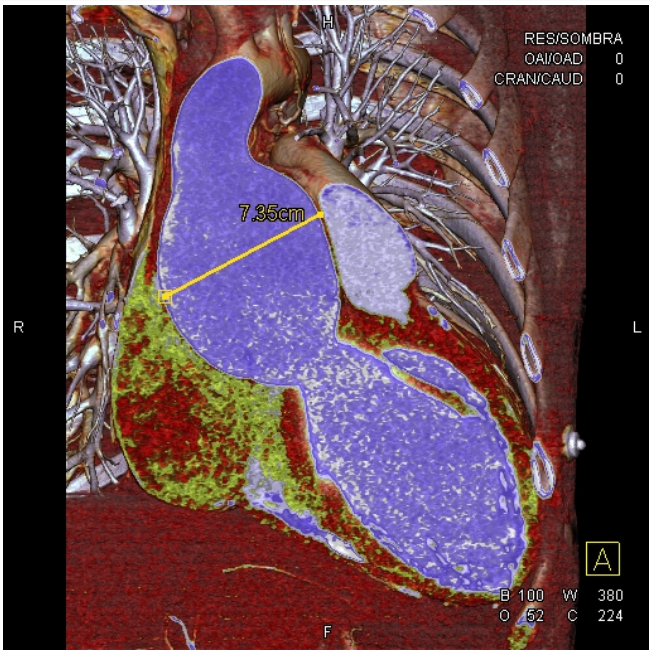

Figure 2.