

Is There a Relationship Between Neutrophil/Lymphocyte Ratio and Vitamin D Levels in Individuals Over 65 Years of Age?

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OBJECTIVES

Vitamin D deficiency may be an important predisposing factor for infections as well as autoimmune diseases in old individuals. Neutrophil/Lymphocyte Ratio (NLR), is a meaningful indicator of inflammation throughout the body. In this study we aimed to show, whether or not a relationship exists between vitamin D levels and NLR in patients older than 65 years.

METHODS

Data of 82 patients over 65 years of age was retrospectively examined. Those without chronic renal or liver failure, active infection or disease affecting hemogram values and bone metabolism were included to study. Complete blood count and vitamin D levels of patients were recorded. NLR was calculated. The correlation analysis was done on patients, in order to understand whether the relationship between vitamin D levels and NLR exists.

RESULTS

The mean level of vitamin D was 21.20 ± 10.99 and NLR was 2.09 ± 0.97 . Patients were divided into 4 groups according to the level of vitamin D. There was no statistically significant difference between the groups in terms of NLR ($p=0.433$). When the patients were divided into two groups according to the adequate (>30 ng/ml) and inadequate (≤ 30 ng/ml) levels of vitamin D, there was no significant difference between the groups in terms of NLR ($p=0.169$). Significant correlation was not detected between the mean vitamin D levels and NLR in patients. There was no significant correlation between vitamin D levels and NLR, even when divided into 3 groups according to their age.

CONCLUSIONS

An important relationship between vitamin D levels and immune system function has been reported. Increase in NLR, which is an indicator of acute phase response, is associated with poor prognosis in various diseases. In our study, there was no significant relationship between vitamin D levels and NLR. However, there is no study done on this topic in the literature. Further studies with higher number of patients may be beneficial.

