Catecholaminergic Polymorphic Ventricular Tachycardia (CPVT)

Introduction

CPVT is a condition that is characterized by exercise or emotion related fainting or cardiac arrest. Patients with CPVT usually have a normal resting ECG, but abnormalities present themselves with exercise or emotional stress. Swimming is uniquely associated with CPVT and type 1 Long QT Syndrome. 

Catecholaminergic polymorphic ventricular tachycardia is inherited, with other affected family members in 30% of cases, with genetic testing yielding a causative mutation in the majority.

Diagnosis

Abnormal heart rhythms are often detected in individuals who undergo exercise testing and Holter monitoring. Infusions of adrenaline can also unmask key abnormal heart rhythms that help to diagnose CPVT (Figure).

Treatment

Patients are treated with beta-blockers, drugs that block the adrenaline effect on the heart. An ICD is considered depending on the severity of presentation and family history.

Selected References