Abstract citation ID: suae036.056

BASELINE SHOCK INDEX-CREATININE CLEARANCE AS A PREDICTOR OF LONG-TERM MORTALITY AFTER ACS. RESULTS FROM 24 YEARS OF FOLLOW-UP OF THE ABC STUDY ON HEART DISEASE

H. Mahmoud, G. Berton, R. Palmieri, F. Cavuto, R. Cordiano, D. Merotto, M. Dario, A. Dal Bo, and F. Bagato
The ABC Study on Heart Disease Foundation-Onlus, Conegliano; Adria General Hospital, Adria; Bassano del Grappa General Hospital, Bassano del Grappa; Conegliano General Hospital, The ABC Study on Heart Disease Foundation-Onlus, Conegliano

Background: Shock index (SI), defined as heart rate divided by systolic blood pressure, is a useful simple predictor of long-term mortality after acute myocardial infarction.

Purpose: To assess the utilization of the SI updated version that includes renal function (Shock Index-Creatinine Clearance (SI-C)) to predict long-term mortality after ACS.

Methods: This preliminary analysis included 589 patients with ACS admitted to three Italian hospitals and discharged alive. Baseline clinical and laboratory data were collected within the first 7 days of hospitalization and SI-C was calculated as \((\text{SI} \times 100) - \text{estimated Ccr}\). Patients were prospectively followed for 24 years or until death.

Results: Virtually all patients completed the follow-up, representing 7066 person-years. Patients’ mean age was 66±12 years, 70% were males and 482(82%) had died during follow-up. Compared to those who survived, deceased patients were significantly different in many clinical features. They also showed significantly higher SI-C values (-11±25 vs. -36±23, p<0.0001). The predictive value of SI-C for 24-year mortality was very good (area under the curve= 0.783, 95% CI: 0.738-0.827, p<0.001). The cumulative risk was significantly higher in the upper SI-C tertile (log rank = 162.1, p < 0.001). Unadjusted Cox regression survival analysis showed that the SI-C score was significantly associated with long-term global mortality (HR: 2.1, 95%CI 1.8-2.3, p<0.0001). A fully adjusted model revealed the same results.

Conclusion: Baseline SI-C seems to be an effective independent predictor of long-term global mortality after ACS. It may have potential as a novel and simple early risk stratification tool for ACS patients including long-term outcomes.
Cox proportional hazards regression of stroke mortality

Area of residence
north
south

Province of residence
west
middle
east

Follow-up years
0 6 12 18 24
Cumulative hazard
0.1 0.2 0.3

* Significantly different