Prevalence of Early Repolarization in Acute Period after Cardiac Defibrillation

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Background: Idiopathic ventricular fibrillation with early repolarization (ER) has been reported. However, ER might be presented by the effects of defibrillated cardiac muscle in the patient who were received the defibrillation. Methods: We studied the presence of ER in the patients who were received the defibrillation due to ventricular fibrillation. Electrocardiograms recorded within one hour after the defibrillation were analyzed. ER was defined as QRS slurring or notching with J-point elevation of ≥0.1 mV from baseline. Results: The study population consisted of 18 patients (12 males, mean age 47.8 ± 18.3 years). ER was observed in 5 patients (27.8%) just after defibrillation and in 7 patients (38.9%) within one hour. Two patients had a diagnosis as ER syndrome based on criteria. Whereas ER was found in the patients with other underlying disease including 3 of 5 patients with ischemic heart disease, 1 of 4 patients with Brugada syndrome, and 1 patient with Wolff-Parkinson-White syndrome. During a mean follow-up period of 22.4 ± 13.9 months, 3 patients (16.7%) displayed an arrhythmic event. The presence of ER was not associated with arrhythmic events during follow-up. Conclusion: ER may not be specific findings of ER syndrome and may be found in the patients with various underlying disease. In our population, ER features were not associated with a worse outcome in patients after defibrillation. Keywords: early repolarization, ventricular fibrillation, defibrillation