Risk Stratification of Non-Ischemic Heart Failure Using Simplified Selvester QRS Scoring System

Yoshihiro Sobue, Eiichi Watanabe, Tomohide Ichikawa, Mayumi Yamamoto, Hiroto Harigaya, Kentaro Okuda, Atsushi Kani, Kazuo Kato, Yukio Ozaki

Division of Cardiology, Department of Internal Medicine, Fujita Health University school of Medicine, Toyoake, Japan

Objectives:
Multiple studies have shown that simplified Selvester QRS scoring system (SSS) can estimate the myocardial infarct size, left ventricular function and is predictive of mortality. We then examined the relation of the SSS for the estimation of mortality in non-ischemic heart failure.

Methods:
We studied 136 consecutive patients (age, 72.1 ± 13.7 years, 73 males, left ventricular ejection fraction 38.6 ± 16.1%) who were admitted to our hospital for the treatment of worsening heart failure between January 2008 and January 2009. The absence of coronary artery disease was confirmed by radionuclide scintigraphy, computed tomography, or coronary angiography. The Selvester QRS score was determined using the 12-lead ECG at discharge by two cardiologists who were blinded to the clinical outcome. The primary endpoint was a composite of all-cause death or hospitalization for heart failure.

Results:
During a mean follow-up period of 11 months, 73 (54%) patients met the primary endpoint. Higher QRS scores were associated with lower survival rates. The multivariate Cox proportional-hazard regression analysis revealed that QRS score provide independent information on the mortality (hazard ratio 1.07, 95% confidence interval 1.07 to 1.12: p = 0.009).

Conclusions:
The SSS can be a useful clinical tool for risk stratification in heart failure patients with non-ischemic origin.

Keywords: QRS score, non ischemic cardiomyopathy