Prevalence and Factors Associated with Early Repolarization Electrocardiographic Patterns Among Adults in the Philippines

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Introduction: Early repolarization electrocardiographic pattern has been implicated in syndrome of ventricular tachyarrhythmias but the local prevalence is unknown and there is limited knowledge on associated factors.

Methods: National Nutrition Health Survey (NNHeS) was a cross-sectional nationwide survey performed in 2003 to determine atherosclerosis related diseases and risk factors using a stratified multistage sampling design covering all the regions and provinces in the Philippines. Electrocardiograms (ECG) were performed in adult subjects surveyed. This is a cross-sectional analytical study involving the retrospective review of the 4340 ECG recordings and NNHeS database to determine the prevalence of ERP including its types and associated risk factors. Risk factors for ERP were evaluated using binary logistic regression analysis.

Result: The overall prevalence of ERP in was 8.46%, higher in males than females (6.05 vs. 2.4%), and decreasing with increasing age. Percentages of the different types of ERP, Type 1 was 21.6%, Type 2 was 78% and Type 3 was 0.28%. Binary logistic regression demonstrated that independent factors for ERP were age OR = 0.99 (CI: 0.9843 to 0.9957, P <0.001), male sex OR = 3.0297 (CI: 2.3856 to 3.8477, P <0.001), without hypertension OR = 0.5630 (CI: 0.4136 to 0.7664, P <0.001) and Living in region 7 OR = 1.4891 (1.0417 to 2.1287, P = 0.029).

Conclusion: ERP is common among Filipinos occurring in 8 per 100 of the population. Younger age, males, no hypertension and those living in region 7 in the Philippines are the independent factors of having early repolarization pattern.