Cases of familial idiopathic left ventricular tachycardia

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The cases of two Asian brothers with idiopathic left ventricular tachycardia are reported. Their 12-electrocardiogram leads showed regular, wide QRS tachycardia showing left bundle branch block morphology with a superior axis deviation. Radiofrequency ablation was performed and there was no specific events during 10 year follow up.

Keywords Ventricular tachycardia; Familial

Case report

Two Asian brothers with idiopathic left ventricular tachycardia were studied. The elder patient was 26 years old when he experienced palpitations for the first time with no relation to exercise. Non-compliance with his medical treatment at a local clinic for several years led him to visit our hospital. His resting electrocardiogram and echocardiogram revealed no specific abnormalities. The electrocardiogram during the tachycardia revealed a regular, wide QRS tachycardia exhibiting left bundle branch block morphology with a superior axis deviation at 157 bpm (Fig. 1). Radiofrequency ablation allowed the patient to enjoy a 10 year remission.

The patient’s younger sibling was 31 years old when he presented with a prolonged episode of palpitations. An electrocardiogram taken in the emergency room revealed ventricular tachycardia at 228 bpm with left bundle branch block (Fig. 2). An echocardiogram revealed a normal structure and normal ventricular function. Programmed ventricular stimulation induced a sustained monomorphic ventricular tachycardia similar to the clinical tachycardia. The earliest activation site was found by activation mapping, and pace mapping confirmed a matched site with the clinical tachycardia in the apicoinferoseptum portion of the left ventricle. After the ablation, no sustained tachycardia could be induced with ventricular extra stimuli. At 3 months of follow-up, there was no recurrence in the absence of any anti-arrhythmic drugs.
Figure 2  Electrocardiogram recorded in the younger brother.