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*CASE REPORT*

# Case of Idiopathic Left Ventricular Tachycardia (ILVT)

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**ABSTRACT**

**Introduction**: The objective of this case report is to illustrate a case of idiopathic left ventricular tachycardia (ILVT). It is important to distinguish key features to differentiate ILVT from other types of ventricular tachycardias.

**Clinical picture**: A 33-year-old male presented with palpitations. Clinical examination was unremarkable, except a heart rate of 170 beats/min. ECG showed a right bundle branch morphology, left superior frontal plane and a relatively narrow QRS duration. A diagnosis of ILVT was made.

**Treatment**: Intravenous verapamil was given and the ILVT was terminated.

**Conclusion**: ILVT differs from other types of VT, such as right ventricular outflow tract (RVOT), in terms of mechanisms, site of origin and management. Overall, ILVT has a good prognosis, compared to VTs seen in ischaemic cardiomyopathy.

*Keywords*: Idiopathic, Tachycardia, Ventricular

## INTRODUCTION

Most ventricular tachycardias encountered in clinical practice occur in patients with structural heart disease. Idiopathic ventricular tachycardia refers to those arrhythmias in those without structural heart disease, metabolic or genetic abnormalities.[1] We report a case of a 33-year-old male with idiopathic left ventricular tachycardia (ILVT).

## METHODS

The patient presents with palpitations. Clinical examination was unremarkable. His blood pressure was stable at 120/70mmHg on admission and his pulse was 170 beats /min. ECG (Fig. 1) showed right bundle branch block morphology, corresponding to the left ventricular origin. It has a left superior frontal plane axis and a relatively narrow QRS duration. He was given verapamil and the VT was terminated (Fig. 2). Echocardiogram showed no structural heart disease. He was continued on regular dose of oral calcium channel antagonists. Catheter ablation was offered but declined. He is followed-up in clinics.

## RESULTS/DISCUSSION

ILVT differs from other types of VT such as right ventricular outflow tract tachycardia (RVOT), in terms of mechanism and site of origin.[2,3] RVOT VTs have characteristic ECG appearance of left bundle branch block and inferior axis.[4] Verapamil is effective in the treatment of ILVT, for both termination and prevention of recurrence.[3,5,6] Catheter ablation has been performed and success rates are up to 85% to 100% in resistant or incessant ILVT.[7-9] Overall, ILVT has a good prognosis,[10] compared to VTs seen in ischaemic cardiomyopathy.

## CONCLUSIONS

This case represents ILVT, not induced by exercise and presents with palpitations. It is rarely associated with syncope or cardiac arrest and was successfully terminated with verapamil.



Fig. 1 Idiopathic Left Ventricular Tachycardia

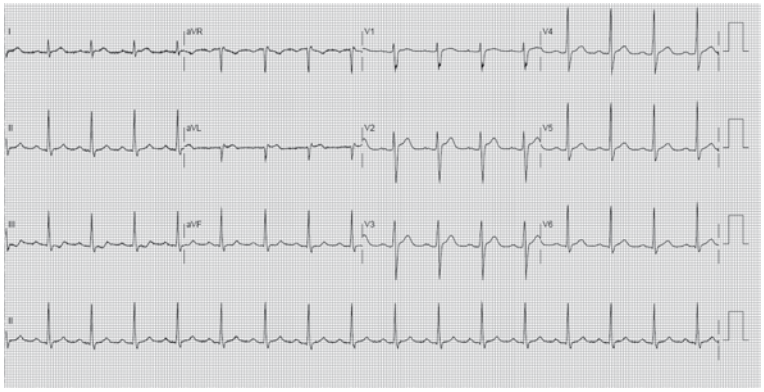


Fig. 2 Post-termination of ILVT with Verapamil

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