Hypertrophied crista terminalis–The great masquerader and savior

A 59-year-old female presented with complaints of dyspnea on exertion New York Heart Association Class II of 6 months duration. On evaluation, electrocardiogram revealed atrial fibrillation. Echocardiogram was done, which revealed moderate pericardial effusion and a mass in the right atrium measuring 3×1 cm (Fig. 1). Provisional diagnosis of right atrial thrombus or tumor was made in view of the clinical presentation. Computed tomography angiogram was done, which unraveled the mystery of the right atrial mass. Hypertrophied crista terminalis gave the appearance of right atrial mass on echocardiography. Also, it revealed diffuse thickening and enhancement of the entire aorta and its major branches without significant narrowing of their



Figure 1. (a) Echocardiography in apical 4-chamber view showing right atrial mass, (b) Echocardiography in subcostal view with anterior tilt showing mass in right atrium and the superior vena cava (*)



Figure 2. (a) Computed tomography angiogram showing hypertrophied crista terminalis, (b) Computed tomography angiogram showing the thickened arch of aorta with contrast enhancement

ostia (Fig. 2). Pericardial fluid was exudative with normal sugar and no malignant cells. Patient was started on vitamin K antagonist, statins, and steroids. Hypertrophied crista terminalis is one of the mimics of a right atrial mass. Certain echocardiographic clues favoring hypertrophied crista include echogenicity similar to the myocardium and best seen when superior vena cava is visible in the same frame, which is better seen in bicaval view or subcostal view in transthoracic echocardiography (1). Diagnosis is confirmed by either a CT scan or an MRI. There are only a dozen of published reports of hypertrophied crista terminalis mimicking right atrial mass (2); however, hypertrophied crista terminalis along with aortoarteritis has never been reported. In our case, the impression of crista terminalis as a mass lesion initiated the cascade of investigations leading us to an early diagnosis of aortoarteritis, which was otherwise clinically not apparent.

Informed consent: Written informed consent was taken from the patient.

References

- Kim MJ, Jung HO. Anatomic variants mimicking pathology on echocardiography: differential diagnosis. J Cardiovasc Ultrasound 2013; 21: 103-12.
- Wang J, Wang G, Bi X, Zhang R, Liu C. An unusual presentation of prominent crista terminalis mimicking a right atrial mass: a case report. BMC Cardiovasc Disord 2018; 18: 210.

In A. Shaheer Ahmed,
Ram Manohar Talupula
Department of Cardiology, All India Institute of Medical Sciences, New Delhi–India

Address for Correspondence: A. Shaheer Ahmed, MD, Department of Cardiology, All India Institute of Medical Sciences, Cn Centre, Aiims New Delhi 110029, New Delhi-*India* Phone: +919968889874 E-mail: ahmedshaheer53@gmail.com ©Copyright 2020 by Turkish Society of Cardiology - Available online at www.anatoljcardiol.com D0I:10.14744/AnatolJCardiol.2019.05752