

Abstract

Evaluation of the Relationship Between Oral Lichen Planus with Serum Levels of Vitamin D, Vitamin C, Selenium and Zinc

Introduction: Oral lichen planus (OLP) is mainly a disorder related to the immune system. Vitamins and minerals can modulate the function of the immune system. Therefore, the lack of these Minerals and vitamins may play a role in the exacerbation of oral lichen planus. The present study was conducted with the aim of investigating the relationship between oral lichen planus disease and serum levels of vitamin D, vitamin C, selenium and zinc.

Methods and Material: In this case-control study, 18 patients with diagnosis oral lichen planus based on clinical-histopathological (according to WHO criteria) and 18 healthy individuals were studied in Ardabil. The clinical severity of oral lesions in the case group was determined by using a modified scoring system derived from Harman. Zero score:silent disease (reticular lines -without sign), score 1: Mild activity (erosive lesions of oral lichen planus in only one place with symptoms), score 2: Medium activity (erosive lesions of oral lichen planus in more than one place with symptoms), score 3: intense activity(generalized erosive and ulcerative lesions of lichen planus with symptom). 3cc of blood were taken from all the patients in the case and control groups in the labrotoar to determine the serum levels of vitamin D, vitamin C, zinc and selenium, and the data were classified and analyzed using T Test and Mann-Whitney U and kruskal-Wallis statistical tests in SPSS software version 25.

Results: The results showed that there is a significant difference in the serum levels of vitamin D, C and zinc in patients with oral lichen planus and healthy individuals, so that the serum levels of vitamin D, C and zinc in patients with oral lichen planus were lower than in healthy individuals. ($P < 0.05$), However, there was no significant difference in the serum level of selenium in patients with oral lichen planus and healthy individuals ($P > 0.05$). Also, a significant relationship between the serum levels of vitamin D and the severity of oral lichen planus disease was observed, but no significant relationship was observed between the serum levels of vitamin C, selenium and zinc with the severity of oral lichen planus disease.

Conclusion: Serum levels of vitamin D, C and zinc show a decrease in a high percentage of patients with oral lichen planus. These vitamins and minerals may play a significant role in the pathogenesis of OLP.

Keywords: Oral lichen plan, vitamin D, vitamin C, selenium, zinc.