

Prevalence of lean type 2 diabetes mellitus in recently diagnosed type 2 diabetes mellitus patients

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ABSTRACT

Introduction: Obesity has always been thought to be a risk factor for diabetes; however, some studies in India have reported that even lean people are prone to diabetes. We conducted this study to see if this holds true for this part of the country. **Objectives:** To determine the prevalence of lean type 2 diabetes mellitus (DM) in recently diagnosed type 2 DM in Manipur. **Materials and Methods:** All recently diagnosed type 2 DM patients, within a period of 24 weeks, who attended the endocrine clinic of RIMS from Jan to Dec 2012 are included in the study. Exclusion criteria are patients with chronic diseases. **Results:** Out of the 181 recently diagnosed diabetics 3.9% had a BMI of $<19 \text{ kg/m}^2$ of which five are females (5.4% of female patients) and two are males (2.2% of male patients). Mean age of Lean diabetics is 54.86 ± 15.32 , mean fasting glucose is $212 \pm 105.5 \text{ mg\%}$ and mean postprandial glucose is $351.57 \pm 167.79 \text{ mg\%}$. DM complications were observed in 28.6% of the Lean diabetics. **Conclusion:** Our study shows a low prevalence rate of Lean DM in recently diagnosed type 2 DM.

Key words: Lean DM, non-lean DM body mass index

INTRODUCTION

Obesity has always been thought to be a risk factor for diabetes and maximum numbers of diabetics are obese; however, some studies in India have reported that most of the diabetics in India have normal range of body mass index and have reported a high prevalence of lean diabetics.

Aims

The aim of this study was to find out the prevalence of Lean Type 2 Diabetes Mellitus (DM) among the recently diagnosed diabetics (<24 weeks) in Manipur.

MATERIAL AND METHODS

All recently diagnosed Type 2 DM patients within a period of 24 weeks who attended the Endocrine clinic of RIMS from Jan to Dec 2012 are included in the study. Exclusion criteria are patients with chronic diseases. All calculations and statistics were done with SPSS software version 20.

RESULTS AND DISCUSSION

A total of 181 recently diagnosed type 2 DM patients were included and we found that the prevalence of Lean DM was 3.9% whose BMI $<19 \text{ kg/m}^2$ of which five are females (5.4% of female patients) and two are males (2.2% of male patients). Table 1 below shows some of the characteristics of the patients evaluated.

Lean type 2 DM was twice as much in females than males. There was not much difference between the Lean diabetics and the non-Lean diabetics as evident from table 1 when comparing the age of onset, blood sugar levels, and blood pressure.

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Table 1: Characteristics of the patients evaluated

	Age	Sex (no.)		FBS (mg%)	PPBS (mg%)	SBP (mmhg)	DBP (mmhg)
		M	F				
Lean DM	54.86±15.32	2	5	212±105.5	351.57±167.79	124.29±12.72	75.71±7.87
Non-lean DM	52.16±10.87	87	87	209.33±92.72	367.47±137.82	124.66±12.36	81.14±9.34

M: Male, F: Female, DM: Diabetes mellitus

Lean diabetics had no previous history of hypertension whereas 33.3% non-lean diabetics had high BP and 5 non-lean diabetics were diagnosed as hypertensive on their visit. Neuropathy was the commonest presentation among the patients, 43.1% in non-lean diabetics and 28.6% among the lean diabetics. Second-most common presentation was polyuria/polydipsia accounting for 36.2% in non-Lean and 28.6% in lean diabetics. Visual impairment was also one of the common complaints, 33.9% in non-Lean and 28.6% in lean diabetics. One patient had history of stroke and one patient had history of myocardial infarction, both were non-Lean diabetics.

Our study showed a low prevalence of lean diabetes (3.9%) among the recently diagnosed diabetics which is almost at the same range as compared to a study done in South India,^[1] but lower than other studies done in other parts of the country.^[2,3] Glucose levels were comparable between the two groups and not higher in lean diabetics as indicated

in other studies.^[4] DM complications were also lower in the lean patient.

REFERENCES

1. Mohan V, Vijayaprabha R, Rema M, Premalatha G, Poongothai S, Deepa R, *et al.* Clinical profile of lean NIDDM in South India. *Diabetes Res Clin Pract* 1997;38:101-8.
2. Mukhyaprana MP, Vidyasagar S, Shashikiran U. Clinical profile of type 2 diabetes mellitus and body mass index-Is there any correlation. *Calicut Med J* 2004;2:e3.
3. Samal KC, Das S, Agarwal BN, Panda NC, Tripathy BB. Nutritional status and profile of NIDDM of recent onset. *J Diabetes Assoc Indian* 1998;28:99-101.
4. Barma PD, Ranabir S, Prasad L, Singh TP. Clinical and biochemical profile of lean type 2 diabetes mellitus. *Indian J Endocrinol Metab* 2011;15(Suppl 1):S40-3.

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