

# Determinants of Neutrophil/Lymphocyte Ratio in Acromegaly Patients

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## OBJECTIVES

Neutrophil/Lymphocyte Ratio (NLR) is an indicative of the acute phase response. It is a significant indicator of the systemic inflammation, and considered as a poor prognosis indicator in various disease. We aimed to evaluate NLR and its determinants in acromegaly patients.

## METHODS

A retrospective chart review of 40 patients with acromegaly and 45 age and sex matched healthy individuals was performed. Patients with active infection, malignancy, chronic inflammatory or autoimmune disease, history of drug use or disease which may affect the hemogram values were excluded from the study. GH, IGF-I and hemogram values of patients were recorded and NLR was calculated. Correlation analysis was performed between GH, IGF-I levels and NLR.

## RESULTS

Mean age of the acromegalic patients was  $47.68 \pm 12.33$  and the control group was  $45.16 \pm 6.83$ . NLR in acromegalics was  $2.04 \pm 0.63$  and in the control group  $1.88 \pm 0.70$ . In terms of NLR, the difference between the two groups was not statistically significant ( $p=0.075$ ). When acromegalics were divided into active ( $n=27$ ) and controlled group ( $n=13$ ) no statistically significant difference was observed between all three groups ( $p=0.204$ ). NLR was  $2.08 \pm 0.70$  in active group and  $1.95 \pm 0.45$  in controlled acromegalics and the difference between the two groups was not statistically significant ( $p=0.556$ ). There wasn't significant correlation between GH, IGF-I levels and NLR. Negative correlation was observed between age and NLR in acromegalics, especially the active acromegalics.

## CONCLUSIONS

Cardiovascular disease is a major cause of morbidity and mortality in acromegaly patients. Studies reported an association between elevated NLR and increased risk of cardiovascular disease. We didn't found an increase in NLR in acromegalic patients. Also in these patients, there wasn't significant association between GH, IGF-I levels and NLR. However, in the literature we couldn't find any study on this issue. Further studies are required in order to make adequate comment on this topic.

