

Dose time of presentation of patients of severe sepsis determines the clinical outcome?

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The aim of this study was to compare the outcomes of patients with septic shock (SS) over a 12-month Period in a closed MICU setting, presenting during different times of the day.

Methods: Patients admitted to the medical intensive care unit (MICU) 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: A total of 100 patients admitted to MICU with the diagnosis of SS were included in this study. Patients were divided into four groups on the basis of their presentation time (Group 1: 6AM-11:59 AM, Group 2: 12:00 PM- 5:59 PM, Group 3: 6PM-11:59PM & Group 4: 12:00 AM- 5:59 AM).

The mean age of cohort was 66.75 yr with 60% males. No significant differences were noted among the four groups with the respect to age, gender, hypertension, CAD, DM and COPD (P not significant).

The clinical out comes in the four groups were compared in terms of need for ventilator & inotropic support, number of deaths and length of stay of the patients in the MICU among different groups.

The patients in group A i.e. between 6 AM-11: 59 AM were found to have worse out come as compared to the patients in group B, C and D.

Discussion: The main finding of this retrospective study is that patients admitted to MICU in the morning hours have worse prognosis, as compared to the patients admitted during the rest of the days. A change in the organizational/staffing structure of a closed MICU during the early morning likely explains the increased mortality noted. It is likely that a number of factors in combination, including the morning rounds account for the higher risk of death during the morning hours.

Our study showed that the patients with septic shock follow the same circadian rhythm in respect to their all-clinical out comes. The patients presented in first quadrant i.e. between 6AM-11: 59 AM had worse out come as compared to the other patients presenting in the other quadrants.

Conclusion: The data suggests that septic shock patients presenting early in the day have worse prognosis as compared to the patients presenting late during the day.

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.