Mean Platelet Volume and Uric Acid Levels in Neonatal Sepsis: Authors' Reply

Banu Aydın • Dilek Dilli • Ayşegül Zenciroğlu •
Nilgün Karadağ • Serdar Beken • Nurullah Okumuş

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To the Editor: We would like to thank authors for their voluminous contributions to the literature in general and to our article in particular. The comprehensive criticism on methodological and pathophysiological issues presented in their letters provides illuminating framework on our study. We would like to offer some clarifications regarding to the points they have raised in the letters for their interest in our manuscript [1].

In our study, blood samples were obtained into blood collection tubes with ethylene diamine tetra acetic acid (EDTA). Platelet count and mean platelet volume (MPV) measurements were performed within approximately 60 min after blood sampling by CoulterLH 780 Analyzer (Beckman Coulter, Inc. CA, USA) with original method and reagents. Therefore, there was no time delay in the measurement of MPV after sampling.

As stated by Prof Varol, hypothyroidism may increase the MPV values [2]. In our unit, all newborns are screened for congenital hypothyroidism. There was no patient diagnosed with hypothyroidism in our study population.

Despite many screening tests being employed in early diagnosis of sepsis, there is still no single test that satisfies the criteria as being the ideal marker for the early diagnosis of neonatal sepsis [3]. In our study, C-reactive protein (CRP) was shown to be more sensitive and specific than MPV and uric acid; the combined use of CRP and MPV has the highest predictive values for diagnosis of sepsis.

In their letter, Kartal O and Kartal AT have commented that procalcitonin is a promising biomarker for early diagnosis of sepsis. In a recent meta-analysis, Wacker et al., revealed that procalcitonin is a helpful biomarker for early diagnosis of

sepsis in critically ill patients [4]. However the infants younger than 28 d were excluded from their study. The authors have also stated that the results of the test must be interpreted carefully with regards to medical history, physical examination, and microbiological assessment.

While nonspecific screening tests are employed in the diagnosis of NS so as to investigate the possibility of infection, specific diagnostic tests are employed to confirm the presence of a specific pathogen in body fluids. Ideally, a screening test should have a high positive predictive value and a high negative predictive value. Unfortunately, none of the screening tests is capable of attaining this ideal. Even though a positive blood culture still remains the gold standard in the diagnosis of neonatal sepsis, considerable effort continues to be devoted to the development of methods of measurement intended to support culture-based diagnosis by evaluating the host-response.

Conflict of Interest None.

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B. Aydın • D. Dilli • A. Zenciroğlu • N. Karadağ • S. Beken (✉) •
N. Okumuş

Neonatal Intensive Care Unit, Dr. Sami Ulus Maternity and Children
Training and Research Hospital, Ankara, Turkey
e-mail: serbeken@yahoo.com