Clinical Characteristic and Clinical Course of Aborted Sudden Cardiac Death Patients with Structurally Normal Heart in King Chulalongkorn Memorial Hospital

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Abstract

Background: PED (Primary electrical disease) is an arrhythmogenic disease group that causes serious ventricular tachyarrhythmia in the absence of recognized structural heart disease. Although Thailand, which is a part of Southeast Asia, is an endemic area of PED, especially Brugada syndrome, there is little known about demographic data and clinical outcome of PED among survivors of sudden cardiac death (SCD).

Objective: To study demographic data and clinical outcome of PED among survivors of SCD in Thailand.

Material and Method: The present study was approved by the ethics committee of the Faculty of Medicine, Chulalongkorn University, Bangkok. The authors reviewed patient medical records for clinical characteristics, etiology, and clinical outcome of survivors of SCD between January 2002 and December 2008. The patients with PED who had normal structural heart and no obvious non-cardiac causes of sudden death were enrolled.

Results: Fifty-two survivors of SCD with PED (mean age 39±12, 49 males), mainly from the northeast and middle regions of Thailand, were recruited for this study. SCD mainly occurred during times when patients were asleep or resting (50% and 15.4%) respectively. Of the 52 survivors, 21 patients (40%) had a documented family history of SCD. The etiology of survivors of SCD is composed of Brugada syndrome (63.5%), Early repolarization syndrome (ERS) (9.6%), Congenital long QT syndrome (LQTS) (7.7%), and idiopathic VF (3.8%). Remaining 15.4% had abnormal ECG but not compatible with any etiology. A large number of patients (78.8%) completely recovered without neurological sequelae. The recurrence of severe ventricular arrhythmia occurred in 27 patients (51.9%) during mean follow-up period 56.5±35.4 months (4 to 137 months). The recurrence was highest during the first year (32%) of follow-up.

Conclusion: The Brugada syndrome is the most common etiology of survivors of SCD with normal structural heart in Thailand. Although the prognosis after resuscitation was good, recurrence was especially high during the first year and as a result, an ICD implantation is needed for prevented recurrence of SCD.

Keywords: Sudden cardiac arrest survivors, Aborted sudden cardiac arrest, Primary electrical disease

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