

Effect of Fasting Blood Glucose (FBG) on Lipid Metabolism and Gender Differences in the Pattern of Dyslipidemia in Adults with Type 2 Diabetes in Northern India

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KEYWORDS Cholesterol. Diabetes Mellitus. Hyperglycemia. Hyperlipidemia. Lipoproteins

ABSTRACT The present study aims to explore the effect of hyperglycemia on lipid profile components of type 2 diabetes patients and to evaluate the gender differences in the lipid abnormalities in type 2 diabetes. A total of 680 diabetic patients (340 males and 340 females) with fasting blood glucose level (fasting glucose <126 mg/dl and with fasting blood glucose \geq 126 mg/dl) were analyzed for serum triglycerides, total cholesterol, LDL, HDL and VLDL. The patients who had one or more parameters (TG, HDL or LDL) outside the targets recommended by American Diabetes Association (ADA) were considered to have dyslipidemia. The subjects with fasting blood glucose (FBG) \geq 126 mg/dl had more deranged levels of lipid profile components and there was a positive significant correlation of FBG with TG ($r=0.3$), TC ($r=0.3$), HDL ($r=0.2$), LDL ($r=0.2$) and VLDL ($r=0.2$). The prevalence of dyslipidemia in males and females were 97.6 percent and 89.9 percent, respectively. Combined dyslipidemia with high LDL and high TG was the most common pattern among males and isolated high LDL among females, contributing to 43.8 percent and 18.2 percent of patients with dyslipidemia, respectively. Dyslipidemia is the commonest complication of diabetes mellitus and the patients with high FBG had more deranged lipid values indicating that poor glycemic control is associated with abnormal lipid profile.

ABBREVIATIONS FBG: Fasting Blood Glucose. TG: Triglycerides. LDL: Low Density Lipoproteins. HDL: High Density Lipoproteins