Abstract

Type 2 diabetic patients have high rates of CVDs, much of which could be prevented with appropriate treatment of lipid abnormalities. Diabetic dyslipidemia consisting of elevated TGs and low levels of HDL-C, with a predominance of small, dense LDL particles and relatively normal LDL-C levels. In diabetic patients, non-HDL-C (calculated as TC minus HDL) could be a stronger predictor of CVDs than LDL-C or TGs because it correlates highly with atherogenic lipoproteins. The study aims to evaluate the role of non-HDL-C as an atherogenic marker and its correlation with other lipid profile parameters in diabetic and non-diabetic population. The sample consisted of (55) Type 2 diabetic patients and (55) normal subjects matched in age, gender, and body mass index (BMI). The data were analyzed by using Pearson correlation and t test as statistical means. Specific kits were used for the measurement of FBS and lipid profile (measured by using spectrophotometer) and for HbA1c (measured by HPLC).

The study revealed that there are statistically significant correlations between non-HDL-C with all of lipid profile parameters and ratios except HDL in patients as well as in controls and showed insignificant correlations with the FBS and HbA1c. The results showed statistically significant differences in mean of TC (p = 0.02), HDL-C (p = 0.009), LDL-C (p = 0.03), TG (p = 0.001), VLDL-C (p = 0.001), LDL/HDL ratio (p = 0.007), non-HDL/HDL ratio (p = 0.001), non-HDL-C (p = 0.000), FBS (p = 0.000), and HbA1c (p = 0.000) between diabetics and their controls. Non-HDL-C showed significant higher levels in diabetic patients (had normal or abnormal LDL and had normal or abnormal TG) comparing with their controls (had normal or abnormal LDL or had normal or abnormal TG) respectively. The study supports the use of non-HDL-C as the more practical and reliable atherogenic marker in diabetic and non-diabetic individuals.

Title: Estimation of non-high density lipoprotein cholesterol concentration and its correlation with lipid profile diabetic patients in Jordan

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