The Prevalence and over 20 Years Long Term Prognosis of the Brugada-Type Electrocardiogram: From the Circulatory Risk in Communities Study (CIRCS)

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Background: Brugada syndrome is an arrhythmogenic disease characterized by an ECG of ST-segment elevation in the right precordial leads. Some previous reports have indicated that asymptomatic patients with Brugada ECG are at relatively low risk of SD; however, there are very limited reports about their long-term prognosis. To clarify the risks of SD, we investigated the 20-year prognosis of asymptomatic individuals.

Methods: The study population was participants of annual health checkups; three communities of CIRCS. We enrolled 8,776 healthy individuals aged 40–79 years old at baseline. All the participants were followed-up through 2004.

Results: There were 9/60 (0.1%/0.7%) individuals with typical type 1/2 Brugada ECG while 149 (1.7%) individuals showed atypical Brugada ECG. Through 2004, SD was observed in 1/4 (1.7%/4.2%) men with the typical/atypical Brugada ECG, while 64 SDs (1.9%) were observed among male participants without Brugada ECG. No SD occurred among female participants with either typical or atypical Brugada ECG.

Conclusion: In this cohort study, persons with atypical Brugada ECG in a middle-aged might have a relatively high risk of SD.

Keywords: Brugada syndrome, sudden cardiac death