

**Evaluation of the mean platelet volume and neutrophil-to-lymphocyte count ratio in patients with Kawasaki Disease**

Gürses D. (1), Gül Ö.(1)

*Pamukkale University Faculty of Medicine Department of Pediatric Cardiology, Denizli, TURKEY*

**Objective:** Kawasaki disease (KD) is considered a kind of systemic vasculitis that primarily invades the medium-sized muscular arteries, including coronary arteries. Platelets are essential players in thromboembolic and inflammatory mechanisms. Mean platelet volume (MPV) and platelet distribution width (PDW) are correlated with platelet function and may be a more sensitive index than platelet number as a marker of clinical interest in various disorders. Neutrophil-to-lymphocyte (N/L) ratio is a predictor of inflammation and it has been shown that associated with cardiovascular events. The aim of this study was to investigate the alterations in MPV, PDW, and N/L ratio in children with KD.

**Methods:** The study population consisted with 24 KD patients and 20 healthy controls. In all subjects, complete blood count, C-reactive protein (CRP), erythrocyte sedimentation rate (ESR) were measured at the first and tenth days of the diagnosis and compared with the healthy subjects.

**Results:** There was no significantly difference between the children with KD and control groups for the sex and age ( $p>0.05$ ). Eight patients were incomplete Kawasaki disease. Cardiac involvement, including pericarditis, endocarditis and coronary artery lesion was detected in the twelve patients. Among these patients, eight had coronary artery involvement. ESR, CRP, WBC, and N/L ratio were significantly higher in the patients at the 1st day compared with the 10th day and control group ( $p<0.001$ ). N/L ratio was found as  $4.2\pm 2.6 / 0.97\pm 0.84 / 0.94\pm 0.56$  at the 1st and 10th days and control group respectively. Platelet count and MPV were higher at the 1st and 10th days compared with control group ( $p<0.05$ ). MPV was found as  $7.54\pm 1.1 / 7.7\pm 1.3 / 6.6\pm 0.87$  fL at the 1st and 10th days and control group respectively. There was no significantly difference between these groups for the PDW ( $p>0.05$ ).

**Conclusions:** Increased MPV and N/L ratio were detected in patients with KD. The present findings emphasized the association between that MPV, N/L ratio and KD. MPV and N/L ratio may be used to determine activity of KD, as a new biomarker. Further studies in larger series including patients with coronary artery aneurysm should be performed in this issue.