

Prognostic value of troponin i & pro-brian natriuretic peptide in patients with sever sepsis: A closed unit experience

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Introduction: Myocardial dysfunction is a common complication in patients with sepsis. Cardiac troponins and natriuretic peptides are biomarkers that were previously introduced for diagnosis and risk stratification in patients with acute coronary syndrome and congestive heart failure, respectively. However, their prognostic and diagnostic impact in critically ill patients warrants definition.

Materials And Methods: Patients admitted to the intensive care unit (ICU) between January 2009 to January 2010 of a tertiary care center, who fulfilled the already reported consensus criteria for septic shock were included in this study.

Results: Sixty-eight patients with septic shock meeting entry criteria were retrospectively studied. 64.7% patients were found to have positive troponins (Troponin I > 0.05). Twenty-four (35.29%) patients had troponin I < 0.05 ng/ml and compromised the troponin I negative group. The mean (S.D) serum troponin I value in troponin I –positive group was 2.55 ± 1.67 ng/ml. None of the patient had progressive EKG changes.

Clinical Outcomes In Terms Of Troponins:

The Troponin I-positive group had higher APACHE II score (30 ± 6

Vs 22 ± 4.7) on admission. Twenty-eight patients died in the total study and among them twenty patients (71.42%) had elevated troponin I. Left ventricular dysfunction was more common in troponin-I positive group (EF= 38 ± 10) than in Troponin I-negative group (EF= 52 ± 6.5). 63.63 % of the patients with elevated Troponin I required mechanical ventilation as compared to 50% patients with normal Troponin I levels. The patients with elevated troponin I levels had longer MICU stay (7.45 vs 5.28 days)

Clinical Outcomes In Term Of Probnp: Among Twenty-eight deaths in this study, 66.66 % patients had elevated Pro BNP. Left Ventricular dysfunction was more common in patients with elevated Pro-BNP (EF= 42 ± 8.2 vs EF = 52 ± 10). 76.67 % patients who needed mechanical ventilation had elevated Pro-BNP. Similarly 67.82 % patients on inotropic support had elevated Pro-BNP. Elevated Pro-BNP was also found to be associated with increase in MICU stay (6.72 vs 4.35 days)

Conclusion: To date, it is unclear whether clinically unrecognized myocardial cell injury accompanies, causes, or results from this decreased cardiac performance. These findings suggest that in septic shock, clinically unrecognized myocardial cell injury is a marker of LV dysfunction.

Biography

Dr. Aziz is currently working as Internal Medicine resident at Jersey City Medical Center/ Mount Sinai School of Medicine. In addition to being an outstanding researcher, Dr. Aziz has authored several articles on different topics of his research and is working right now on many important research projects related to Critical Care medicine and Cardiology. These articles have also been cited hundreds of times by other researchers in the field. Dr. Aziz has presented his findings at various medical conferences and published in several internationally read peer-reviewed journals. In addition to that he is a member of editorial board of several well-recognized journal. His work has been well recognized both nationally and internationally.