Chronic CAD/Stable Ischemic Heart Disease

PROGNOSTIC SIGNIFICANCE OF INTERMEDIATE QRS DURATION IN PATIENTS WITH STABLE CORONARY ARTERY DISEASE

ACC Moderated Poster Contributions
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Introduction: Prolonged QRS duration (>0.12s) is associated with adverse cardiovascular events. However, there is a lack of conclusive data on the significance of intermediate QRS duration (0.10-0.12s). We sought to determine the association of QRS (0.10-0.12s) with left ventricular function and prognosis in ambulatory patients with stable coronary artery disease (CAD).

Methods: We enrolled 1024 patients with CAD and evaluated the association of intermediate QRS duration (0.10-0.12s) on electrocardiogram with baseline echocardiographic findings (left ventricular ejection fraction (LVEF), LV mass index, and diastolic dysfunction) and with subsequent hospitalization for congestive heart failure (CHF) during a mean of 7.0 years of follow-up.

Results: Of 1024 patients, 85 (8%) had QRS 0.10-0.12s, 117 had QRS duration >0.12s, and 684 (67%) had normal QRS <0.10s. Compared to patients with normal QRS, those with QRS 0.10-0.12s were more likely to have LVEF<50% (20% vs 7%, $p<0.0001$), LV mass index >100 g/m2 (45% vs 33%, $p=0.03$), diastolic dysfunction (20% vs 10%, $p=0.005$), and incident CHF (29% vs 12%, $p<0.0001$). After adjustment for age, gender, ethnicity, and baseline measures of cardiac dysfunction, QRS 0.10-0.12s remained significantly associated with CHF (HR 1.9, 95% CI 1.1-3.4, $p=0.03$).

Conclusion: We found that intermediate QRS duration is associated with poor cardiac function and predicts subsequent CHF hospitalization in persons with CAD.

Figure 1. Age adjusted survival without CHF in patients with normal (<100 msec) and intermediately prolonged (100-120 msec) QRS duration.