Clinical picture

Electrocardiogram in Brugada syndrome

A 35-year-old Chinese male with no past medical history was found unresponsive at home. When emergency medical services arrived at the scene, patient was noted to be in ventricular fibrillation and had to be defibrillated twice. The patient subsequently had a return of spontaneous circulation and was brought to the emergency department (ER). The electrocardiogram done in the ER showed a pseudo right bundle branch block and ST segment elevations followed by an inverted T wave in leads V1 and V2, consistent with the classic ‘coved’ Brugada type 1 pattern (Figure 1). Further history obtained from the family members revealed that the patient’s father and elder brother, both, had suffered sudden cardiac death, at the age of 44 and 39 years, respectively. Patient was placed on the hypothermic protocol and admitted to the cardiac intensive care unit but eventually had only minimal neurological recovery.

Brugada syndrome is an autosomal dominant channelopathy caused by a ‘loss of function’ mutation in the sodium channel gene SCN5A.1 It occurs predominantly in the males of Asian ethnicity and usually presents with life threatening ventricular arrhythmias or Sudden Cardiac Death. Brugada syndrome should be suspected when these characteristic patterns are observed on the electrocardiogram and these patients should be considered for an automated implantable cardioverter-defibrillator implantation.2 Genetic testing is also available to help establish the diagnosis and identify relatives who are at a risk. Increased awareness among the physicians of these EKG patterns can lead to early recognition and intervention which can help reduce the incidence of sudden cardiac death in Brugada syndrome.

Photograph and text from S. Chadha, Internal Medicine, Maimonides Medical Center, Brooklyn, NY, USA; O. Chen, V. Shetty, R. Frankel and J. Shani, Cardiology, Maimonides Medical Center, Brooklyn, NY, USA.

email: sameer_n_heart@yahoo.co.in

Conflict of interest: None declared.

References


Figure 1. Electrocardiogram showing Brugada type 1 pattern.