

Prevalence and prognostic value of early repolarization (j wave) in patients with hypertrophic cardiomyopathy

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Topic(s):

Electrocardiography / cardioversion / defibrillation

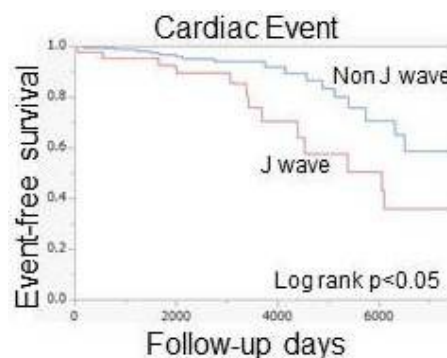
Citation:

European Heart Journal (2014) 35 (Abstract Supplement), 775

Background: The J wave syndrome is associated with cardiac events which sometimes occur in hypertrophic cardiomyopathy (HCM). However, few data exist regarding the prevalence and prognostic value of a J wave in HCM.

Methods and results: We studied 233 consecutive patients with HCM (144 men, mean age 62±17 years). Mean duration of follow up was 94.9±61.5 months. The J wave was defined as a J-point elevation of ≥ 0.1 mV from baseline, with notching or slurring in at least two consecutive inferior and/or lateral leads. The total prevalence of a J wave was observed in 44 patients (18.8%). Cardiac event, such as documented ventricular tachyarrhythmia or sudden cardiac death were occurred in 32 patients (13.7%). When patients were divided into two groups (Group 1; 32 with cardiac events and Group 2; 201 without cardiac events), the prevalence of J wave was significantly higher in Group 1 than in Group 2 (43.8% vs 14.9%, $P < 0.01$). An amplitude of J wave was lower in Group 1 than that in Group 2 (0.19 ± 0.07 mV vs 0.25 ± 0.07 mV, $P = 0.013$). Patients in Group 1 were significantly more likely to have a history of ventricular tachyarrhythmia including non-sustained ventricular tachycardia ($P < 0.01$), or syncope ($P < 0.01$), and a family history of sudden death ($P < 0.01$). There were no significant differences in QRS duration, QTc interval, left ventricular end-diastolic dimension, left ventricular ejection fraction, and left atrial diameter between two groups.

Conclusions: These results demonstrate that the presence of a J wave may be associated with an increased risk for cardiac events in patients with HCM.



Kaplan-Meier curve.