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**“STUDY OF LIPID PROFILE IN DIABETIC PATIENT
IN RESPECT OF AGE GROUP”**

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“Study of Lipid Profile in Diabetic Patient In Respect Of Age Group”

Sanjay Kumar Pandey

Department of Zoology, A. N. College, Patna, Magadh University

Abstract – In this paper we present diabetes mellitus which is known to be associated with lipid disorders and cardiovascular complications. The age of the patient and duration of ailment has been variously believed to influence the lipid Pattern. India continues to be the "diabetes capital" of the world, and by 2030, nearly 9 percent of the country's population is likely to be affected from the disease.

Keywords:- Age, Mellitus, Diabetes, Lipid Profile, Duration

INTRODUCTION

Diabetes mellitus has emerged as a major non-communicable disease internationally as well as regionally. India accounts for the main number of people 50.8 million anguish from diabetes in the world, followed by China (43.2 million) and the United States (26.8 million) reveal new figures released by the International Diabetes Federation (IDF). India continues to be the "diabetes capital" of the world, and by 2030, nearly 9 per cent of the country's inhabitants are likely to be affected from the disease [RESS, 2013]. The As per Indian Council of Medical Research study, the pooled Estimates of prevalence rate in India were 62.47 per thousand. It was also estimated that diabetes is directly responsible for 9% of Acute Myocardial Infarction cases, 4% of stroke cases, 2% of neuropathy, and 32% of cataract cases. [EXP, 2004] Diabetes mellitus is a worldwide health problem predisposing to markedly increased cardiovascular mortality and morbidity.

Lipid abnormalities significantly contribute to the increased risk of cardiovascular disease and other morbidity in diabetic's. There is a growing body of evidence showing that hyperglycemia and Dyslipidaemia are linked to increased cardiovascular risk. [Gordon, 2008] Nowadays, the term "Dyslipidaemia" is increasingly being used to describe abnormal changes in lipid profile, replacing the old term "hyperlipidaemia". Dyslipidaemia encompasses changes in HDL-cholesterol (HDL-C), the size and density of LDL-cholesterol (LDL-C) and the total cholesterol/HDL-C ratio (TC/HDL-C). [Goldberg, 2001] The term diabetic Dyslipidaemia comprises a triad of raised triglycerides, reduced HDL-C and excess of small, dense LDL particles. [O'Brien, 1998 Colhoun, 2004] The lipid abnormalities are prevalent in diabetes mellitus because insulin resistance or

deficiency affects key enzymes and pathways in lipid metabolism. In particular, the following processes are affected: apoprotein production, regulation of lipoprotein lipase, action of cholesterol ester, transfer proteins and hepatic and peripheral actions of insulin. Even more, it has been proposed that the composition of lipid particles in diabetic dyslipidaemia is more atherogenic than other types of dyslipidaemia. This means that even normal lipid concentrations might be more atherogenic in diabetic than in nondiabetic people. Atherosclerosis accounts for up to 80% of deaths in diabetic patients due to coronary heart disease (CHD) and cerebrovascular or peripheral vascular disease. This paper was conducted to know the impact of duration of illness and age on the lipid profile and glycaemic control in type 2 diabetic patients.

LIPID PROFILE IN DIABETES MELLITUS - AGE IMPACT

It is estimated that 194 million people had diabetes in the year 2003, and about two-third of these people lived in developing countries. (IDF, 2003). In type 2 diabetes mellitus lipid abnormalities are almost the rule. Typical findings are elevation of total and VLDL cholesterol, triglyceride concentration, lowering of HDL cholesterol and a predominance of small, dense LDL particles (ADA, 2007). Insulin resistance is often involved in this process, (Joshua *et al.*, 2002) though the pathophysiology of lipid abnormalities in diabetes is not yet totally explained. Lipid abnormalities in patients with diabetes are likely to play an important role in the development of atherogenesis. These lipid disorders include not only quantitative but also qualitative abnormalities of lipoproteins which are potentially atherogenic. Type 2 DM is associated with a cluster of interrelated plasma lipid and lipoprotein (LP) abnormalities that are all recognized as

predictors for coronary heart disease, including reduced plasma levels of high density lipoprotein cholesterol particles and elevated plasma levels of TG (Craig *et al.*, 1998). Elevated levels of Lp (a) a well-known independent predictor of CVD (BarrettConnor 2004; Howard *et al.*, 1998) has also been reported in diabetic patients compared to control groups. In these the status of age and/or the duration of illness with respect to Dyslipidemia appear poorly elucidated Talat *et al.* (2003) found that duration of diabetes was associated with higher incidence of Dyslipidemia (Talat *et al.*, 2003). Riffat, S; Khyber medical college Peshawar, agreed with this in a work on impact of Duration of Type2 DM on lipid profile.

Lipid profile of diabetic patient on the basis of age				
Age group (years)	TG	HDL	LDL	TC
Less than 40 Years				
(n = 8) male	2.57±0.69	3.30± 1.1	12.54±0.6	84.55±1.19
(n = 11) female	3.04±0.25	6.04±2.62	3.80±0.75	7.43±2.98
40-64Years				
(n = 30) male	2.36±0.87	3.94±1.06	3.42±0.36	5.95±1.46
(n = 35) female	2.30±0.52	3.45±0.47	3.78±0.50	7.22±1.46
Greater than 65 Years				
(n = 15) male	2.12±0.68	4.52±1.12	3.13±1.08	5.18±1.49
(n = 5) female	1.70±0.41	2.51±0.94	5.15±1.10	8.70±1.10

CONCLUSION:

In this paper we found that the diabetic theme is related to medications. Such treatment decreases the blood glucose intensity and most probably alters the overall pathophysiology, including the lipidemia of the state. Overall diabetes mellitus is closely associated with Dyslipidemia but age group and DM duration may not be strong indices for lipid profile prediction especially with respect to subjects under management.

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