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# RISK OF ATHEROSCLEROSIS IN TYPE-2 DIABETICS.

KEYWORDS: Hyperglycemia, body mass index, vascular complications, atherosclerosis.

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**ABSTRACT** *Diabetes mellitus is a metabolic disorder, associated with disturbances of many biochemical pathways, due to which functions of almost all organs are affected, especially vascular system leading to many complications including atherosclerosis resulting in coronary artery disease.*

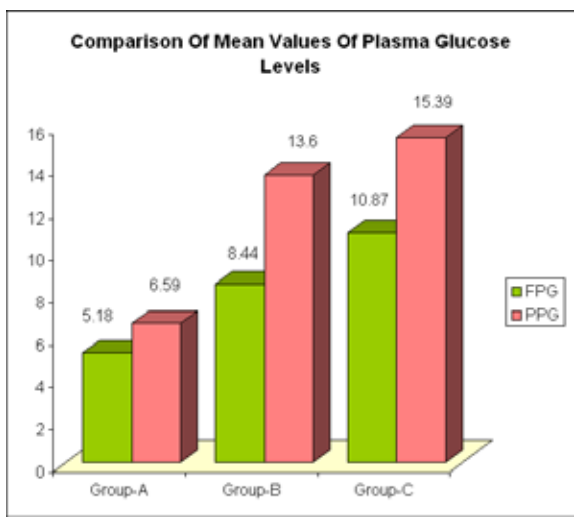
**INTRODUCTION:**
Diabetes mellitus is a complex metabolic syndrome with an absolute or relative deficiency of insulin characterized by hyperglycemia, glucosuria, ketonemia, ketonuria, dyslipidemia and progressive tissue damage with microvascular and macrovascular complications. These complications include retinopathy resulting in blindness, renal failure, neuropathy and atherosclerosis which may result in stroke, gangrene, or coronary artery disease[1].

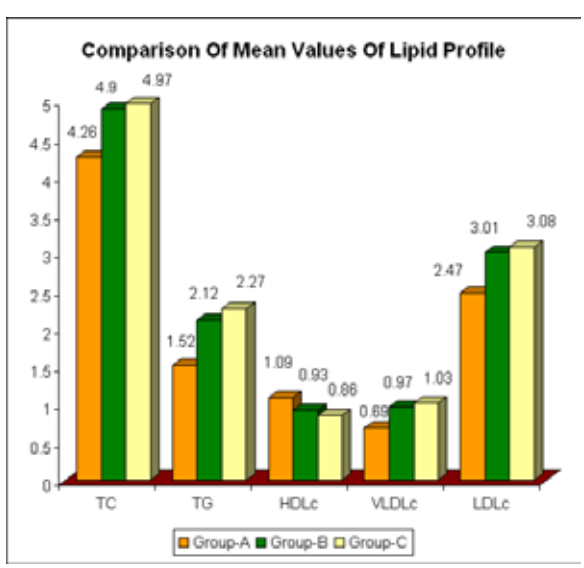
**AIM OF THE STUDY:**
Risk of atherosclerosis in type-2 diabetes mellitus.

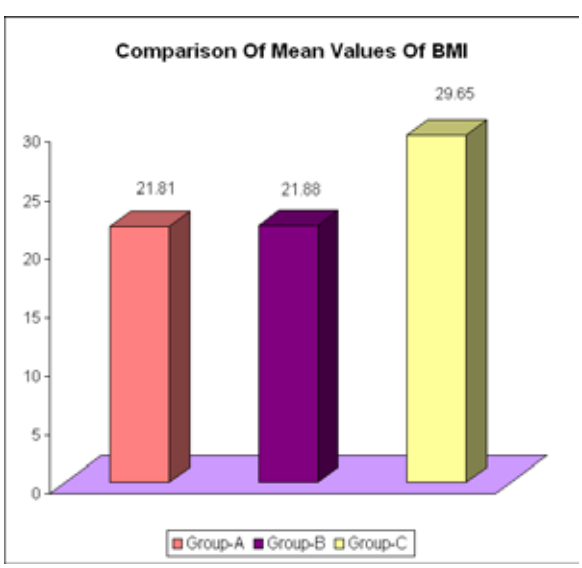
**MATERIALS AND METHODS:**
30 known type-2 diabetics and 20 normal subjects attending SVSMCH Medicine OPD were selected to estimate blood glucose and lipid profile.BMI was calculated by using Quetlet's index[2].

**RESULT:**
The results of the present study is discussed in three groups:

**Group-A :** Non diabetic with normal BMI.
**Group-B :** Type2 diabetes mellitus with normal BMI.
**Group-C :** Type2 diabetes mellitus with high BMI.



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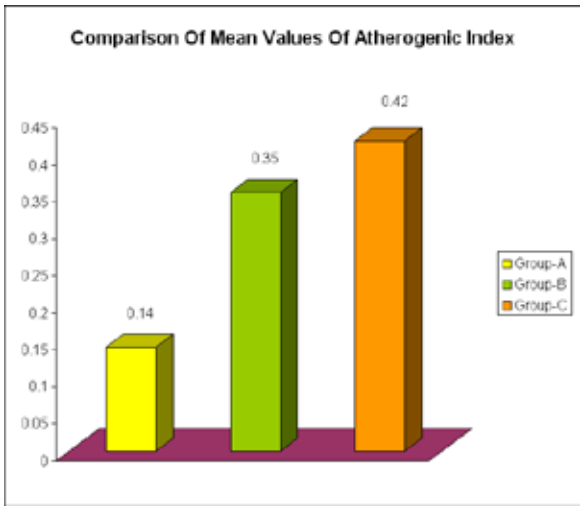


**DISCUSSION:**

The results of the study shows that test group inspite of being on oral hypoglycemic drugs still have fasting and post prandial hyperglycemia and rise is more significant in those with high BMI. The main dearrangements in lipid profile consist of rise in serum triglyceride levels and decrease in HDLc and increased level of atherogenic index in proportion to rise in BMI[3]. Body mass index is an important underlying factor in the pathogenesis of insulin resistance syndrome. Adipocyte functions as endocrine, paracrine and autocrine organ that releases the adipokines which play an important role in the pathogenesis of insulin resistance, hypertension, disorders of coagulation, dyslipidemia, atherosclerosis, coronary heart disease and glucose intolerance abnormalities associated with insulin resistance syndrome.

**CONCLUSION:**

The severity of hyperglycemia, hypertriglyceridemia and atherogenic index in test groups is closely related to BMI. Lipid profile was significantly dearranged in diabetics. Atherogenic index is significantly higher in diabetics as compared to non-diabetics which predict the risk of coronary atherosclerosis in type-2 diabetes mellitus. Hence it is concluded that adipose tissue which secretes tumor necrosis factor-α that play a significant role in aetiopathogenesis of diabetes mellitus and insulin resistance syndrome. So visceral obesity plays an important role in the pathogenesis of type-2 diabetes mellitus and body mass index is a critical factor that has to be evaluated in diabetic patients. [4,5,6].

**REFERENCE**

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