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Effects of diabetes on lipid profile

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ABSTRACT

Dyslipidemia is one of the major risk factors for cardiovascular disease in diabetes mellitus. The purpose of the study was to examine the association between hyperglycemia and coronary heart disease (CHD) and to see the effects of variation in age groups, sex, blood glucose and BMI of diabetic subjects on their Total Cholesterol, HDL, LDL, VLDL, and Triglyceride levels.The study comprised of 70 diabetic subjects (46 male and 24 female), aged between 31 to 90 years. Fasting Blood sugar and Lipid Profile tests were performed. Results showed that the percent of diabetic subjects who had elevated Total Cholesterol levels, LDL, VLDL, Triglyceride levels, TC /HDL ratio, and LDL/ HDL ratio and decreased HDL levels was respectively 15.71%, 7.14%, 37.14%, 21.42%, 5.17%, 4.28%, 97.11% .The chi-square value prove the results that variation in age, sex, fasting blood sugar and BMI had no significant effect on elevated HDL, LDL, and triglycerides where as variation in BMI had significant effect on elevated VLDL, and variation in glucose level had significant effect on Total Cholesterol. It was concluded that major problem among studied diabetic subjects was decreased HDL levels although other lipoproteins were also at elevated levels which were at risk for CHD diseases. Subjects are advised besides controlling their glucose levels they should also concentrate on exercise, avoid smoking and consumption of trans fatty acids.

Key Words : *Salix tetrasperma*, Mordant, Fastness

INTRODUCTION

Diabetes (*Diabetes mellitus*) is classed as a metabolism disorder. A person with diabetes has a condition in which the quantity of glucose in the blood is too elevated (hyperglycemia). This is because the body either does not produce enough insulin, produces no insulin, or has cells that do not respond properly to the insulin the pancreas produces. This results in too much glucose building up in the blood. This excess blood glucose eventually passes out of the body in urine. So, even though the blood has plenty of glucose, the cells are not getting it for their essential energy and growth requirements.Uncontrolled diabetes mellitus may lead to complications. Diabetes affects the blood vessels, the blood and heart. Diabetes increases the risk of heart diseases by 3 to 4 fold. Diabetic patients are at great risk of developing atherosclerosis.

Dyslipidemia is strongly related to increased CVD risk. In the UK Prospective Diabetes Study (UKPDS) LDL-cholesterol concentration was the best predictor of MI. In this observational epidemiology study, a 1 mmol/l increase inLDL was associated with a 57% increased risk of MI. Small dense LDL particles found in patients with type 2 diabetes are less effective ligands of the LDL

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