

High risk of sleep apnoea among Emirati patients with diabetes and obesity

Hassan S, Buckley A, Al Tameemi T, Lessan N, Barakat M T

Introduction: Obstructive sleep apnoea (OSA) is a common, but under-diagnosed, sleep disorder. In addition to the loss of quality of life attributable to daytime somnolence and impaired cognitive function, OSA has deleterious effects on insulin sensitivity, blood pressure and cardiovascular outcomes. To date, however, little information is available regarding the prevalence and symptomatology of OSA in our local population, its relationships with type 2 diabetes mellitus (T2DM) and obesity, and its impact on health outcomes.

Methods: A questionnaire-based study was performed in the setting of a large diabetes and general medical outpatient clinic in Abu Dhabi. Individuals attending the centre for indications other than diabetes were recruited by convenience sampling. The STOP BANG questionnaire, which has previously been validated as a screening tool in OSA, was translated into Arabic for use in this study. Additional relevant clinical information was retrieved from the clinic's electronic database with the consent of participants.

Results: 700 Emirati individuals (48.1% male, 51.9% female) took part in the study. The mean age of participants was 43.4 ± 12.3 years and mean BMI was 30.5 ± 6.1 kg/m². 46% of those recruited were previously diagnosed with T2DM. The results of the STOP-BANG questionnaire indicated high risk of OSA in 19.6%, intermediate risk in 34.7% and low risk in 45.7% of participants. High scores were more prevalent amongst patients with T2DM compared to normoglycaemic individuals (31.5% v 5.5%). Snoring was the most commonly reported risk factor in male participants (73.2%), while in female participants tiredness was more common (53.4%) (table 1). An increase in STOPBANG risk score was associated with an increase in BMI.

Discussion: More than half of the Emirati population are at high or intermediate risk for OSA according to STOP BANG criteria. T2DM is associated with symptoms of OSA and our findings indicate the need for proactive screening in these individuals. In future, we plan to use polysomnography to validate the STOP BANG criteria in our population.

STOPBANG	Male (n,%)	Female (n,%)
Snoring	246 (73.2%)	131 (36.1%)
Tired	208 (61.6%)	194 (53.4%)
Observed	107 (31.8%)	45 (12.4%)
Blood pressure	113 (33.6%)	78 (21.5%)
BMI	51 (15.2%)	92 (25.3%)
Age	142 (42.3%)	106 (29.2%)
Neck circumference > 40	151 (44.9%)	21 (5.8%)

Table 1-Frequency of STOP-BANG sleep apnoea indicators among Emirati men and women