

Heart Failure

PROGNOSTIC VALUE OF ECG QRS SCORE IN ASYMPTOMATIC INDIVIDUALS WITHOUT CLINICAL CARDIOVASCULAR DISEASE: INSIGHTS FROM THE MULTI-ETHNIC STUDY OF ATHEROSCLEROSIS

Poster Contributions

Poster Sessions, Expo North

Monday, March 11, 2013, 9:45 a.m.-10:30 a.m.

Session Title: Epidemiology, Risk Modeling and Prediction of Outcomes in Heart Failure

Abstract Category: 15. Heart Failure: Clinical

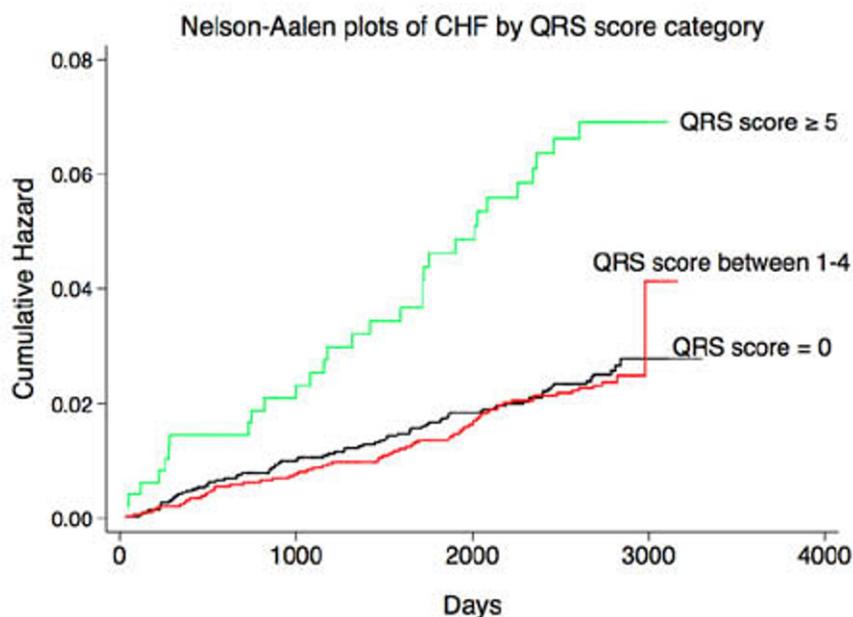
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Background: On a 12-lead electrocardiogram, the ECG QRS-score can be used as an index of myocardial scar. Our main objective was to assess the association of QRS-score with all-cause mortality and incident heart failure (HF) in asymptomatic individuals from the Multi-Ethnic Study of Atherosclerosis (MESA) cohort.

Methods: 6765 multiracial participants between the ages of 45-84 and free of clinically apparent cardiovascular disease (CVD) at entry underwent a 12-lead ECG at baseline and were followed for a median of 7.6 years. Cox proportional hazard models were constructed to predict the end points of all cause death and HF after adjustment for demographic characteristics and CVD risk factors.

Results: 49.9% of participants had a QRS score=0, 43.6% had a QRS score between 1 and 4 and 6.5% had QRS score ≥ 5 . A total of 418 all-cause death and 176 HF events were observed during the follow-up period. Events occurred primarily in individuals with QRS score ≥ 5 . Relative to those with QRS score of 0, the hazard ratios (HR) (95% CI) for death and HF in participants with QRS score ≥ 5 were respectively: 2.01 (1.48 to 2.75), and 2.87 (1.87 to 4.39), ($p < 0.001$). After adjustment for demographic and CVD risk factors, incident all cause death was positively associated with increased QRS score (HR:1.05 per 1 point increase, $p = 0.03$) and with incident HF (HR:1.08 per 1 point increase, $p = 0.01$).



Conclusions: QRS score was an independent predictor of all cause death and incident HF in this multiethnic cohort of healthy individuals.