

A STUDY ON GLYCAEMIC CONTROL, LIPID PROFILE AND BODY MASS INDEX IN PATIENTS WITH DIABETES MELLITUS

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Diabetes mellitus (type 2) is one of major non communicable disease in Sri Lanka. Its prevalence is high in urban areas. The present study deals with the blood glucose concentration, body mass index(BMI) and lipid profile viz. serum total cholesterol, serum high density lipoprotein(HDL) cholesterol, serum low density lipoprotein(LDL) cholesterol and serum triglycerides in seventy three randomly selected confirmed cases of diabetes mellitus(type 2) aged 30-65years. An adequate number of controls were taken for comparisons. Impaired lipid metabolism resulting from uncontrolled hyperglycemia has been implicated in cardiovascular complications in diabetes mellitus patients. This study was designed to find out the status of glycaemic control, lipid profile and body mass index, among type 2 diabetes mellitus patients. The results indicate about 84% of the patients had a high body mass index, equal to or above 23 kg/m^2 , where as 51% patients were obese ($\text{BMI} \geq 25 \text{ kg/m}^2$). Mean fasting blood glucose concentration was $135 \pm 21 \text{ mg/dl}$. Mean total cholesterol concentration was $217 \pm 27 \text{ mg/dl}$. Mean fasting blood glucose concentration, triglycerides and LDL cholesterol were higher in males than in females, but difference was not statistically significant ($p > 0.05$). HDL cholesterol was higher in females ($41 \pm 5 \text{ mg/dl}$) than in males ($38 \pm 3 \text{ mg/dl}$) and the difference was statistically significant ($p < 0.05$). Lipid profile components of the diabetics as well as controls were positively correlated with fasting blood glucose except HDL cholesterol in the control group which is negatively correlated. There was a linear relationship between fasting blood glucose and dyslipidaemia. The concentrations of serum total cholesterol, LDL cholesterol and triglycerides were significantly higher and HDL cholesterol concentration was significantly lower in patients with worse glycaemic control as compared to patients with good glycaemic control. Other finding observed was that the level of dyslipidaemia increased as per the increasing body mass index and advancing age.

