

Comparing the Diagnostic Accuracy of Procalcitonin and C-Reactive Protein in Neonatal Sepsis: A Systematic Review

NagaSpurthy Reddy Anugu

California Institute of Behavioral Neurosciences & Psychology, USA

Neonatal sepsis remains a significant diagnostic challenge in newborn care. It has the potential to be disastrous, but precise diagnosis is difficult. No biomarker has yet demonstrated sufficient diagnostic accuracy to rule out sepsis when clinical suspicion exists. As a result, neonates with suspected sepsis are treated with empiric antibiotics. These unnecessary antibiotics promote bacterial antibiotic resistance, raise economic costs, and alter the composition of the gut microbiota. This study aimed to determine the diagnostic accuracy of procalcitonin in the prompt diagnosis of neonatal sepsis. Articles were systematically screened in PubMed/MEDLINE, PubMed Central (PMC), and ScienceDirect, using keywords and Medical Subject Heading (MeSH) terms to identify the relevant articles. Additionally, one article from the Indian Journal of Applied Research was also used. Inclusion/exclusion criteria were applied post article screening via title and abstracts. Quality appraisal check was done using the Scale for the Assessment of Narrative Review Articles (SANRA) checklist, A Measurement Tool to Assess Systematic Reviews (AMSTAR) checklist, and Newcastle-Ottawa checklist. Six related articles were strictly reviewed. Procalcitonin is a useful biomarker in the early diagnosis of neonatal sepsis. Because procalcitonin has a better correlation with proven sepsis and is an early biomarker in diagnosing neonatal sepsis, it should be included in the overall sepsis evaluation. Future clinical trials on optimal cut-off levels of procalcitonin with shifting neonatal ages and its use in the post-op setting are needed.

Biography

NagaSpurthy is a Researcher at California Institute of Behavioral Neurosciences & Psychology, Fairfield, USA. She has done her under graduation from Medciti Institute of Medical Sciences, Telangana, India and was awarded with a gold medal for her merit. She is interested to further her research in neonatology, pediatric cardiology and adolescent medicine.