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Asynchronous and hypokinetic movement of the left ventricular posterior wall due to preexcitation syndrome

A 30-year-old professional male cyclist presented with palpitations and a wide irregular QRS complex tachycardia on electrocardiography, which spontaneously reverted to sinus rhythm. A pre-excitation pattern suggestive of a left posteroseptal accessory pathway was observed (panel A). An M-mode echocardiogram, parasternal long-axis view, performed before catheter ablation, showed delayed left ventricular anterior septal (LVAS) wall motion with respect to the left ventricular posterior (LVP) wall. In addition, a decreased amplitude of the LVP wall motion gave rise to a mild-moderate (left ventricular ejection fraction (LVEF) 40%) systolic dysfunction (panel B). After catheter ablation of the accessory pathway, synchronic motion of both walls (LVP and LVAS), an improvement in the LVP motion and normalisation of systolic function (LVEF 55%, panel C) were noted.

Usually, in patients with left posteroseptal accessory pathway, an M-mode echocardiogram, parasternal long-axis view shows an abnormal early local activation of the base of the left ventricle, which produces a presystolic notch movement of the LVP wall, synchronic to the LVAS wall. In our patient, LVP wall motion had an abnormal amplitude and was asynchronous with

respect to the LVAS wall motion, causing systolic left ventricular dysfunction. The normalisation of these parameters, after successful catheter ablation, indicates that these abnormal findings were related to the existence of the accessory pathway.

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