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A study on lipid profile in patients of diabetes mellitus type 2

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Abstract: *Diabetes Mellitus is the most common metabolic disorder affecting the people worldwide. New discoveries in recent times have minimized morbidity and mortality in these patients. Diabetic ketoacidosis, vascular complications are the frequent causes of death in diabetes. Among them derangement in Lipid profile is commonly seen. Increased blood sugar and lipid profile derangement have additive cardiovascular risk. Serum lipid profile of 120 Type 2 DM patients were studied. Variation in serum lipid levels as per sex and age were studied. Mean values of the different lipid fraction TC, LDL-C, HDL-C, and TG were 227.5±22.03, 149.40±25.01, 42.15±5.68, 170.90±24.77 respectively. This study, showed that DM Type 2 have impact on lipid metabolism. Age and sex of the patients did not have much influence on serum lipids. Duration and severity of diabetes had marked influence on lipid levels. Hence, good control of diabetes would help to check the alterations in lipid level and prevent development of complication.*

Key Word*: Diabetes, lipid profile, vascular complication*

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I. Introduction

The most common metabolic disorder affecting the people worldwide is Diabetes Mellitus. Diabetes has been known since ancient times, but only in the last few decades new discoveries have provided great hopes to minimize morbidity and mortality. The diabetic ketoacidosis was major fatal complication of diabetes which has come down due to advent and proper use of insulin.

The vascular complications have remained same and they have replaced diabetic ketoacidosis as the frequent cause of death in diabetes.

Lipid profile derangement is commonly seen in diabetes. One of the most common secondary causes of lipid profile derangement is diabetes mellitus type 2. Insulin resistance and obesity combine to cause lipid profile derangement. Increased blood sugar and lipid profile derangement have additive cardiovascular risk. It is being said that patients with DM should be treated like as if they already have coronary artery disease. So identification, critical evaluation, and follow-up of serum lipid profile in Type 2 DM is so important.

II. Materials And Methods

Source of Data

A total of 120 patients attending OPD were taken in this study.

Inclusion Criteria

1. Patients with Type 2 DM of age more than 30 years.

Exclusion Criteria

Type 2 diabetes patients with concomitant diseases or condition affecting the lipid levels such as hypothyroidism, hypertension, on lipostatic drugs, and thiazides.

- A detailed history and careful physical examination was done.
- Routine blood and urine examination
- Biochemical analysis for fasting blood sugar (FBS) and postprandial blood sugar (PPBS)
- Fasting serum triglycerides (TGs)
- Total cholesterol (TC)
- High-density lipoprotein cholesterol (HDL-C), low density lipoprotein cholesterol (LDL-C).

III. Results

TABLE NO.:1 Distribution of patients as per sex

TOTAL NO OF PATIENTS	MALES	FEMALES
120	72	48

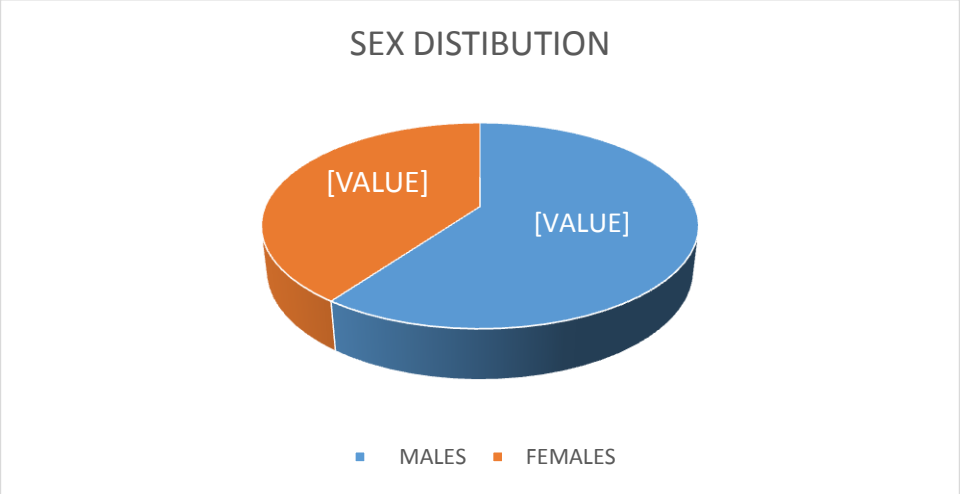

TABLE NO: 2 DISTRIBUTION OF PATIENTS AS PER AGE

30-39 years	40-49 years	50-59 years	>60 years
34	34	26	26

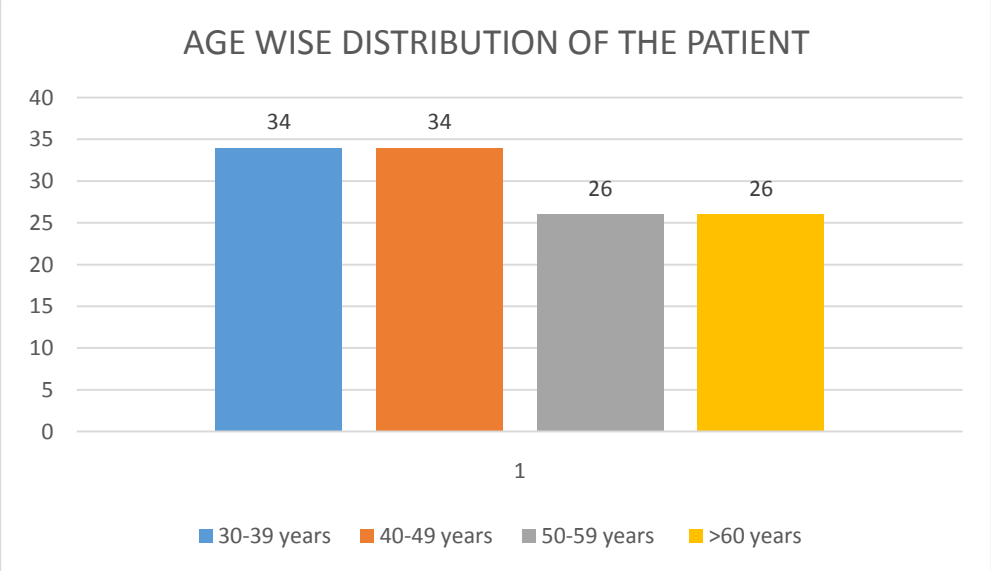

TABLE NO:3 MEAN LEVEL OF LIPID PROFILE

Total Choesterol	227.5±22.03
LDL Cholesterol	149.40±25.01
HDL Cholesterol	42.15±5.68
Triglyceride	170.90±24.77

IV. Discussion

Type 2 DM is one of the most common causes of dyslipidemic vascular complications. It is being found that Type 2 DM suffer from dyslipidemia in turn leading to various vascular complication (All Bright et al. 1989).

Several workers in India (Ajagnakar and Sathi et al. 1989; Vaishnava et al. 1989; Shankar et al.) have reported that in the incidence of diabetes is greater in male then females. In our study, it is observed that 60% were males 40% were females.

V. Summary &Conclusion

The serum lipid profile of 120 Type 2 DM patients was studied. The variation in serum lipid levels as per sex and age were studied. In this study 72 patients were male and 48 were female. The mean values of the different lipid fraction TC, LDL-C,HDL-C, and TG were 227.5±22.03, 149.40±25.01, 42.15±5.68, 170.90±24.77 respectively.

From this study, it was found that DM Type 2 has a real impact on lipid metabolism. Hyperlipidemia is quite common in diabetes. The age and sex of the patients did not have much influence on serum lipids. The duration of diabetes and the severity of diabetes had marked influence on lipid levels. Hence, good control of diabetes would help to check the alterations in lipid levels. Diabetic patients with complications tend to have higher levels of lipid fractions (TGs, cholesterol, and LDL-C) and lower levels of HDL-C. This suggests that there appears to be some relation between the genesis of various vascular complications (micro vascular and macro vascular), and the presence of lipid abnormality. It is difficult to find out a single factor as the cause as multiple mutually interacting factors determine the presence or development of these complications. As good control of diabetes is shown to keep the lipid levels in near normal range, it appears important to aim at critical control of DM to prevent or at least postpone the onset of various complications.

References

[1]. Chaturvedi N, Fuller JH, Taskinen MR; EURODIAB PCS Group. Differing associations of lipid and lipoprotein disturbances with the macrovascular and micro vascular complications of Type 2 diabetes. Diabetes Care 2001;24:2071-7.
[2]. Mazzone T. Current concepts and controversies in the pathogenesis, prevention, and treatment of the macrovascular complications of diabetes. J Lab Clin Med 2000;135:437-43.
[3]. Ginsberg HN, Goldberg LL. Disorders of lipoprotein metabolism. In: Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, et al., editors. Harrison's Principles of Internal Medicine. Vo1. 2. Ch. 344. New York: McGraw Hill Medical Publishing Division; 2001. p. 2246.
[4]. Harvey JN. Diabetic nephropathy. BMJ 2002;325:59-60.
[5]. The Diabetes Atorvastatin Lipid Intervention (DALI) Study Group. The effect of aggressive versus standard lipid lowering by atorvastatin on diabetic dyslipidemia: The DALI study: A double-blind, randomized, placebo-controlled trial in patients with Type 2 diabetes and diabetic dyslipidemia. Diabetes Care 2001;24:1335-41.
[6]. Femske TK. Lipid – Lowering update 2001. Aggressive new goals. Can Fam Physician 2001;47:303-9.
[7]. Andersson B. Hormone replacement therapy in postmenopausal women with diabetes mellitus: A risk benefit assessment. Drugs Aging 2000;17:399-410.
[8]. American Diabetes Association. Evidence – Based nutrition principles and recommendations for the treatment and prevention of diabetes related complications. Diabetes Care 2002;25Suppl 1:S50-60. How to cite this article: Jain HR, Shetty V, Singh GS, Shetty S. A Study of Lipid Profile in Diabetes Mellitus. Int J Sci Stud 2016;4(9):56-6

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