ECG DILEMMA-ANSWER

Abdulwahab Hritani[1], Firas Baidoun[2], Fatima Samad[1]

[1]Cardiology Department, Aurora Sinai/St. Luke Medical Centers, Milwaukee, Wisconsin
[2]Internal Medicine Department, University of Florida College of Medicine, Jacksonville, Florida

Corresponding Author: Fatima Samad, MD. 2900 W Oklahoma Ave, Milwaukee, WI 53215 (fatimasamad@gmail.com)

Received: April 19, 2017 Accepted: May 24, 2017 Published: July 19, 2017

Am J Hosp Med 2017 Jul;1(3):2017.028 https://doi.org/10.24150/ajhm/2017.028

Answer: B

Brugada Syndrome (BrS) is a rare autosomal dominant entity with variable penetrance and is caused by a mutation in the cardiac sodium channels (1). BrS has 3 subtypes with type 1 (ECG presented) being the most common; it is described as an elevation in the J point and coved-type ST segment elevation of ≥2 mm followed by an inverted T wave, with this feature being present in≥ 1 right precordial lead (V1 through V3) (2, 3). To increase the sensitivity of diagnosing BrS, the expert consensus statement of 2013 on inherited arrhythmogenic diseases (4) recommend diagnosis just based on ECG change in only one precordial lead without any clinical symptoms (excluding electrolyte abnormality, myocardial infarction and pulmonary embolism). The prevalence of BrS is not quite known but is estimated at 5-20 per 10,000 people (1). Patients may suffer from syncope and/or sudden cardiac death (SCD) due to polymorphic ventricular tachycardia (VT)/ventricular fibrillation (VF) (2). It is estimated that spontaneous type 1 Brugada pattern is associated with 0.5-1% event rate per year, with that event rate going as high as 60% over the next 4 years in those with prior cardiac arrest or arrhythmic events (1-3). Implantable cardioverter defibrillator (ICD) is not indicated in asymptomatic patients while its implantation is class I indication in those with aborted cardiac arrest. The management of those with spontaneous asymptomatic Brugada syndrome (such as in the case of our patient) including electrophysiological (EP) studies, remains controversial (1-3). Asymptomatic patients do not require antiarrhythmic therapy. Quinidine, a class I antiarrhythmic, has been shown to suppress ventricular arrhythmias in BrS patients. It's mainly used in those with multiple ICD shocks, those who have contraindication to ICD therapy and in BrS patients with supraventricular arrhythmias (4). This patient underwent an EP study without any inducible ventricular arrhythmias. He did not require an ICD placement and is now being closely followed up.

Notes

Author contributions: All authors have seen and approved the manuscript, and contributed significantly to the work.
Financial support: Authors declare that no financial assistance was taken from any source.

Potential conflicts of interest: Authors declare no conflicts of interest. Authors declare that they have no commercial or proprietary interest in any drug, device, or equipment mentioned in the submitted article.

References

1. Ramon Brugada, M.D., Ph.D. et al. Brugada Syndrome. Methodist DeBakey Cardiovascular Journal. 2014 Jan-Mar; 10(1): 25–28.
2. Jitendra Vohra, MD, FRACP, FCSANZ et al. Update on the Diagnosis and Management of Brugada Syndrome. Heart, Lung and Circulation (2015) 24, 1141–1148.
3. Melissa Dakkak, DO, et al. Beneficial Effects of Isoproterenol and Quinidine in the Treatment of Ventricular Fibrillation in Brugada Syndrome. Case Rep Cardiol. 2015;2015:753537
4. Silvia G. Priori, MD, PhD, et al. HRS/EHRA/APHRS Expert Consensus Statement on the Diagnosis and Management of Patients with Inherited Primary Arrhythmia Syndromes. Heart Rhythm, Vol 10, No 12, December 2013.