

عنوان مقاله:

The Evaluation of Serum Procalcitonin Levels in Neonatal Infections

محل انتشار:

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خلاصه مقاله:

Background Procalcitonin is known as one of the bacteremia and sepsis markers such as cytokines, interleukin and reactive proteins. This study was conducted to determine the procalcitonin levels in neonatal sepsis. Materials and Methods In a cross-sectional study, the serum procalcitonin levels in 50 term newborns with suspected sepsis was compared with 50 healthy newborns in Ghaem Hospital, Mashhad-Iran, from 2013 to 2015. The newborns were divided in two groups of clinical infection [two or more clinical symptoms (such as lethargy, apnea, respiratory distress, restlessness, seizures, need for mechanical ventilation, abdominal distention, hypotension and oral intolerance) as well as two positive laboratory symptoms], and control group (less than 2 clinical symptoms improved within 24 hours or healthy term newborns). Finally, the serum procalcitonin levels was compared with CBC, ESR and CRP. The results were analyzed using SPSS version 21.0. Results The mean leukocyte count and neutrophil percentage in clinical sepsis newborns were higher than in healthy newborns ($P < 0.001$). The mean procalcitonin levels in highly suspected sepsis and control groups were 0.14 ± 0.03 and 0.07 ± 0.02 , respectively ($P = 0.002$). The Sensitivity, specificity, positive and negative predictive values of procalcitonin in all patients were 92, 89, 85 and 83 percent, respectively. Conclusion In current study, the serum procalcitonin levels in newborns with clinical sepsis were about twice the normal newborns. Therefore, it seems that this marker can be helpful in early diagnosis of neonatal infections.

کلمات کلیدی:

Neonatal sepsis, Newborn, Procalcitonin

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