Early Repolarization Pattern in Patients with Vasospastic Angina Is Related to Sudden Cardiac Death and Fatal Ventricular Arrhythmia

Chang-Myung Oh, Jaewon Oh, Hye-Jin Hwang, Jong-Yun Kim, Hui-Nam Pak, Moon-Hyoung Lee, Boyoung Joung

Division of Cardiology, Department of Internal Medicine, Yonsei University College of Medicine, Seoul, Korea

Background: This study was performed to investigate the prevalence and prognostic significance of early repolarization (ER) in patients with vasospastic angina (VA). Methods: We assessed the prevalence and prognostic significance of ER in 693 VA patients (age 51±9 years). The control group consisted of 1,189 age- and sex-matched healthy control. The primary end point was death from all causes, and secondary end points were aborted sudden cardiac death or fatal ventricular arrhythmia.

Results: ER was more common in VA (36.9% [n=256]) than in control (5.5% [n=65], p<0.001). VA patients with ER (ER group) were more likely to be men (65% vs. 56%, p=0.017) than those without ER (Non-ER group). Although there was no difference in primary end point, secondary end points were more frequently observed as the initial presentation (2.7% vs. 0.7%, p=0.044), and during the mean follow up period of 86.7±51.3 months (3.5% versus 0.9%, p=0.02) in the ER than in the non-ER group. A J-point elevation of more than 0.1 mV in the inferior leads was associated with an increased risk of secondary end points (HR 4.00,1.52-10.55; p=0.005). Conclusion: ER was more frequently observed and associated with an increased risk of aborted sudden cardiac death or fatal ventricular arrhythmia in VA patients.

Keywords: early repolarization, J-point, vasospastic angina