



## Clinical Profile of Lean Body Weight Type 2 Dm Patients and Comparison with Obese and Non-Obese Type 2 Dm Patients (A Study Of 75 Cases)

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### KEYWORDS

### INTRODUCTION

All of us are aware of Diabetes Mellitus. It is the most prevalent metabolic and non-communicable disorder in the world. Today it defined as a 'metabolic syndrome' and can be precisely said that "Type 2 DM represents a syndrome of metabolic and haemodynamic abnormalities as a result of complex pathophysiological interactions between hyperglycemia,  $\beta$ -cell dysfunction, hypertension, insulin resistance, dyslipidemia, endothelial cell dysfunction and proteinuria which underlie the etiology and progression of micro- and macro-angiopathy".

This study was undertaken at GAIMS and JIYA HOSPITAL, Bhuj, between the periods of January 20014 to July 2015. It was conducted on randomly selected type 2 diabetic patients attending diabetic clinic, out patient department and from indoor admissions.

Seventy five (75) documented cases of Type 2 Diabetes Mellitus taking Anti-diabetic treatment with age more than 30 were selected.

Patients were classified mainly in to three groups according to their BMI :

**GROUP A :** BMI less than Or equal to 18.5 (Lean body weight, LB

Type 2 DM patients)

**GROUP B :** BMI less than or equal to 25 (Non obese patients)

But > 18.5.

**GROUP C :** BMI more than 25 (Obese type 2 DM patients)

### Summary & conclusion of this study is as below:

1. In LB type 2 Diabetics, peripheral Neuropathy (52%) & infections (42%) were the commonest presenting clinical feature, which differs from other two groups.
2. Most risk factors for atherosclerosis are less prevalent in LB type 2 DM patients i.e. HDLc is not low  $44.9 \pm 16.1$  mg/dL, and even serum cholesterol ( $200 \pm 4.5$ mg/dL) was on lower side than other two groups. While in GROUP A triglycerides ( $191.9 \pm 31.2$  mg/dL) was on higher side than other two groups.
3. In GROUP A majority of patients were from 30-40 years of age group (40%). While in GROUP C main bulk of patients were from age group of 50-60 years (32%). In GROUP B majority were between age group of 30-40 years (32%).
4. Male : female ratio was 3 : 2 in GROUP A (60% v/s 40%). While in GROUP B and GROUP C there were 52% and 48% male respectively.
5. Only 20% patients were having positive family h/o type 2 DM in GROUP A. while in GROUP B and GROUP C, 40% and 44% of patients were having positive family h/o DM

respectively. The absence of any strong familial tendency and a strong male preponderance of cases make it possible that LB Type 2 DM is in some way different from the other subjects with Type 2 disease.

6. In GROUP A, 60% of patients were from urban area and 48% of patients were from middle socio-economic class, so less chances of poverty, malnutrition as well illiteracy.
7. In GROUP A fasting plasma glucose and 2-hour postprandial plasma glucose were more on higher side than other two groups. FPG was  $239 \pm 42.5$  mg/dL, while 2-PG was  $294 \pm 52.6$  mg/dL in GROUP A. Even HbA1C ( $9.15 \pm 0.9$  %) was on higher side that other two groups (B & C).
8. Incidence of hypertension was on lower side in GROUP A (20%) in compare with GROUP C (28%). Abnormality in ECG (CAD) was more in GROUP C (32%) than in GROUP A (16%). Low incidence of hypertension, dyslipidemia and CAD can also be explained by low BMI in GROUP A.
9. In GROUP A renal status was compromised in 16% of patients while in GROUP C only 4% of patients had compromised renal status.
10. Prevalence of diabetic retinopathy was almost similar in all the three groups. Diabetic retinopathy was 16%, 8% and 16% in GROUP A, GROUP B & GROUP C respectively.
11. In GROUP A, 64% patients were on OHA, 28% on Insulin and 8% were on combined therapy (OHA + Insulin). In GROUP A only 60% of patients were regular while 40% were irregular in taking treatment. In GROUP B 12% patients on Insulin, 4% on combined and rest (84%) on OHA. Out of this 80% were regular.
12. In GROUP C majority of patients (88%) were on OHA, 8% on Insulin and 4% were on combined therapy. Most of the patients (88%) were regular in therapy. Patients on insulin were showing more irregularity in treatment.

Thus, LB type 2 diabetic patients appear to be a distinct entity. More detail studies need to be done on the clinical profile and the natural history of this group of patients. Prevalence of LB Type 2 DM being 11 to 25% depending on the population group under consideration, is much higher than any form of secondary DM or Type 1 DM seen in our population and deserves due attention.