

A clinical evaluation of high fluorescent platelet fraction percentage in thrombocytopenia

Kickler TS, Oguni S, Borowitz MJ.

Department of Pathology, Johns Hopkins University, School of Medicine, Baltimore, MD, USA.

We evaluated an automated method (XE-2100 automated blood cell counter equipped with a laser and upgraded software, Sysmex, Kobe, Japan) to quantify the high fluorescent platelet fraction percentage (HFPP%) as an indicator of platelet production. The mean HFPP% value was 3.1 in 80 healthy subjects (95% confidence interval, 2.8%-3.5%). The coefficient of variation was less than 10% for elevated values and 10% to 20% for normal values. Sample stability was up to 48 hours. We tested the HFPP% in 171 patients with thrombocytopenia. The highest values were found in patients with autoimmune thrombocytopenia and disseminated intravascular coagulation, although HFPP% also was increased in patients with regenerating marrows. In other patient groups with decreased platelet production, the HFPP% was within the normal range. The HFPP% was predictive in the evaluation of thrombocytopenia. We found elevated HFPP% values in disorders associated with increased platelet production, particularly associated with platelet destruction, and normal values in disorders associated with decreased platelet production. The results are precise; testing can be performed as readily as a CBC count using an EDTA-anticoagulated blood sample.

PMID: 16393688 [PubMed - indexed for MEDLINE]