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VITAMIN D LEVEL IN PATIENTS WITH RECURRENT HERPES LABIALIS

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Abstract. Vitamin D plays an important role in immune system regulation, also its deficiency is assumed to affect the patients' predisposition to viral diseases such as recurrent herpes labialis. In this cross-sectional study, we tried to compare the mean serum level of vitamin D in participants with a positive history of recurrent herpes labial lesions and healthy controls.

Keywords: Recurrent herpes labialis, Vitamin D, Serum

Materials and methods. The vitamin D serum level of 43 participants with a positive history of recurrent herpes labial lesions who were referred to the City Med laboratory during 2022–2024, was compared with 42 healthy controls. An Independent T-test was used to compare the vitamin D serum level between two genders. In order to assess the mean age value and gender distribution, an independent T-test and Pearson Chi-Square were used, respectively for the two groups. The serum vitamin D level was compared between both control and test groups.

Results. There was no significant difference between vitamin D mean serum levels in the two evaluated groups (p.value = 0.72). Although the age (p.value = 0.09) and recurrence (p.value = 0.13) of herpes labialis had no statistically significant relation to the vitamin D serum level, the healing duration of herpes labialis was inversely related (p.value = 0.01). Lower-level of serum vitamin D were accompanied by a longer healing duration of the lesions.

Conclusion. Vitamin D is a secosteriol which can act as a signaling pathway for immune system regulation. Vitamin D receptors are commonly expressed on immune cells. Monocytes, macrophages and dendritic cells can secrete 1-αhydroxylase an activator enzyme for 25(OH)D conversion to calcitriol. Calcitriol prevent some pre-inflammatory mediators such as interferon- γ and tumor necrosis factor-α. Vitamin D can shift the immune response from Th1 to Th2 cell response and it can decrease the inflammation by inducing immunosuppression. Vitamin D serum level was not different between both evaluate groups. Based on the results of this study, the mean serum level of vitamin D was not statistically different between the patients with history of RHL and the control groups without history of RHL. Although there was no relation between age and recurrence frequency of RHL and vitamin D serum level, the longer healing duration was accompanied by lower vitamin D serum level. The relation of healing duration of herpetic lesions and serum level might be related to the complementary effect of vitamin D on immunologic behavior of herpes virus.Although the vitamin D serum level of participants with a history of recurrent herpes labialis had no relation with age and herpes virus recurrence frequency, a longer healing duration of lesions had been reported in patients with lower serum levels of vitamin D.

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