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Electrocardiogram Quiz – Case 19

E. Petrou,
V. Vartela,
A. Tsipis,
S. Nikiforos,
I. Fekos,
C. Girasis,
M. Boutsikou,
G. Karatasakis,
G. Athanassopoulos,
D.V. Cokkinos

Division of Cardiology, "Onassis" Cardiac Surgery Centre, Athens, Greece

A 65-year-old man presented with palpitations of a few hours' duration. The patient's surface ECG is depicted in figure 1.

Questions

a. What can you deduce about the patient's cardiac history based on the ECG?
b. What is the significance of your findings and what would be the treatment?

Comment

Hypertrophic cardiomyopathy (HCM) is a genetically determined myocardial disease, and has a prevalence estimated to be 1 in 500 in the general population. Patients with HCM are prone to a variety of arrhythmias. Atrial fibrillation (AF), which is present in approximately 5% of patients at the time of diagnosis, is the most common, potentially serious atrial arrhythmia. The annual incidence of AF in this patient population is 2% per year, almost

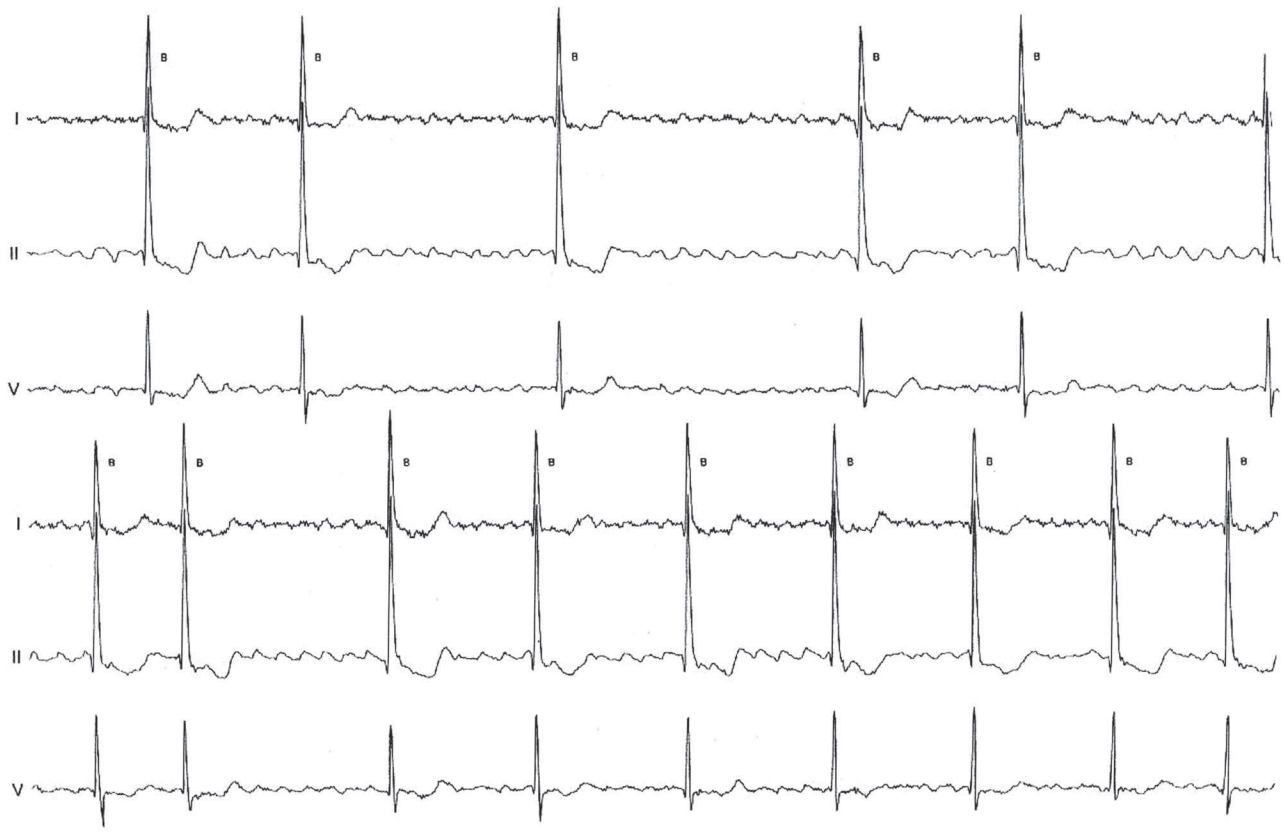

Figure 1

five times higher than the general population. AF episodes are associated with systemic thromboembolism and poor prognosis in patients with HCM; however, studies regarding the impact of AF on the long-term prognosis of HCM patients have been limited in number, with sometimes conflicting results. AF in patients with HCM is generally associated with deterioration of the clinical status, functional capacity, and quality of life.

In AF, therapeutic goals include rate control, stroke prevention, and quality of life improvement. Therapy goals can also include rhythm control. The latter can be achieved pharmaceutically, with direct current cardioversion or pulmonary vein ablation in selected patients. Especially in HCM patients, anticoagulation is the cornerstone of treatment. Additional AF treatment in HCM depends on the initial decision regarding need for surgical intervention, whether or not AF is permanent, and the severity of symptoms in patients with non-permanent AF. It has been reported that catheter ablation of AF in HCM patients is an effective and safe therapeutic option, especially in the case of paroxysmal AF. Recently, attempts to detect patients with HCM at risk for AF, using electrocardiographic and echocardiographic criteria, have been made.

Our patient was treated with intravenous amiodarone and normal sinus rhythm was re-established. Further investigations and electrophysiological assessment were scheduled.

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Corresponding author:

E.G. Petrou, Division of Cardiology, "Onassis" Cardiac Surgery Centre, 356 Sygrou Ave., GR-176 74 Kallithea, Greece
e-mail: emmgpetrou@hotmail.com