Relationship between immature platelet fraction and platelet count among pediatric patients with dengue fever: A prospective cross-sectional study

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Background & 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 cells count (WBC) and presence of fever was 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 was also determined.

Results: The IPF increased as the platelet count decreased. The highest increase in IPF coincided with the trough of platelet count. 87% 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.

Are fertility and its preservation discussed with girls undergoing treatment for cancer?

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Ovarian cryopreservation is an up-and-coming fertility preservation technique. The process involves laparoscopically removing slices of ovary and cryopreserving these sections, with a view to auto-transplant back to the patient at a later date. Ovarian cryopreservation has already seen success in women of reproductive age; we now look to determine how it can be used in the context of pediatric oncology. Previously, girls and their parents had very limited options regarding the often-devastating effects of cancer treatment on their reproductive health. Many chemotherapies and radiotherapy have the potential to cause premature ovarian failure, resulting in infertility. Studies have shown that patient and parent groups see infertility as one of the most significant late effects of treatment, so something must be done to address both these concerns and the real risk of sterilizing treatment. Therefore, the project explored to what extent a regional center is considering the late effect of infertility in pediatric cancer patients. We assessed to what extent oncologists are discussing fertility issues and whether ovarian cryopreservation is being advocated for young girls with cancer. Based on our findings, we suggest improvements for how we can better advocate patient’s best interests in the topic of onco-fertility.