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*Original Article***The Relationship between Serum 25-Hydroxyvitamin D Levels and Metabolic Syndrome**

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Abstract

Introduction & Objective: Metabolic syndrome is one of the main health problems raised around the world and vitamin D deficiency is a possible new risk factor. The aim of this study was to understand this relationship in the Iranian population.

Materials & Methods: This case-control study was done on 186 subjects over 20 years referred to endocrine clinic in the spring and summer of 2011. Clinical and laboratory data were collected using questionnaires. After determining the subjects with metabolic syndrome according to ATP III criteria and the control group, blood samples of all participants were taken to measure 25-hydroxyvitamin D levels and sent to the laboratory. The collected data were analyzed with statistical software SPSS v.16.0 and Pearson's chi square test.

Results: Comparing vitamin D levels between the healthy individuals and the patients showed significant differences between the two groups (32.6 ± 16.5 in the control group vs. 17.3 ± 10.7 in the case group). In the patients, those with vitamin D deficiency compared with those with normal levels of vitamin D, had higher levels of BMI and triglycerides and lower levels of HDL cholesterol.

Conclusion: It seems that vitamin D-deficient individuals have a greater chance of having metabolic syndrome. However, prospective studies are needed to prove this relationship.

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Keywords: Metabolic Syndrome / Risk Factors / Vitamin D

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