Letter to the Editor
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Heart Rate Behind Systemic Inflammatory Response Syndrome Associated with One-Year Mortality in the Patients with Acute Myocardial Infarction?

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In the recent issue of Acta Cardiologica Sinica, Huang et al. showed systemic inflammatory response syndrome (SIRS) was independently associated with one-year mortality in patients with acute myocardial infarction (AMI) and clearly elucidated the detrimental effects of SIRS on mortality through myocardial hypoperfusion, vascular endothelial dysfunction, and systemic inflammation.[1] Another study in Taiwan also provided complementary evidence that incremental leukocyte counts were independently associated with one-year mortality on the top of TIMI risk score in patients with ST-elevation myocardial infarction;[2] however, a crucial factor might confound with the association between SIRS and mortality in the study of Huang.

The SIRS vs. non-SIRS group had significantly greater values of leukocyte count but had similar levels of C-reactive protein which was not correlated with mortality; additionally, body temperature was similar between the two groups.[1] It suggests that the major effect of SIRS on mortality possibly originated from other components of SIRS such as respiratory or heart rate, representing heart failure severity. We might postulate heart rate as the direct predictor regarding no correlation between the presence or severity of heart failure and mortality in the study.[1] Heart rate is a vital predictor in patients with acute coronary syndrome and every 30 beats per min increment of the pulse was associated with an approximate twenty percent increase in six-month mortality.[3] The utility of TIMI and GRACE score was also validated to predict mortality in the Chinese population with AMI recently.[4] Therefore, heart rate behind SIRS might be the true predictor of one-year mortality in the study.[1]

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