

The Comparison of Serum Vitamin D Level in Patients with Iron Deficiency Anemia and Minor Thalassemia

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Abstract

Background and Objective: Of the most common hypochromic microcytic anemia are iron deficiency anemia and minor thalassemia, which are common in Iran and their differential diagnosis is extremely important. The level of 25-hydroxy vitamin D is the indication of vitamin D blood status. The aim of this study was to compare serum levels of vitamin D in people with minor thalassemia and iron deficiency anemia with healthy subjects in order to investigate the relationship between vitamin D deficiency and iron absorption.

Material and Methods: In this case-control study, 24 patients with minor thalassemia, 20 patients with iron deficiency anemia and 24 healthy individuals participated. Groups were matched for age and sex. Testing of Vitamin D level by ELISA, ferritin by quantitative luminescence method and HbA2 by column chromatography was carried out.

Results: The number of individuals with low level of vitamin D in iron deficiency group is 15 (75%), in minor thalassemia group is 8 (33/3%) and in the control group 11 (45.8%).

Conclusion: In this study, the highest percentage of vitamin D deficiency is observed in cases with iron deficiency anemia. Because of association between vitamin D and anemia, iron and vitamin D supplementation is recommended to enrich the diet.

Keywords: Anemia; Minor Thalassemia; Iron Deficiency Anemia; Vitamin D