

Title: Comparison of osteoprotegerin and vascular endothelial growth factor in normoalbuminuric type 1 diabetic and control subjects

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Background: The aim of the current study was to evaluate the association of osteoprotegerin and Vascular Endothelial Growth Factor (VEGF) with glycemic indices and diabetes status.

Methods: A total of 44 normoalbuminuric Type 1 diabetic patients and 44 healthy control subjects, matched for age, body mass index, sex ratio, and lipid measures were enrolled. Univariate and multivariate logistic regression analyses were used to determine the association of osteoprotegerin and VEGF with diabetes status. Further, linear regression analysis was performed to investigate the roles of osteoprotegerin and VEGF as determinants of glycated hemoglobin (HbA1c).

Results: Osteoprotegerin and VEGF were significantly elevated in diabetic subjects (2.76 ± 0.85 vs. 2.26 ± 0.75 pmol/l and 187.1 ± 92.7 vs. 125.9 ± 52.3 pg/ml, respectively, $p < 0.01$) and were positively correlated with glycemic indices (i.e. fasting plasma glucose and HbA1c, $p < 0.001$). After controlling for possible confounding factors, odds ratios (confidence interval) of osteoprotegerin and VEGF for diabetes were 2.532 (1.003-6.392) and 1.021 (1.002-1.041), respectively ($p < 0.05$). Further, linear regression analysis revealed that the association of osteoprotegerin with HbA1c is independent of VEGF and vice versa ($p < 0.001$).

Conclusion: Osteoprotegerin and VEGF are elevated in normoalbuminuric Type 1 diabetic subjects and are independently associated with glycemic indices and diabetes status.

Biography

Alireza Arefzadeh is Assistant Prof of Endocrinology & Metabolism. He is clinician and researcher and he works about internal medicine field and diabetes mellitus, GDM, international education of diabetes and other endocrinology fields. He likes teaching students, interns, residents and fellowships. He has published articles and books in the field of diabetes mellitus, thyroid and other fields of internal medicine and endocrinology.