

Left Ventricular Diverticulum of the Interventricular Septum

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In this study, we report a case of a healthy, 25-year-old male patient with presyncope during a football match divergent blood pressure, and a grade 3/6 aortic diastolic murmur. The echocardiogram showed a rounded structure in the basal area of the interventricular septum adjacent to the aortic valve, which causes inadequate commissural support, communicating with the left ventricle (LV). There was moderate secondary aortic insufficiency and dilated LV with preserved contractility. MRI revealed myocardial density in the structure without delayed enhancement. After follow-up, the LV increased further in size and syncope on exertion. The patient underwent surgery and the anatomic pathologist diagnosed left ventricular diverticulum. The diverticulum, a congenital protrusion in the myocardial wall of the LV, differs from an aneurysm by its close connection to the chamber and presence of myocardial fibers in the composition of the

wall¹. It most often affects the LV or right ventricular apex and is rare in the septum.

Author contributions

Conception and design of the research, Acquisition of data and Writing of the manuscript: Barberato SH; Analysis and interpretation of the data: Barberato SH, Barberato MFA; Critical revision of the manuscript for intellectual content: Barberato MFA.

Potential Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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Study Association

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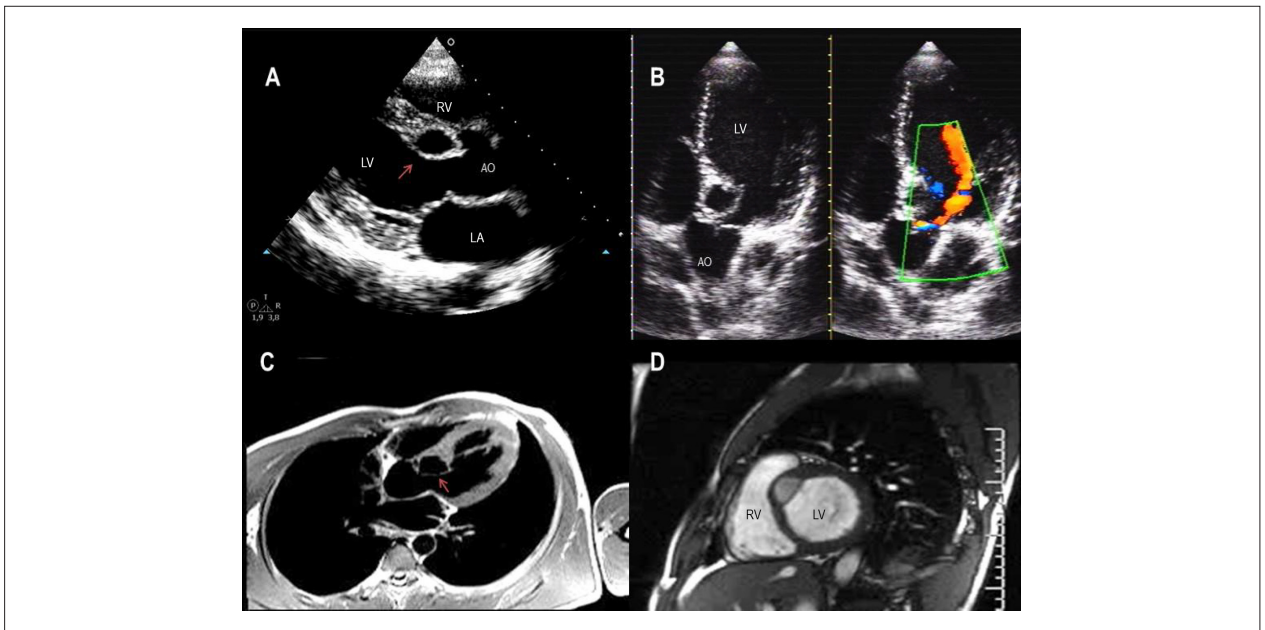


Figure 1 – A) Transthoracic echocardiogram, parasternal longitudinal view, showing the diverticulum in the interventricular septum (arrow) adjacent to the right coronary cusp of aortic valve; B) apical five-chamber view showing the aortic regurgitant jet and apparent structural communication with the LV cavity (Doppler flow); C) Cardiac MRI, axial view in dark blood sequence, and T1-weighted image, confirms the continuity solution (arrow); D) short basal axis view sequence of cine-MRI (perfusion) shows isointense structure (muscular) and hypointense content.

Reference

1. Barberato MF, Barberato SH, Binotto CN, Cavalcanti MJ, Passos AP, Miyague NI. Prenatal diagnosis of left ventricular aneurysm and diverticulum. *Arq Bras Cardiol.* 2009;93(2):e36-8.