

# Congenital Ventricular Crypt, Diverticulum or Aneurysm? A Finding to be Considered

¿Cripta ventricular congénita, divertículo o aneurisma?: Un hallazgo para considerar

MARIANA CARNEVALINI, HÉCTOR DESCHLE<sup>MTSAC</sup>

Ventricular clefts (or crypts) are congenital defects of the myocardial wall whose prevalence varies between 3% and 6%. (1, 2)

It is important to differentiate clefts or crypts from diverticula and congenital aneurysms.

Congenital diverticula are saccular outpouchings involving the entire myocardial thickness. They extend beyond the confines of the myocardial margin, communicating with the ventricular cavity through a narrow mouth, and may collapse in systole. (3, 4) Congenital aneurysms are muscular or fibrotic thin-walled wide-mouthed protrusions associated with akinetic/dyskinetic segments, which commonly occur in the apex. (3)

Clefts or crypts are defined as discrete V- or U-shaped invaginations, perpendicular to the long axis of the ventricle, with >50% penetration into the compact myocardium, within the confines of the pericardium, and they collapse in systole. They can be single or multiple and are commonly found in the basal and mid-inferoseptal segments. (1) They do not present motility disorders and are associated with slightly increased ejection fraction and systolic volume. (5) They are usually reported in patients with hypertension, hypertrophic cardiomyopathy (HCM) or myocarditis, in carriers of the HCM gen, and incidentally in healthy subjects. (3, 5)

The images correspond to a 64-year old female patient with no prior cardiovascular history. Transthoracic echocardiography showed normal left heart, mild septal hypertrophy, and preserved systolic function. A glove finger-like image penetrating into the septum was observed in the anterior interventricular septum, without communication with the right ventricle, with systolic collapse, consistent with ventricular crypt (Figure 1). A 3D transthoracic echocardiography was also performed, which confirmed the crypt found in the anterior septum.

## Conflicts of interest

None Declared

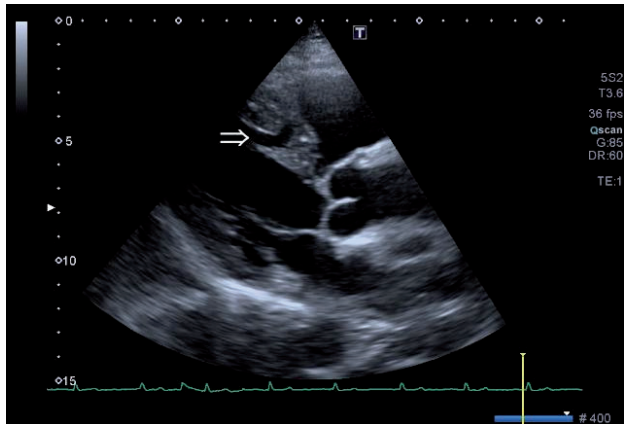
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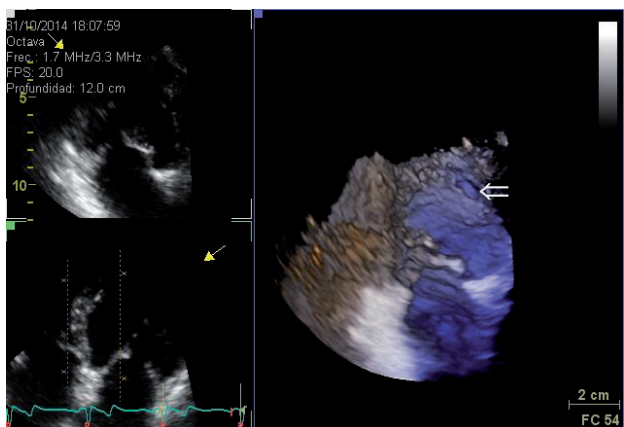
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**Address for reprints:** Dr. Héctor Deschle - Diagnóstico Maipú - Av. Maipú 1668 (1636) Vicente López, Pcia. de Buenos Aires

Diagnóstico Maipú  
Full Member of the Argentine Society of Cardiology



**Fig. 1.** Parasternal long axis image. Notice the deep U-shaped invagination in the interventricular septum (arrow).



**Fig. 2.** 3D echocardiography image showing the crypt opening from the left ventricular septal surface (arrow).

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