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Correlation between serum ٢٥ hydroxy vitamin D٣ and laboratory risk markers of cardiovascular diseases in type ٢ diabetic patients

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View references (٤١)

Abstract

Objectives: To determine the association between vitamin D deficiency and cardiovascular risk markers among diabetic patients. Methods: This was a cross-sectional study conducted in Ghaem Hospital, Mashhad, Iran, from December ٢٠٠٧ to March ٢٠٠٨ in ١١٩ type ٢ diabetic patients. Coronary, cerebrovascular, and peripheral vascular diseases were confirmed. Blood biochemical parameters including laboratory risk markers of cardiovascular disease were determined. Serum ٢٥ hydoxy (OH) D was measured during winter. The correlation between vitamin D deficiency and cardiovascular prevalence, and also laboratory variables was determined. Results: The mean age of patients was ٥٥,٣ ± ١١,٢ years. The mean ٢٥(OH) D concentration was ٣٢,٤ ± ٢١,٦ng/ml. The prevalence of hypovitaminous D was ٢٦,١٪ among the diabetic patients. The difference with the control group was not significant (p=٠,١٢). Overall, ٣٦ (٣٠,٣٪) patients were positive for coronary vascular disease (CVD). The correlation between hypovitaminous D and CVD was not significant (p=٠,١١). Patients with vitamin D deficiency had significant differences in body mass index (p=٠,٠٠٣), metabolic syndrome (p=٠,٠٥), high sensitive C-reactive protein (p=٠,٠٠٩), microalbuminuria (p=٠,٠٤), and glumerular filtration rate (p=٠,٠٢), compared to patients with sufficient vitamin D. The fasting blood sugar, glycosylated hemoglobin, lipid profiles, homocysteine, uric acid, and insulin resistance were not related to vitamin D deficiency. Conclusion: There is an association between hypovitaminous D and inflammatory markers that contributed to CVD, so vitamin D may be important in maintaining cardiovascular health.

Indexed Keywords

EMTREE drug terms: C reactive protein; calcifediol; glucose; glycosylated hemoglobin; homocysteine; lipid; uric acid

EMTREE medical terms: adult; amino acid blood level; article; body mass; cardiovascular disease; cardiovascular risk; cerebrovascular disease; controlled study; coronary artery disease; cross-sectional study; female; glomerulus filtration rate; glucose blood level; hemoglobin blood level; human; inflammation; insulin resistance; Iran; lipid blood level; major clinical study; male; metabolic syndrome X; microalbuminuria; non insulin dependent diabetes mellitus; peripheral vascular disease; prevalence; risk factor; uric acid blood level; vitamin blood level; vitamin D deficiency

MeSH: Adult; Biological Markers; Calcifediol; Cardiovascular Diseases; Cross-Sectional Studies; Diabetes Complications; Diabetes Mellitus, Type ٢; Female; Humans; Iran; Male; Risk Factors; Vitamin D Deficiency
Medline is the source for the MeSH terms of this document.

Chemicals and CAS Registry Numbers: C reactive protein, ٩٠٠٧-٤١-٤; calcifediol, ١٩٣٥٦-١٧-٣; glucose, ٥٠-٩٩-٧, ٨٤٧٧٨-٦٤-٣; glycosylated hemoglobin, ٩٠٦٢-٦٣-٩; homocysteine, ٤٥٤-٢٨-٤, ٦٠٢٧-١٣-٠; lipid, ٦٦٤٥٥-١٨-٣; uric acid, ٦٩-٩٣-٢;Biological Markers; Calcifediol, ١٩٣٥٦-١٧-٣

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