Original Article

Comparison Of Lipid Profile Between Controlled And Uncorated Diabetic Subjects

Muhammad Saeeduddin**†, Muhammad Saifullah Rasool†, Shajah Hayat†, Aftab Ahmad†

Department Of Biochemistry, School Of Medical Sciences, Aligarh Muslim University, Aligarh, India.

Abstract

Low density lipoprotein cholesterol (LDL-C) levels are increased in diabetic subjects. This study was undertaken to compare the lipid profile between controlled diabetic and uncontrolled diabetic subjects. The study group comprised of 40 controlled diabetic subjects (AGE: 40.75 ± 10.78 years, BMI: 28.19 ± 5.66 kg/m²; LDL-C: 108.80 ± 38.49 mg/dL) and 40 uncontrolled diabetic subjects (AGE: 40.82 ± 10.78 years, BMI: 29.32 ± 4.89 kg/m²; LDL-C: 177.00 ± 57.96 mg/dL) selected from the outpatient clinic of Aligarh Muslim University Hospital. Total cholesterol (TC), triglycerides (TG), high density lipoprotein cholesterol (HDL-C), and low density lipoprotein cholesterol (LDL-C) were estimated in all the cases. The mean values of TC, TG, HDL-C and LDL-C were significantly higher in the uncontrolled diabetic group compared to the controlled diabetic group. A significant negative correlation was observed between age and the levels of HDL-C. No significant difference was observed between the BMI of the two groups. The study concluded that LDL-C was significantly higher in the uncontrolled diabetic group as compared to the controlled group.

Keywords: Diabetic, LDL-C, HDL-C, TG, TC

Introduction

Diabetes mellitus is a metabolic disease characterized by hyperglycemia and is associated with increased risk of cardiovascular disease. Hyperlipidemia is a common complication of diabetes mellitus and is associated with increased risk of atherosclerosis and cardiovascular disease. Hypertriglyceridemia is a well-known risk factor for cardiovascular disease and is often present in patients with diabetes mellitus. Low density lipoprotein cholesterol (LDL-C) is a major risk factor for cardiovascular disease and is elevated in patients with diabetes mellitus. Therefore, the aim of this study was to compare the lipid profile between controlled and uncontrolled diabetic subjects.

Materials and Methods

The study group comprised of 40 controlled diabetic subjects (AGE: 40.75 ± 10.78 years, BMI: 28.19 ± 5.66 kg/m²; LDL-C: 108.80 ± 38.49 mg/dL) and 40 uncontrolled diabetic subjects (AGE: 40.82 ± 10.78 years, BMI: 29.32 ± 4.89 kg/m²; LDL-C: 177.00 ± 57.96 mg/dL) selected from the outpatient clinic of Aligarh Muslim University Hospital. Total cholesterol (TC), triglycerides (TG), high density lipoprotein cholesterol (HDL-C), and low density lipoprotein cholesterol (LDL-C) were estimated in all the cases. The mean values of TC, TG, HDL-C and LDL-C were significantly higher in the uncontrolled diabetic group compared to the controlled diabetic group. A significant negative correlation was observed between age and the levels of HDL-C. No significant difference was observed between the BMI of the two groups. The study concluded that LDL-C was significantly higher in the uncontrolled diabetic group as compared to the controlled group.

Results

The mean values of TC, TG, HDL-C and LDL-C were significantly higher in the uncontrolled diabetic group compared to the controlled diabetic group. A significant negative correlation was observed between age and the levels of HDL-C. No significant difference was observed between the BMI of the two groups.

Conclusion

Diabetes mellitus is a metabolic disease characterized by hyperglycemia and is associated with increased risk of cardiovascular disease. Hyperlipidemia is a common complication of diabetes mellitus and is associated with increased risk of atherosclerosis and cardiovascular disease. Low density lipoprotein cholesterol (LDL-C) is a major risk factor for cardiovascular disease and is elevated in patients with diabetes mellitus. Therefore, the aim of this study was to compare the lipid profile between controlled and uncontrolled diabetic subjects.

References


