

The predictive role of Interleukin-6 in early diagnosis of Sepsis in premature newborns.

Abstract:

Introduction: Bacterial septicemia is one of the major causes of mortality and morbidity in newborns. The aim of this study was to investigate the predictive role of Interleukin-6 in early diagnosis of Sepsis in premature newborns.

Materials and methods: the type of this study is observational and its method is analytical cross sectional. The study population included all preterm infants admitted to neonatal ICU of Hospital Buali in Ardabil city. For all newborns, CRP, IL-6, CBC, and blood culture tests have been done before hospitalization, on third day, and on seventh day.

All gathered data are analyzed using SPSS₂₁ and One-sample T-Test statistical methods, repeated measures ANOVA.

Findings: The average of Interleukin-6 in the first day and also the third day after hospitalization was more than normal value. This difference was regarded statistically meaningful ($P \leq 0.05$). The average of CRP in the first day of hospitalization was not significantly different from the normal values ($P = 0.653$). However, the average of CRP in the third and seventh day of hospitalization was more than the normal value. This difference was statistically meaningful ($P \leq 0.05$).

Conclusion: An increase in Interleukin-6 occurs earlier than CRP. Hence, it can be used in neonatal premature Sepsis diagnosis earlier than CPR with other symptoms.

In addition, in response to the treatment, its serum level changes happen faster than CRP. Also, its decrease can be an earlier index in response to the treatment compared to CPR.

Keywords: Neonatal Sepsis, Premature newborns, Interleukin-6, and CRP.