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Lipid pattern in serum of patients with type 2 diabetes mellitus

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The most common pattern of diabetic dyslipidemia is elevated triglycerides levels and decreased high density lipoprotein cholesterol (HDL-C) levels. Type 2 diabetic patients may have elevated levels of non-high density lipoprotein cholesterol (non-HDL-C). The concentration of low density lipoproteins cholesterol (LDL-C) was reported to be not significantly different from non-diabetic individuals. Recently it has been reported that the measurement of LDL-C as well as triglycerides may not be fully standardized in many clinical laboratories. The present study is designed to compare the serum lipid pattern of type 2 diabetes mellitus patients with non-diabetic individuals and the LDL-C was determined by a direct method. Fasting blood samples were collected from 94 subjects (47 diabetic and 47 non-diabetic). In the present study diabetic samples showed, significantly higher levels of total cholesterol, TC (175.34 mg/dl±30.7), LDL-C (112.68 mg/dl±27.9), non-HDL-C (136.06 mg/dl±28.9) and TG (144.04 mg/dl±55.7), than non-diabetic samples, TC (150.26 mg/dl±24.7), LDL-C (90.74 mg/dl±22.1), non-HDL-C (104.54 mg/dl±24.2) and TG (97.6 mg/dl±33.8), with p values of $p<0.0004$, $p<0.0001$, $p<0.00001$, $p<0.00001$, respectively. Diabetic serum samples showed significantly lower HDL-C levels, (39.53 mg/dl±9.2) than that of non-diabetic samples, (43.94 mg/dl±9.8), with p value of $p<0.03$.

Conclusion: Diabetic patients had a high TC, TG, LDL-C and non-HDL-C levels than the non-diabetic individuals, which may indicate that diabetic patients are more susceptible to cardiovascular disease than the non-diabetic individuals.

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