

Early and Late Mortality Among Patients with Renal Dysfunction in Acute Coronary Syndromes

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Background:

Renal Insufficiency (RI) is associated with poor outcome in patients with acute coronary syndrome (ACS). Several formulas to estimate glomerular filtration rate (eGFR), as a proxy of renal function, are available, although their implication on early and late mortality in patients with ACS remains unknown.

Methods:

Data was extracted from the acute coronary syndromes survey in Israel (ACSIS) during 2002-2010. Renal function was assessed using 5 eGFR formulas: CKD- EPI, MDRD, MAYO, Inulin clearance based (IB), and Cockcroft-Gault (CG). We compared the implications of 4 stages of RI using the different eGFR formulas on in- hospital and 1-year mortality.

Results:

Included were 4039 patients with ST elevation myocardial infarction (STEMI) and 4687 patients with non ST elevation ACS (NSTEMI-ACS). In - hospital and 1-year mortality rates are depicted in Figure ($p < 0.001$ for all). On multivariate analysis, RI was independently associated with early and late mortality in STEMI and non STE-ACS patients using all eGFR formulas ($p < 0.001$ for all).

Conclusion:

RI, as assessed by different eGFR formulas, is associated with early and late mortality in patients with STEMI or NSTEMI-ACS. Thus, all formulas could be used for risk stratification in ACS patients.

