

The long-term outcomes of early repolarization pattern and incidence of early repolarization syndrome in a population-based cohort study

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September 23, 2020

Abstract

Background : Early repolarization pattern (ERP) is associated with long-term cardiovascular death. However, the incidence of early repolarization syndrome (ERS) has never been studied in a general population-based cohort study. Purpose : To determine the prevalence and long-term outcome of ERP as well as the incidence of ERS in a general population-based cohort study. Methods : Participants from the electricity generating authority of Thailand (EGAT) study during 1997 to 2015 were included. The outcomes included cardiovascular death, deaths due to acute myocardial infarction, SCD, and all-cause mortality. A Cox- proportional hazard model was used to determine the association between ERP and the outcomes. Results: 2,689 participants with completed ECGs and risk factor profiles were included for the analysis. Mean follow up duration was 11.2±6.7 years. There were 444 participants with baseline ERP. There were 566 deaths during the follow-ups; of these, 21 were SCD including 6 ERS. The prevalence and incidence of ERS in our study was 0.22% and 0.20 per 1000 person-year. Overall, ERP was not associated with an increased risk of all-cause mortality (hazard ratio [HR]=1.04; 95% confidence interval [CI]:0.81 to 1.34; p =0.75). However, ERP was associated with an increased risk of all-cause mortality in the population [?]55 years old (HR=2.36; 95% CI:1.47-3.77; p <0.01). Conclusion : The prevalence of ERP in the Thai population was higher than the prevalence in other countries in Asia. Our study supports previous studies that ERP is associated with a long-term increased risk of all-cause mortality in the young-middle age population.

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