Acute and Stable Ischemic Heart Disease

C-REACTIVE PROTEIN IN NON-ST ELEVATION MYOCARDIAL INFARCTION PATIENTS IS USEFUL IN IMPROVING DISCRIMINATION OF CONVENTIONAL RISK SCORE: A REPORT FROM MULTICENTER PCI REGISTRY

Poster Contributions
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Background: Precise risk stratification of non-ST elevation acute coronary syndrome (NSTE-ACS) remains a clinical challenge. C-reactive protein (CRP), an inflammatory biomarker, has been widely used as a preclinical marker predictive of cardiovascular morbidity and mortality. The aim of this study was to determine the incremental prognostic value of serum CRP level in addition to the conventional risk scoring system for NSTE-ACS patients.

Methods: We analyzed 16,563 consecutive patients from October 2008 to June 2015 within Japanese multicenter PCI registry. Of the 4,113 NSTE-ACS patients, 2434 (59.1%) had CRP measurement upon admission. We examined in-hospital mortality by the serum CRP level, and then compared performance of conventional ACC-NCDR risk scoring system via c-statistics, Akaike/Bayes information criterion (AIC/BIC), and Hosmer-Lemeshow test's p-value, with and without consideration of CRP.

Results: The median CRP were 0.29 (interquartile range 0.1-0.72). Crude and adjusted mortality rate by CRP quartile is demonstrated in the figure. After adjustment, $\log_{10}$CRP was an independent predictor of death (OR: 2.21, CI: 1.47-3.31). The NCDR risk model had better discrimination when CRP was added as a variable; c-statistics 0.895 vs. 0.906, AIC 444.8 vs. 428.2, and BIC 508.5 vs. 497.3 (Hosmer-Lemeshow p-value 0.62 vs. 0.96).

Conclusions: CRP was an independent risk factor of in-hospital mortality in NSTE-ACS patients that underwent PCI and had incremental prognostic value.