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Clinical Video

Congenital Left Ventricular Inferoseptal Huge Diverticulum Mimicking Pseudoaneurysm

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Clinical Video

A 51-year-old man presented with noncardiac chest pain. He had a history of left anterior descending coronary artery stent implantation due to acute onset chest pain 5 years ago. He had no history of palpitation, syncope, shortness of breathless or thromboembolic event. Vital signs were stable. Physical examination was unremarkable. The electrocardiogram showed sinus rhythm, left axis deviation and nonspecific intraventricular conduction delay (Figure 1). Transthoracic echocardiography raised suspicion of congenital left ventricular inferoseptal bilobulated huge diverticulum mimicking pseudoaneurysm on 2-dimensional imaging with aliasing and bidirectional flow visualized by color flow Doppler on subcostal view (Video 1 and 2). Parasternal and apical windows have poor acoustic image. Normokinesis of myocardium of the walls of the diverticulum can be discerned on subcostal view. Cardiac magnetic resonance imaging confirmed the congenital left ventricular inferoseptal bilobulated huge diverticulum protruding into the apex of the right ventricle without a thrombus formation (Video 3 and 4). We offered the patient regular follow-up without any intervention.

Congenital ventricular diverticulum is a rare cardiac abnormality in adult patients [1]. Congenital left ventricular diverticulum is usually asymptomatic. The most frequent clinical presentation in symptomatic patients includes arrhythmias, embolic events, infective endocarditis, rupture, and congestive heart failure [2]. Congenital diverticulum differs from a pseudoaneurysm by presence of normokinetic myocardium in the composition of the wall of diverticulum. We hereby demonstrated the importance of physical examination and cardiac imaging in the diagnosis of congenital ventricular diverticulum.

Video Legends

Video 1: Transthoracic echocardiography showing left ventricular inferoseptal bilobulated huge diverticulum on subcostal view. Arrow shows the neck of diverticulum. LV; Left ventricle, RV; Right ventricle

https://youtu.be/3gfso6wE2-Q

Video 2: Aliasing and bidirectional flow visualized by color flow.

https://youtu.be/-J887pIu32k

Video 3: Steady-state free precession cardiac magnetic cine imaging of foreshortened 4-chamber view demonstrating left ventricular inferoseptal diverticulum.

https://youtu.be/x_ldDn75STg

Video 4: Steady-state free precession cardiac magnetic cine imaging of short axis view of the left and right ventricular at mid ventricular level showing left ventricular inferoseptal diverticulum.

https://youtube.com/shorts/Qez7E6BAh_Q

References

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2. Ohlow MA, von Korn H, Lauer B. Characteristics and outcome of congenital left ventricular aneurysms and diverticula: analysis of 809 cases published since 1816. Int J Cardiol. 2015;185:34-45.

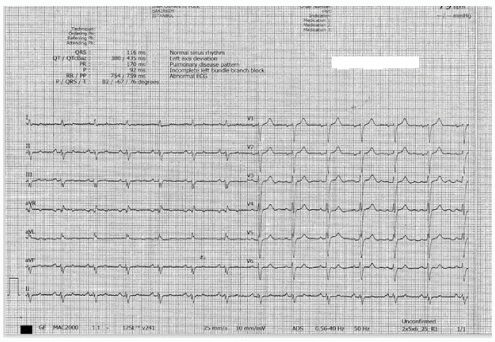

Figure 1: ECG showing left axis deviation and nonspecific intraventricular conduction delay.

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