

Relationship Between Immature Platelet Fraction and Platelet Count Among Pediatric Patients with Dengue Fever: A Prospective Cross-sectional Study

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Background and Objectives: Immature platelet fraction (IPF) is a new hematologic parameter which reflects the rate of thrombopoiesis. This study aims to determine the relationship between IPF and platelet count among pediatric patients with thrombocytopenia due to dengue fever.
Methods: This was a prospective cross-sectional study of 77 pediatric dengue patients admitted at a private hospital in the Philippines. Baseline and daily IPF, platelet count, hematocrit, white blood cell count (WBC) and presence of fever were recorded according to day of illness. The pattern of IPF in relation to the patterns of platelet count, hematocrit, WBC count and fever were analyzed. The proportion of patients showing platelet recovery at different time points and an IPF cut-off value predictive of platelet recovery within 24 hours were also determined.
Results: The IPF increased as the platelet count decreased. The highest increase in IPF coincided with the trough of platelet count. Eighty-seven percent of the patients showed platelet recovery after the increasing trend of IPF, 87% after the peak value and 95% after the decreasing trend. An IPF value of more than 6.6% was predictive of platelet recovery, with a sensitivity of 45% and specificity of 70%.
Conclusion: There was an inverse relationship between IPF and platelet count but with a statistically indirect and weak correlation. The decreasing trend of IPF can be a good predictor of an increasing trend in platelet count. These findings suggest a possible role of IPF as an additional parameter to predict platelet recovery in dengue fever.

Biography:
Maria Monette S. Ong-Misa obtained her Bachelor of Science in Biology from the University of the Philippines Los Baños in 2008 (magna cum laude), and Doctor of Medicine from the University of the Philippines Manila in 2013. She finished her residency training in Pediatrics at Makati Medical Center in 2016.

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