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Letter to the Editor

When to evaluate the age, creatinine, and ejection fraction (ACEF) score in patients with acute coronary syndromes?

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Dear editor,

Recently, one interesting article reported the relationship between the age, creatinine, and ejection fraction (ACEF) score and the all-cause mortality of the patients with acute coronary syndromes (ACS) [1]. In this study, 1901 patients were enrolled, and further divided into low-risk (ACEF ≤ 1.45), intermediate-risk (ACEF > 1.45 and ≤2.0) and high-risk (ACEF > 2.0) groups according to the ACEF score (age/left ventricular ejection fraction + 1 [if creatinine > 176 μmol/L]). One-year mortality of ACS patients in low-risk, intermediate-risk, and high-risk groups were 1.6%, 5.6%, and 23.0%, respectively. Furthermore, the ACEF score was also related with an increased risk of major adverse cardiac and cerebrovascular events (adjusted HR 2.23, $p < 0.001$), and transient ischemic attack/stroke (adjusted HR 2.58, $p < 0.001$).

Obviously, aging and decreasing left ventricular ejection fraction related to increasing mortality within ACS patients [2]. Serum creatinine, as a marker of kidney function, may reflect to renal disease, and the relationship between renal disease and ACS has been well verified [3]. However, it seemed confused in the timing of evaluating the ACEF score of ACS patients, before or after the coronary angiography? Ischemic mitral regurgitation (IMR) arised in 13% to 50% patients of acute myocardial infarction [4], which may result in overestimating the left ventricular ejection fraction. With the improving of ischemic lesions, mild or even moderate IMR may disappear after percutaneous coronary intervention (PCI) treatment. As a result, the ACEF scores may be different of these patients before and after PCI treatment. A timely ACEF score evaluation would be more accurate in predicting prognosis of ACS patients.

Conflict of interest

The authors report no relationships that could be construed as a conflict of interest.

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