

International Conference on

Metabolic Syndromes

October 17-18, 2016 Rome, Italy

Effect of diabetes mellitus type 2 on lipid profile; age duration

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Diabetes mellitus is a group of metabolic disorder caused by increase in blood glucose level and defects in insulin resistance, insulin action. Certain ethnic and racial group of Asia and Africa has greater risk of diabetes. Insulin deficiency causes higher metabolism of free fatty acid and can cause disorder in lipid metabolism. As compared to non-diabetic control group, type 2 diabetes mellitus have high triglycerides and low HDL-c levels. Type 2 diabetes is associated with increased risk of cardiovascular disease. In the female category, diabetic female showed a significant increase in the level of these lipid parameters compared to male diabetic subjects had higher HDL, LDL and TC. There was a sharp and definite increase in the number of patients having >200 mg/dl total cholesterol after 35 years of diabetes mellitus. There was a sharp increase in the number of patients having >160mg/dl of triglycerides after 35 years of diabetes mellitus. After the age of 30 years, there was also increase in LDL and TG in female and in males and there was slight change in HDL-c level in both the sexes. Diabetic males had significantly higher level of cholesterol triglycerides, LDL and significantly lower level of HDL cholesterol as compared to that of female diabetics and also the diabetic subjects were on medications (oral hypoglycemic). Such treatment decreases the blood glucose level and most possibly changes the overall pathophysiology, including the lipidemia of the condition. Many factors affect lipid levels in diabetes because carbohydrate metabolism affect lipid metabolism. The study showed that dyslipidemia was observed in the diabetic population but HDL-c was not significantly decreased. In our study, diabetic women were found to have more elevation of LDL as compared to men but the trends were similar to previous studies with regards HDL below or TG levels above the target levels. No other major sex differences were noted. This research will uplift awareness for the need of lipid analysis and must be educated on the risks they face as a result of their condition and necessary steps for its management. Most of our patients with triglyceride levels of <400 mg/dl had a combination of high LDL and a low HDL level, which was the most common pattern of dyslipidemia found in our study.

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