

ABSTRACT

VALIDITY OF C-REACTIVE PROTEIN (CRP) TEST AS BIOMARKER IN DETECTING NEONATAL SEPSIS: A RETROSPECTIVE STUDY

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Background: Neonatal sepsis has been considered as one of the common severe bacterial infections with relatively high mortality. A blood culture positive result remains the gold standard in the diagnosis. Apart from the culture result, there is no single test that is consistent for the diagnosis of neonatal sepsis.

Objective: To determine the validity of C-Reactive Protein test as a biomarker in the diagnosis of Neonatal Sepsis.

Design: Retrospective

Setting: Tertiary Hospital in Davao City

Participants: A total of 522 cases who qualified the inclusion criteria were included in the study

Main Outcome Measures: Descriptive statistics was used to present demographic profile of participants. Sensitivity, specificity, positive and negative predictive value as well as accuracy were also computed. Pearson Chi-square test statistics with continuity correction was used to test the association of clinical and demographic profile with positive CRP-test.

Results: Among the 522 cases retrieved, 274 had positive CRP while only 63 cases had positive blood culture with a prevalence rate of 12.07%. The sensitivity, specificity, positive and negative predictive values of CRP were 30.16%, 66.23%, 10.91 % and 87.35% respectively. The data reflected an accuracy percentage of 61.88. The variables that were found to be associated with CRP result confirmed via blood culture include age in days, gestational age, prolonged ruptured bag of water, fever and poor suck.

Conclusion: The estimation of C-Reactive Protein test in detecting neonatal sepsis is not sufficiently accurate to be fully relied as an only test and indicator to diagnose neonatal sepsis. However, the high negative predictive value could help in excluding sepsis and can be useful in aiding the decision to discontinue antibiotic therapy.

Keywords: *Neonatal Sepsis, C-Reactive Protein, Blood Culture*

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