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IMAGES IN CV APPLICATIONS

Congenital pseudoaneurysm of the mitral-aortic intervalvular fibrosa with a 5 years' follow up

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A 1 month female baby was referred to our Institution for heart murmur. Clinical examination was normal with only an innocent murmur and EKG was normal. We performed two-dimensional (2D) and three-dimensional (3D) transthoracic echocardiograms (TTE). In five-chamber view and left ventricular long axis view we detected a saccular formation in the region of the mitral-aortic intervalvular fibrosa (MAIVF). The 2D TTE (Fig. 1 panel a–c; Movie I) showed the pseudoaneurysm expanding in systole and collapsing in diastole. The 3D TTE (Fig. 1 panel d) added a more realistic, didactic and easily understandable imaging, well defining the ostium of the pseudoaneurysm (Fig. 1 panel f, g; Movie II). The pseudoaneurysm measured 7 × 6 mm. No other cardiac anomalies were recorded. Patient's history was silent for infection, trauma or intervention [1] and so it was classified as congenital/idiopathic pseudoaneurysm of the mitral-aortic intervalvular fibrosa (PMAIVF) [2]. At the age of 4, she underwent cardiac computed tomography (CT) examination [1]. CT scan confirmed the presence of the PMAIVF showing a bulging "blackberry-like" aspect (maximum diameter of 12 × 10 mm), with posterior extension to the crux and the atria and an inlet diameter of 4 mm (Fig. 1 panel e). The infant is undergoing 6 months' follow up with 2D and 3D TTE and no variations in size and/or shape of the PMAIVF have been detected after 5 years from the diagnosis. The girl is still completely asymptomatic, does not have any comorbidity and is on aspirin. Given the stability of the pseudoaneurysm and the absence of symptoms, we continue with clinical and TT echocardiographic follow up [1, 2].

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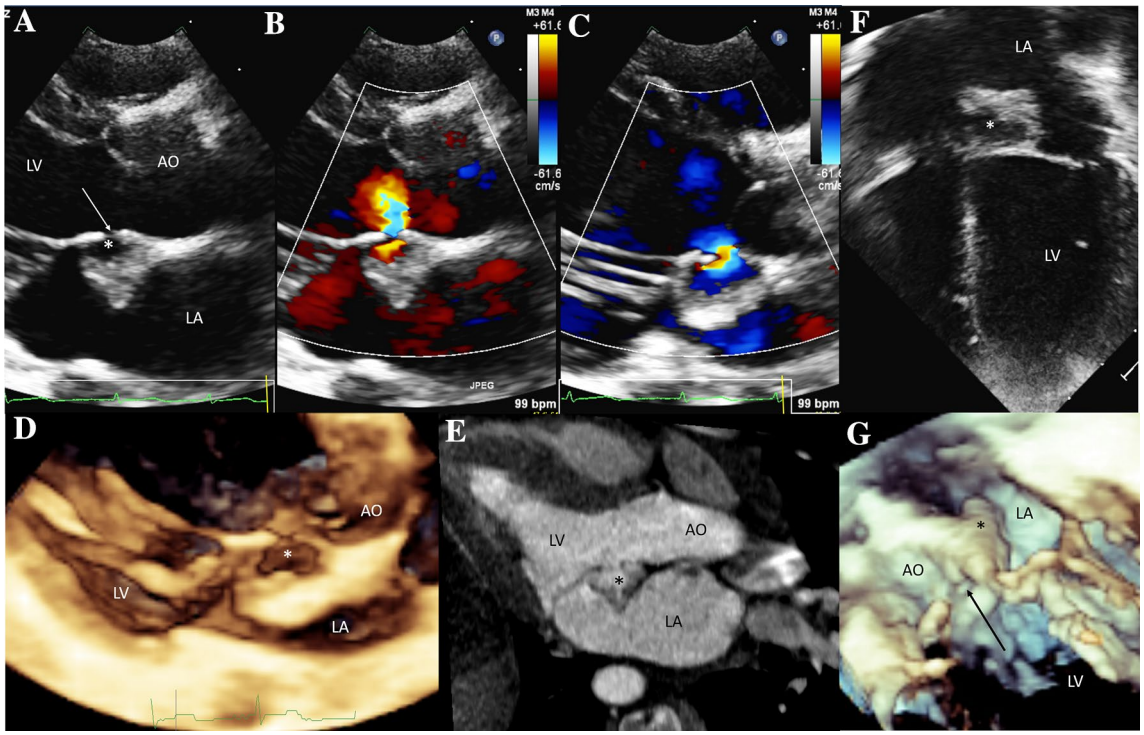

Fig. 1 **a–c** Parasternal long axis view. The white arrow points at the ostium of the pseudoaneurysm (*). The color doppler shows the flow going to and fro the pseudoaneurysm in systole (isovolumetric period) and diastole respectively. **d** 3D echocardiogram illustrating the pseudoaneurysm (*). This section is similar to the echo long axis view (**a–c**) and to the CT scan view (**e**). **e** CT scan where the pseudoaneurysm (*) is clearly visible. This section is similar to the echocardiographic long axis view (**a–c**). **f, g** 2D and 3D echocardiogram four chamber view (tilted in the 3D view) where the pseudoaneurysm is clearly visible. Black arrow point at the entrance of the pseudoaneurysm (*). *LA* left atrium, *LV* left ventricle, *AO* aorta

Compliance with ethical standards

Conflict of interest No financial support was received, and none of the authors has any related interest to disclose.

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