

Prevalence Of High-Risk Obstructive Sleep Apnoea by Berlin Questionnaire in Patients with Type 2 Diabetes Mellitus: A Study from Tertiary Care Hospital

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Abstract : Background: Obstructive Sleep Apnea (OSA) is a common but underdiagnosed sleep disorder characterized by repeated upper airway collapse during sleep. It frequently coexists with Type 2 Diabetes Mellitus (T2DM), a chronic metabolic condition with significant global and national health implications. The interplay between these conditions increases the risk of severe complications such as stroke, hypertension, and cardiovascular diseases. Understanding the prevalence of high-risk OSA in T2DM patients is essential for improving clinical outcomes and guiding public health interventions. Objective: This study aimed to assess the prevalence of high-risk OSA among T2DM patients using the Berlin questionnaire and to identify demographic and clinical predictors of risk. Methodology: This cross-sectional study of 100 patients with Type2 diabetes was undertaken at a tertiary care hospital in India for a period of 2 months. OSA was evaluated using the Berlin questionnaire. Diabetes mellitus was diagnosed according to WHO criteria as fasting blood sugar level > 7 mmol/L or random blood sugar >126 mg/dl on 2 separate occasions. Particulars of patients were recorded following which detailed history and physical examination were done. Data was analyzed using spss version 21. Results: The prevalence of high-risk OSA was 72% among the study population. The mean age was 54.9 +- 12.47 years. Age groups were divided into 3 groups (less than 50, 50-65, and greater than 65) The highest prevalence was observed in the 50-65 age group, accounting for 59.7% of high-risk cases. Gender distribution revealed a higher proportion of high-risk females (88.46%) compared to males (66.21%). Normal-weight individuals (BMI 18.5-24.9 kg/m²) represented 74.02% of high-risk OSA cases, while overweight individuals (BMI 25-29.9 kg/m²) accounted for 65.21%. Additionally, 90.9% of hypertensive patients were identified as high-risk for OSA. Conclusion: The study highlights a high prevalence of OSA risk among T2DM patients, especially those with hypertension and those in the middle-aged group. These findings emphasize the importance of routine OSA screening and tailored interventions for diabetic patients to reduce associated health risks. Proactive management can help mitigate the compounded effects of these two conditions, improving overall patient outcomes and reducing the burden on healthcare systems.

Keywords : obstructive sleep apnea, type 2 diabetes mellitus, berlin questionnaire, prevalence, hypertension

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