Comparison of Presepsin (CD14), Procalcitonin (PCT) and C- reactive protein (CRP) plasma concentrations at different SOFA and APACHE II scores during the course of sepsis.

Thesis

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Presented by

Ahmed Mohamed Elbakry Mohamed Kotrob

MSCs of Critical Care Medicine .Cairo University.

Supervisions.

Prof.Dr / **Alia Hassan Abd-Elfattah**

Prof of Critical Care Medicine. Faculty of medicine. Cairo University.

Prof.Dr / **Akram Mohamed Abdelbary Ahmed.**

Prof of Critical Care Medicine. Faculty of medicine. Cairo University.

Assist.Prof / **Mohamed Mohamed Youssef Khaled.**

Assist.Prof of Critical Care Medicine. Faculty of medicine. Cairo University.

Dr / **Momen Yahia Arafa.**

Lecturer of Critical Care Medicine. Faculty of medicine, Cairo University.

Cairo University

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Abstract

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Background: Sepsis remains a major challenge in clinical practice with considerable morbidity and mortality despite modern treatments. Clinicians need good diagnostic and prognostic markers to identify infected patients who would rapidly benefit from prompt, empirical antibiotic therapy and other supportive treatment.

Objective: to comparison of Presepsin (CD14), Procalcitonin (PCT) and C- reactive protein (CRP) at different SOFA and APACHE II scores in sepsis patients

Subjects and Methods:A prospective cohort observational study was conducted in Maady Armed Forces Compound Hospital, Cairo, Egypt recruiting admitted adult critically ill patients diagnosed. All subjects were recruited during the period from December 2013 to November 2015. All subjects were subjected to complete history taking, clinical examination, Complete blood count, Kidney and Liver function, Coagulation profiles, blood, urine, and sputum cultures ± wound or drain culture, presepsin, PCT and CRP plasma concentrations.

Results: Mean age of our study group was 49.8±16.05 years and mean APACHE II score 14±4.4 with mean length of ICU stay was 13.6±7.06 days.There was significantly higher frequency of DM and HTN in Non- survivors group than Survivors.SOFA score was significantly higher at all assessments in Non- survivors as compared to survivors on admission and at day 1, 3,7 and 15. Procalcitonin and presepsin means were significantly higher from day 0 to 15 in non-survived group as compared to survived group on admission, day 1, 3,7 and 15. There was positive liner significant correlation between procalcitonin and values of APAHE score started from day 0. There was positive liner significant correlation between procalcitonin and values of SOFA score started from day 1with p value 0.005and started to show strong direct correlation till day 15**.** There was positive liner significant correlation between presepsin and values of SOFA score started from day 0 and started to show strong direct correlation till day 15.

Conclusion: Our results concluded that to provide a more consistent and reproducible picture of sepsis incidence and outcomes, the task force sought to integrate the biology and clinical identification of sepsis with its epidemiology and coding.

Key Words: Sepsis, Prognosis, Outcome prediction, Presepsin, CRP, Procalcitonin, APACHE II scores