

The aim of this study was therefore to evaluate the accuracy of presepsin (P-SEP) as a novel biomarker of bacterial infection for neonatal sepsis diagnosis” Miyosawa et al (2018).

Abstract:

Background: Although the incidence of neonatal sepsis is decreasing, neonatal sepsis remains a severe life-threatening disease. No current biochemical marker can provide perfect diagnostic accuracy for neonatal sepsis. The aim of this study was therefore to evaluate the accuracy of presepsin (P-SEP) as a novel biomarker of bacterial infection for neonatal sepsis diagnosis.

Methods: We prospectively studied newborns with sepsis (sepsis group; n = 13) during the first 30 days after birth and compared them with control preterm newborns (control group; n = 18). In addition, we evaluated term newborns with some clinical signs of early onset sepsis (non-sepsis term group; n = 35).

Results: P-SEP in the sepsis group was significantly higher than in the control group ($P < 0.001$) The area under the curve for P-SEP was 0.868 (95%CI: 0.71-1.00). A P-SEP cut-off of 795 pg/mL was established, with 85% sensitivity and 89% specificity. The positive and negative predictive values were 85% and 89%, respectively. In the non-sepsis term group, P-SEP had better stability than white blood cells and C-reactive protein for 3 days after birth.

Conclusions: P-SEP can better discriminate between infections and non-infectious inflammatory conditions than the currently used biomarkers.

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Reference:

Miyosawa, Y., Akazawa, Y., Kamiya, M., Nakamura, C., Takeuchi, Y., Kusakari, M. and Nakamura, T. (2018) Presepsin as a predictor of positive blood culture in suspected neonatal sepsis. *Pediatrics International*. February 22nd. .



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DOI: 10.1111/ped.13469

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