Prevalence of Lean Type II Diabetes Mellitus in India

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***Abstract*—There has been limited research on the geo prevalence and socioeconomic disparities of Lean Type II Diabetes Mellitus in India. To understand this complex interplay of socioeconomic parameters between poorest rural quintile and richest urban quintile suggesting disproportionate impact among uneducated under developed large rural population for providing an insight to the healthcare professionals and policymakers to promote healthy lifestyle and effective management of all types of diabetes for improving rural healthcare mechanism in rural India.**

I. INDRODUCTION

Type II Diabetes Mellitus (DM II) a global public health condition also poses serious challenge to the Indian Healthcare system specifically affecting its large less health-conscious socio-economically underdeveloped rural population with an annual estimate of about thirty million reported cases of this chronic non communicable disease (NCD).

Although DM II is associated with obesity, but less health-conscious sizable portion comprising of lean and thin population in rural India having lower Body Mass Index (BMI) projected as new class of Lean Type II Diabetic disorder. Appearing more severe than its counter parts having higher risk of micro-vascular consequences, several factors of genetic ethnicity and lifestyle habbits with poor food choices increase its prevalence substantially. Although reliable estimation of exact risk factors of this Lean Type II Diabetes in India still warrants detailed research to suggest effective prevention, proper management and correct treatment plans for its timely control. India becoming Diabetic capital of the world is putting in lot of expenditure both in terms of finances and lives to control this unabated self created health menace urgently which cannot be afforded for too long.

II. RESEARCH AND METHODOLOGY

The multistage stratified sampling technique used by the latest statistics of National Family Health Survey of India carried out during the year 2021-23was utilized to select the rural areas comprising various villages and urban areas comprising various cities in Northern part of India as primary sampling units for evaluating four survey schedules taking Height (Measuring Tape) , Weight (Light weight electronic machine) , Blood Pressure (Battery operated Digital BP Device) and random Blood Glucose (BG) levels (Portable Glucometer with glucose test strips) were utilized scientifically which formed as fundamental traits for this random based valuation study. Two Composite Variables computed on BMI and BG levels while nine Independent Variables comprised characteristics of Age (Children, adult and old) , Marital Status (Married, Unmarried and Widow), Sex (Male and Female) , Occupation (Working and Non-working) Educational background (Primary, Secondary and Graduation levels) , Economic conditions (Annual Income from 1 to 5 lacs Indian Rupees) , Social Status on caste basis (Schedule Caste, Schedule Tribe and Backward Class) and Intoxicants consumed (Alcohol, tobacco and drugs) were used for undertaking this research study.
Descriptive Statistics were utilised to measure prevalence and variations across socio economic characteristics while Binary Logistic Regression was carried out to find out the covariates of Type II Diabetes in different age and sex groups while measuring their health inequalities.

III. RESULTS AND DISCUSSION

Lean Type II diabetes prevalence varied from 11 % in the poorest quintile to 1 % in the richest quintile while odds of Lean Type II diabetes among those in the poorest quintile was 6 % compared to the richest

quintile. The concentration index of Lean Type II diabetes was 0.5 % for me as compared to 0.45 % for women suggesting a disproportionate impact on lower socioeconomic groups. Among all diabetes cases, Lean type II diabetes has proven to be poor prognosis compared to its other counterparts and it has also established that Lean Type II diabetes has also increased cardiovascular and non cardiovascular mortality compared to other obese diabetic cases.

The overall prevalence of Lean Type II diabetes increases with age, higher among males and substantially higher among economically poor located in rural areas. Multivariate analysis of Lean Type II diabetes also confirmed its higher prevalence among socio economic poor population living in rural areas of Northern region of India. There exists significant disparity among wealth based and education-based inequalities having existence of high blood pressure in urban areas compared with their counter parts located in rural areas suggesting that Lean Type II diabetes exists among normal or low BMI scores cases.

The potential causal mechanism of Lean Type II diabetes may include acquired factors too suggesting financial impoverishment aggravating this diabetic condition. This study advances our understanding f the complex interplay between socioeconomic disparity for implementing interventions among vulnerable population in rural areas too.

IV. CONCLUSION

The increased prevalence of Lean Type II form of DM II among socioeconomically under developed rural population of northern India highlights the need for tailored treatment approaches which may differ from usual course of action for obese life style-oriented Type II diabetes in urban areas. Community awareness with down deep public health measures to reduce and prevent the incidence of Lean Type II diabetes in far reaching and under developed areas having low wealth quintiles.

Access to Universal Healthcare promoting preventive care, emphasizing chronic prognosis, managing wealth disparities for managing all types of diabetes is THE urgent need for Indian healthcare system to improve health and wealth of India so as to address the widening of gap between better off and worse off citizens of India.

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UNDERTAKING

I, Kanka Pandita, Author of this article on Prevalence of Lean Type II Diabetes Mellitus in India, do hereby solemnly declare and certify that this paper is my original work, purely conceived and written by me only and send nowhere else than International Journal of Innovative Research in Technology (IJIRT) for its publication.

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