PO317 Are There Any Correlations Between Ratio LDL-C/HDL-C and Lipoprotein(A) With Insulin Resistance in Type 2 Diabetes Patients With Abdominal Obesity?

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PO317

ARE THERE ANY CORRELATIONS BETWEEN RATIO LDL-C/HDL-C AND LIPOPROTEIN(A) WITH INSULIN RESISTANCE IN TYPE 2 DIABETES PATIENTS WITH ABDOMINAL OBESITY?

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Background: Obesity and diabetes have recently become so prevalent across the world that it is replacing undernourishment and infectious disease. Dyslipidemia is another risk factor for metabolic syndrome and on the other hand, dyslipidemia is also associated with insulin resistance. Increased low density lipoprotein cholesterol (LDL-C) are atherogenic, whereas increased of high density lipoprotein cholesterol (HDL-C) is considered cardioprotective. The ratio of LDL-C to HDL-C is currently advocated to estimate the risk of coronary artery disease. Insulin resistance and Lipoprotein(a) (Lp(a)) also have been proposed as independent risk factor of cardiovascular disease. The relationship between type 2 diabetes, an insulin resistant condition with Lp(a) concentration and also ratio lipoprotein remains controversial. The aim of this study is to analyze the correlation of ratio LDL-C/HDL-C and Lp(a) with insulin resistance in type 2 diabetes patients with abdominal obesity.

Method: We analyzed 78 patients with type 2 diabetes and abdominal obesity consisting of 54 male and 24 female patients using cross sectional observational design. Blood pressure, body weight, height and waist circumference (WC) were measured and body mass index (BMI) were calculated. Abdominal obesity was defined by WC >80cm in women and >90cm in men. We measured fasting plasma glucose (FPG) and post prandial glucose (PPG), HbA1c, total cholesterol (TC), LDL-C, HDL-C, ratio LDL-C/HDL-C, triglyceride (TG), Lp(a) and basal insulin. Insulin resistance can be assessed by using homeostasis model assessment (HOMA) from fasting serum insulin concentration. HOMA of insulin resistance (HOMA-IR) is a simple, inexpensive and non-laborious technique. Data was statistically analyzed using logistic regression test.

Result: The mean age of the patients in this study was 57.47±11.04 years old, with duration of diabetes was 8.38±1.64 years. The average BMI in this study was 29.52±3.73 kg/m2. The overall

mean of FPG in these patients was 181.19±72.52 mg/dL, while PPG was 263.63±115.87 mg/dL and HbA1c was 9.66±8.03%. Lipid profile of the patients showed the average level of TC was 199±50.99 mg/dL, LDL-C was 124.45±36.49 mg/dL, HDL-C was 43.95±10.21 mg/dL, ratio LDL-C/HDL-C was 2.94±1.01 mg/dL, TG was 189.39±168.88 mg/dL and Lp(a) was 20.10±3.96 mg/dL. The mean of fasting insulin level in this study was 24.55±5.85 uIU/mL and HOMA-IR 4.28±2.26. Statistical test showed that there was no significant correlation between ratio LDL-C/HDL-C and Lp(a) with HOMA-IR (r 0.012; p 0.91 and r 0.126; p 0.271).

Conclusion: Ratio LDL-C/HDL-C and Lp(a) levels did not correlate with insulin resistance in type 2 diabetes patients with abdominal obesity.

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