Glasgow Prognostic Score predicts the readmission caused by acute decompensated heart failure after myocardial infarction.

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Topic(s):
Coronary Artery Disease – Epidemiology, Prognosis, Outcome

Citation:
Purpose: The Glasgow Prognostic Score (GPS), combination of C-reactive protein (CRP) and serum albumin concentration, provides predictions of prognosis in patients with heart failure. We evaluated the GPS of patients with acute myocardial infarction (MI).

Methods: We investigated the prognosis of 1182 patients with acute MI in our institution. These patients were classified into three groups by GPS at admission. GPS was defined as follows: patients with both elevated CRP (> 1.0mg/dL) and hypoalbuminemia (< 3.5 g/dL) were allocated a score of 2, patients with only one of these biochemical abnormalities were allocated a score of 1, and patients with neither of these abnormalities were allocated a score of 0.

Results: Of the patients, 70.3% (n = 831), 19.2% (n = 227), and 10.5% (n = 124) had GPS of 0, 1, and 2, respectively. In-hospital mortality of GPS 0, GPS 1, and GPS 2 were 4.7%, 18.1%, and 31.5%, respectively (p < 0.0001). Relative to a GPS of 0, the hazard ratios for the readmission caused by acute decompensated heart failure (ADHF) were 3.27 (95% CI: 2.04-5.18) for a GPS of 1 and 3.62 (95% CI: 1.93-6.42) for a GPS of 2 in the age- and sex-adjusted Cox proportional hazard model. After propensity score matching, baseline characteristics were balanced, and 250 paired patients constituted GPS 0 group and GPS 1–2 group. Patients with GPS1 or 2 had a higher risk of the development of ADHF compared with patients with GPS 0 (Hazard ratio: 1.96, 95% confidence interval: 1.13–3.47, p = 0.017).

Conclusions: The GPS, which is based on systemic inflammation, is useful for predicting the development of acute decompensated heart failure after myocardial infarction.
Abstract: P836
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Follow-up (days)