

Clinical outcomes of surgical sepsis and septic shock protocols in surgical intensive care unit

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Background: Sepsis and septic shock are global public health problems that associated with high mortality. Nowadays, Surviving Sepsis Campaign (SSC) have been developed guideline to decrease morbidity and mortality. Therefore these evidence-based protocols were adapted and applied to sepsis and septic shock management practice. However, its clinical outcomes are unknown. This study aims to compare medians survival time and outcome of treatment process before and after the sepsis and septic shock treatment protocol was implemented.

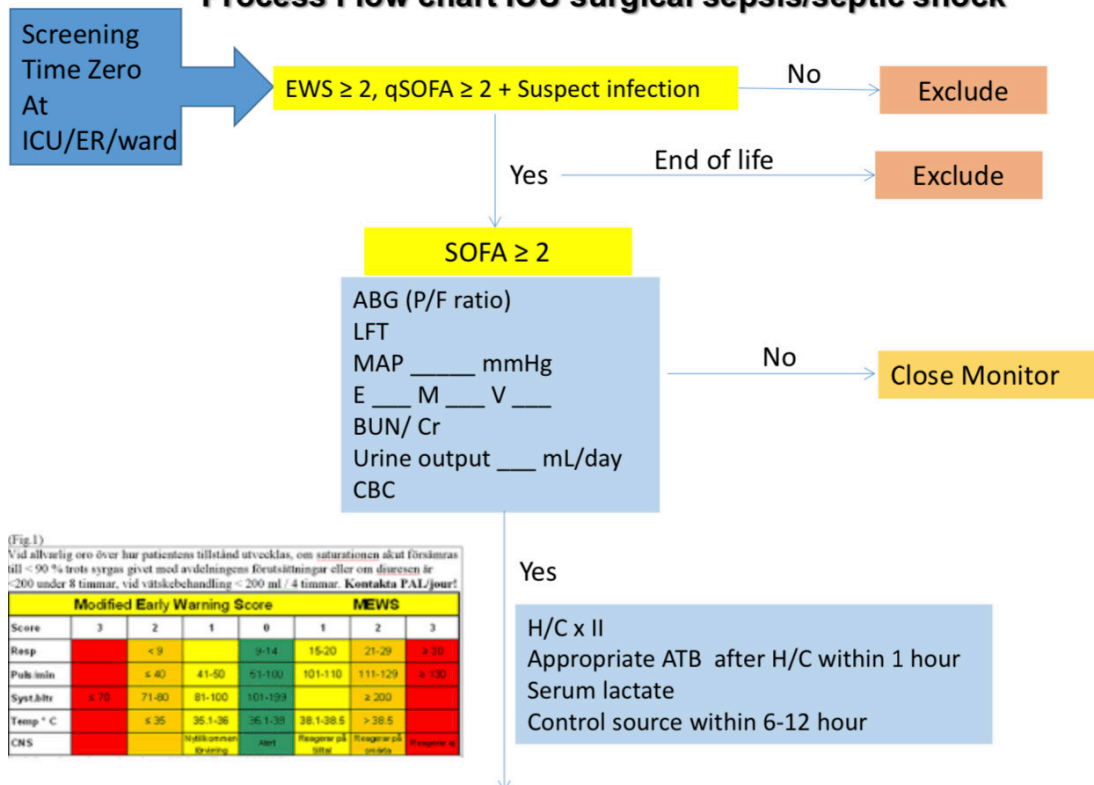
Methods: This study is interventional study. Data from all 401 patients were classified to 2 group, 195 in protocol group were retrieved during April 1st ,2021 to January 31st , 2022 comparing with those of 206 patients in usual care during January 1st , 2018 to June 30th , 2021. Data collection comprised of patients' demographic data, treatment process in the first hours and outcomes of treatment.

Results: After the sepsis and septic shock treatment protocol was applied to practice; medians survival time was significantly increased in protocol group ($p = 0.016$, 95% CI 12.32-19.68), ICU length of stay significantly decreased from 11 to 4 days ($p < 0.001$), ventilator and vasopressor free day significantly increased from 2 to 6 days and 3 to 7 days ($p < 0.001$). Factors associated with mortality were delayed initial fluid resuscitation > 2 hr, vasopressor > 2 hr, culture sensitivity > 4 hr and empirical antibiotics > 5 hr ($p = 0.017, 0.028, 0.008$ and 0.008 respectively).

Conclusion: Sepsis and septic shock treatment protocol resulted increase medians survival time, ventilator and vasopressor free day. Consequently ICU length of stay is

therefore decreased. Delayed initial fluid resuscitation > 2 hr, vasopressor > 2 hr, culture sensitivity > 4 hr and empirical antibiotics > 5 hr were associated with mortality.

Process Flow chart ICU surgical sepsis/septic shock



Process Flowchart ICU surgical sepsis continued

