Image in cardiology

Congenital Submitral Diverticulum

Divertículo submitral congénito

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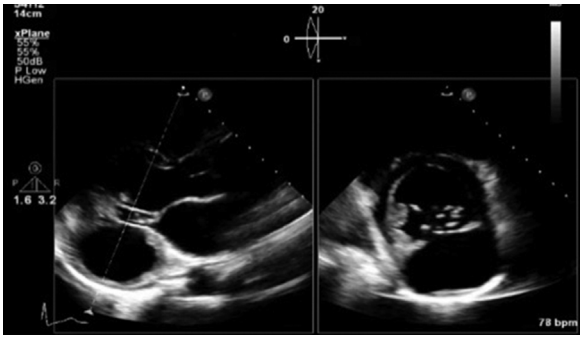

Figure 1.

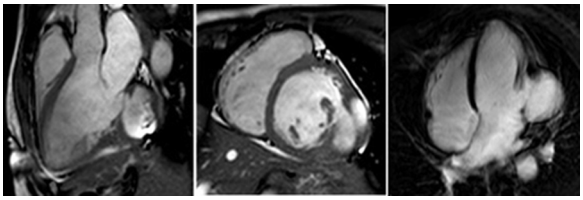

Figure 3.

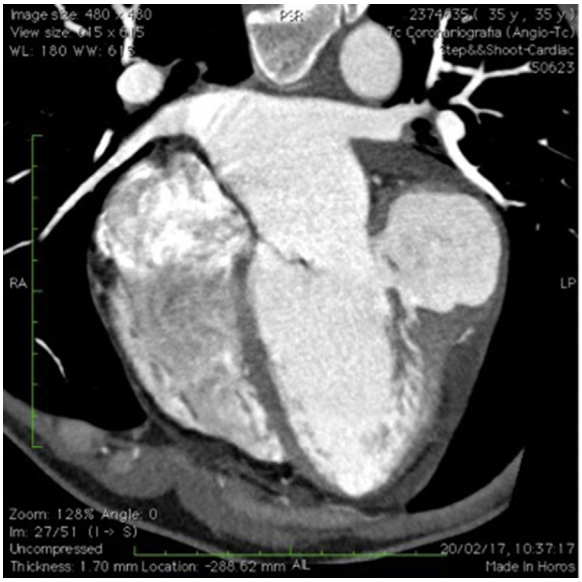

Figure 2.

A 36-year-old Guinean woman was referred to our center for a closer examination of systolic murmur. She had no cardiovascular complaints. Echocardiographic examinations depicted a large saccular structure at the left ventricular lateral and infer-lateral walls, in the submitral region (Figure 1). The outpouching structure was connected to the left ventricle (LV) through a large neck. In diastole, blood flowed from the LV into the cavity, and in systole blood flowed from the cavity into the LV. These findings suggested that this cavity itself contracted. No other cardiac abnormalities were found. To better delineate the whole shape of the cavity, a computed tomographic scan was requested. It allowed precise measurement of the outpouching structure (9 x 7 cm), delineation of its morphology and excluded coronary artery disease (Figure 2). To confirm whether the cavity wall consisted of muscle, a cardiac magnetic resonance study was performed; cardiac magnetic resonance cine and late gadolinium enhancement images clearly demonstrated a contractile cavity wall, consisting of muscle with no fibrosis (Figure 3). A diagnosis of large congenital submitral left ventricular diverticulum was made. The patient refused surgery and is followed up at our cardiology clinic.

Left ventricle diverticulum is a rare condition and it is important to differentiate it from pseudoaneurysm. While the definitive diagnosis should be based on histopathologic evaluation, a review of the literature showed that there are different clinical and radiologic criteria for distinguishing these lesions. Cardiac magnetic resonance adequately characterizes these outpouchings, allowing accurate diagnosis, a better understanding of their natural history, and can guide proper management decisions.

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