

**STUDY OF LIPID PROFILE IN TYPE 2 DIABETES MELLITUS PATIENTS****Dr. Sharmistha Rout\*<sup>1</sup> and Dr. P. Karkuzhali<sup>2</sup>**<sup>1</sup>Department of Pathology, SBMCH, Chennai.<sup>2</sup>(Professor and HOD), Department of Pathology, SBMCH, Chennai.**\*Corresponding Author: Dr. Sharmistha Rout**

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**ABSTRACT**

Diabetes Mellitus is the most common metabolic disorder affecting people all over the world. It has been known to be associated with lipid disorders and cardiovascular complications.<sup>[1]</sup> Dyslipidemia is one of the major cardiovascular disease (CVD) risk factors and plays an important role in the progress of atherosclerosis, the underlying pathology of CVD.<sup>[2]</sup>

The aim of this study is to assess the lipaemic changes in diabetes mellitus patients attending.

**INTRODUCTION**

Diabetes Mellitus is the most common metabolic disorder affecting people all over the world. It has been known to be associated with lipid disorders and cardiovascular complications.<sup>[1]</sup> Dyslipidemia is one of the major cardiovascular disease (CVD) risk factors and plays an important role in the progress of atherosclerosis, the underlying pathology of CVD.<sup>[2]</sup>

The aim of this study is to assess the lipaemic changes in diabetes mellitus patients attending the OPD of the Medicine Department of Sree Balaji Medical College and Hospital.

**METHODS**

A total of 100 Type 2 diabetic patients from the Out Patient Department of Sree Balaji Medical College and Hospital, volunteered to participate in the study.

The fasting blood sugar (FBS) and lipid profiles were recorded with standard procedures. An informed written consent was obtained from them and their age ranged from 30-70 years. The objectives of the present study were thoroughly explained to them. Clinical history was also documented and following exclusion criteria were used:

- 1) Not taken any steroid therapy in past 3 months
- 2) No history of any liver, kidney or cardiac failure or any neoplasm
- 3) Patients who were on any type of anti-lipidemic therapy.

**RESULTS**

**Table 1: Shows the mean values of age and Fasting blood sugar of the Type 2 Diabetes Mellitus patients which were observed to be 51.4 +/- 11.12 years and 172.35 +/- 49.5 mg/dl respectively.**

Variables	Mean +/- SD
Age (in years)	51.4 +/- 11.12
FBS (in mg/dl)	172.35 +/- 49.5

Table 1: Mean +/- SD of age and FBS of Type 2 Diabetes Mellitus patients.

**Table 2: Mean +/- SD of lipid profiles of Type 2 Diabetes Mellitus patients.**

Variables	Mean +/- SD
Total Cholesterol (in mg/dl)	199.21 +/- 34.20
Triglycerides (in mg/dl)	185.02 +/- 75
HDL - C (in mg/dl)	34.23 +/- 8.1
LDL - C (in mg/dl)	123.32 +/- 27.47

Table 2 shows the quantitative analysis of the lipid profiles of the Type 2 Diabetes Mellitus patients and found that the mean total cholesterol is 199.21 +/- 34.20 mg/dl, triglycerides is 185.02 +/- 75 mg/dl, HDL is 34.23 +/- 8.1 mg/dl and LDL is 123.32 +/- 27.47 mg/dl.

Among all the diabetic patients, hypercholesterolemia was found in 93.8 % individuals and increased LDL cholesterol in 86.2 % individuals. Of all the participants, only 28 % were found to have normal values of triglycerides. These results are in agreement with the previous research reports that dyslipidaemia is commonly associated with Type 2 Diabetes Mellitus.

These observations further confirm that patients with Type 2 Diabetes Mellitus have co-incidence of several lipid profile abnormalities. Dyslipidaemia could have an impact on the development of insulin resistance in Type 2 Diabetes Mellitus. There might be some significant genetic association between development of insulin resistance and dyslipidaemia among Type 2 Diabetes patients.<sup>[3]</sup>

## CONCLUSIONS

The present study on the Type 2 diabetic patients of Sree Balaji Medical College and Hospital suggested that common lipid abnormalities in diabetes induced dyslipidaemia are hypercholesterolemia, hypertriglyceridemia and elevated LDL cholesterol.

Results suggest a high prevalence of dyslipidaemia which might be playing a major role in the development of cardiovascular diseases and cerebrovascular accidents among the patients of Type 2 Diabetes Mellitus.

The optimal care for the diabetic patient should therefore include routine monitoring of blood glucose and serum lipid profile. Efforts to achieve lifestyle changes such as weight reduction physical exercise and abstinence from smoking should be encouraged and initiated first and then followed by medication with lipid lowering drugs prescribed in evidence based necessary conditions.

The optimum treatment with proper anti-diabetic drugs to obtain a fair glycaemic control should go concomitantly with lipid lowering drugs, along with dietary precautions.

## REFERENCES

1. American diabetes association – Position statement. Management of Dyslipidemia in Adults with Diabetes. *Diabetes Care*, 1998; 21: 179-82.
2. A study of lipid profile in Type 2 Diabetic Punjabi Population – Singh and Kumar, *Journal of Exercise Science and Physiotherapy*, 2012; 8(1): 7-10. Lipid profile levels in Type 2 Diabetes Mellitus in tribal population of Adilabad in Andhra Pradesh, India, V. Siva Prabodh et al, *Journal of Clinical and Diagnostic research*, 2012.
3. Dyslipidaemia in Type 2 Diabetes Mellitus patients in Benghazi, Libya, Mohammed Ahmida et al Correlation of Type 2 Diabetes Mellitus and Dyslipidaemia among Nepalese, Joshi et al, *Asian J Pharm Clin Res*, 2014; 7(5): 295-299.