

C-Reactive Protein And Procalcitonin As Biomarker Of Sepsis After Congenital Heart Surgery

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Abstract

To study the trend and usefulness of CRP and PCT after CHS to diagnose infection in children below 6 months of age.

After congenital heart surgery (CHS), Cardiopulmonary bypass (CPB), Delayed sternal closure and Low cardiac output due to ventricular dysfunction in immediate post operative period can cause systemic inflammatory response syndrome (SIRS) which is difficult to differentiate from proven post operative infection.

C – Reactive Protein (CRP) and Procalcitonin (PCT) are potential early biomarkers not only diagnose sepsis but also guide the need for empirical antibiotic therapy and duration of antibiotics.

In this Single-center retrospective observational study, medical records of 99 patients (65 male and 34 female) with age range of 0-6 months admitted in our center between January 2017 to July 2017 were reviewed. Children above 6 months of age and pre-operative culture proven infection were excluded. In PCICU, along with relevant surgical details, duration of mechanical ventilation and up gradation of antibiotics were noted. CRP and PCT levels were recorded preoperatively and on post-operative day (POD) 1, 3 & 5, along with other necessary investigations to diagnose infection. After assimilation of data, the infected and non-infected groups were compared with respect to trend of CRP and PCT level. Receiver operating characteristic (ROC) curve was used to arrive the cut off level of CRP, Procalcitonin (PCT). We have also studied the sensitivity and specificity of them along with their co-relation with duration of mechanical ventilation and total days of PCICU stay.

Biography:

Dr. Dhaval Darji, has completed his study in Pediatrics in the year 2014 from the international recognized board, New Delhi (Diplomate National Board). He has finished his fellowship in PICU from India's one of the largest children hospital (Wadia Children Hospital Mumbai). After that he has been trained in pediatric cardiac ICU from one of the top Corporate hospital in Mumbai. He has done multiple studies e.g. Neonatal hypoglycemia and its complication, Role CRP and Procalcitonin as biomarkers after congenital open heart surgery which were about to present in national as well as international journals.

Citation: Dr. Dhaval Darji; C - reactive protein And Procalcitonin As Biomarker Of Sepsis After Congenital Heart Surgery; Webinar on Medical and Nursing Education, April 24, 2021.