

Vitamin D Deficiency in Non-alcoholic Fatty Liver Disease

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Abstract

Background: Regarding the importance of non-alcoholic fatty liver disease (NAFLD) and high prevalence of vitamin D deficiency in different societies, the aim of this study was to evaluate the distribution of Vit D deficiency in individuals with non-alcoholic fatty liver disease.

Methods: In this cross-sectional study, 122 individuals with non-alcoholic fatty liver disease were selected by simple sampling method. After collecting demographic data, serum Vit D 25(OH) level was measured by ELFA method. Blood lipids level (TG, cholesterol, HDL, LDL), FBS, AST, ALT, alkaline phosphatase, total and direct bilirubin, albumin and PT were measured by enzymatic method. To analyze the data, descriptive and analytical methods and SPSS software version 16 were used.

Results: The study cases are comprised of 122 individuals (57.4% male). The average age of cases was 42.4 ± 11.7 years and the mean of serum Vit D level was 19.8 ± 22 ng/dl (3-220 ng/dl). Regarding the serum 25(OH) D levels data showed 66.4% of cases were Vit D deficient (Vit D level <20 ng/dl), 18% had insufficient level (Vit D level= 20-30 ng/dl) and the remained 15.6% had sufficient level (Vit D level >30 ng/dl). HDL level was higher in individuals with 25(OH) D sufficiency compared to those with 25(OH) D insufficiency and Vit D deficiency (P-value= 0.019). There was no significant relationship between serum Vit D level and other investigated variables.

Conclusions: The results of this study indicated that most individuals with non-alcoholic fatty liver disease had Vit D deficiency. Further studies are suggested.

Keywords: Vitamin D, Non-alcoholic Fatty Liver Disease, Liver Function Tests, Lipid Profile