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**Usefulness of an elevated neutrophil to lymphocyte ratio
in predicting coronary artery involvement in children with Kawasaki Disease**

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Objectives: In this study, we aimed to evaluate the usefulness of NLR in the diagnosis of any form of
KD and the correlation between NLR and the persence of coronary artery lesions.
Methods: We retrospectively evaluated the medical records of all the cases diagnosed with Kawasaki
disease between 2006 to 2012. The patients were divided into two groups consisting of complete and
incomplete forms of KD. Complete KD (cKD) was determined according to previously reported criteria.
The patients who had prolonged fever and 2 or 3 clinical criteria together with at least three
supplementary laboratory findings or echocardiographic coronary artery abnormalities were diagnosed
to have incomplete KD. The complete blood counts of sex- and age-matched healthy children were
used as controls.

Results: The number of the cases with KD and controls were 72 and 71, respectively. The groups
were similar in terms of age and gender. Twenty-five of those (34.7%) had iKD and twenty-two
(30.6%) had coronary involvement. WBC, neutrophil, platelet counts, and NLR were significantly
higher and conversely hemoglobin levels were lower in patients with KD compared to controls. The
comparison of clinical and laboratory findings of complete and iKD revealed no difference in age, sex,
WBC, neutrophil, lymphocyte, and platelet counts, NLR ratio, ESR and CRP levels ROC (reciever
operator characteristics) analysis was performed in order to determine sensitivity and specifity of
NLR value in predicting the KD and 1.34 value, was determined for predicting the KD with 70.8%
sensitivity (95% CI 59.8-81.0), specificity 97.18% (95% CI 90.2-99.7), respectively. There were no
significant differences between the patients with and without CALs groups in terms of age, gender,
WBC, neutrophil, lymphocyte and platelet counts, NLR ratio, ESR and CRP levels.

Conclusion : In conclusion, it was found that NLR was increased in KD patients. Although we did not
find any difference between complete and incomplete KD patients in terms of NLR, our results
demonstrated that the diagnosis of KD can be supported by elevation of the NLR over a cut-off value
of 1.34 especially in the cases with incomplete clinical features