



DETECTING OF SLEEP APNEA IN HOSPITALIZED PATIENTS WITH DIABETES

Misnikova, I. ; Kovaleva Y. ;. Gubkina, V. ; Dreval, A.
Moscow Regional Research Clinical Institute named after M.F. Vladimirsky

INTRODUCTION

Cardiovascular diseases are main causes of death and disability in diabetes mellitus (DM) patients Sleep apnea (SA) plays an important role in development of cardiovascular complications. Sleep breathing disorders are more common in DM patients.

AIM

The aim of study was to create an effective model for screening for sleep apnea in hospitalized DM patients.

METHODS

Total of 192 hospitalized DM patients were included. All patients were surveyed using Epworth Sleepiness Scale and Berlin Questionnaire to identify risk of sleep problems. Cardiorespiratory sleep monitoring using Watch-Pat 200 for diagnosis of SA was performed in 53 patients with high SA risk.

RESULTS

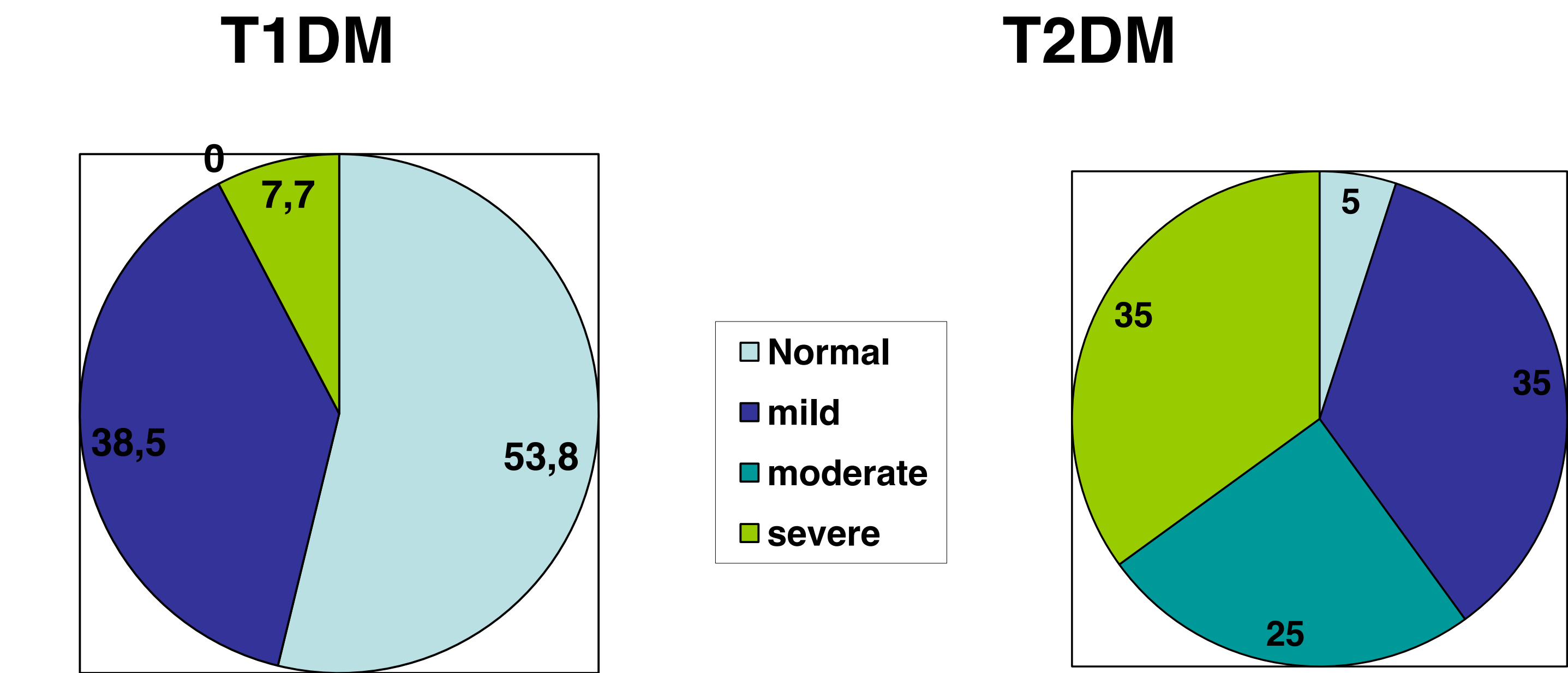
There were 38.5% patients with T1DM (31.1%-men, 68.9%-women, mean age-5.5±11.6 years) and 61.5% patients with T2DM (28.8% of men, 71.2%-women, mean age-60.5±9.5 years). High prevalence of snoring (T1DM-44.6%, T2DM-67.8%) and daytime drowsiness (T1DM-28.4% T2DM-38.1%) were detected. Among patient with high SA risk 60% T2DM patients had moderate and severe stages of SA, 35%-mild stage, 5% did not have SA. In T1DM patients only 7.7% had severe stage of SA, no patients had .moderate, 38.5%-mild stage and 53.6% had normal sleep breathing. There was positive correlation between apnea/hypopnea index (AHI) and BMI 0.608 (p<0.01), as well as the AHI and age 0.593 (p<0.01).

RESULTS

Incidence of daytime drowsiness, mean neck circumflex and incidence of obesity in T1 and T2 DM patients

| Diabetic type (n) | Daytime drowsiness (ESS score≥ 9) % (aбc) | Neck circumflex (sm) M±m | Obesity % (n) |
|----------------------|---|-----------------------------|-------------------------|
| | | All / ESS score ≥ 9 | |
| T2DM (118) | 38,14 (45) | 41,29±3,56 / 42,60±3,17 | 72,88 (86) / 93,33 (42) |
| T1DM (74) | 28,38 (21) | 37,90±3,15 / 38,08±3,47 | 10,81 (8) /14,29 (3) |

Severity of sleep apnea (%)



| Diagnosis | pAHI | Oxygen Saturation | Oxygen Desaturation |
|-----------|------------------|-------------------|---------------------|
| T1DM | 4,3 [1,1; 7,0] | 95,0 [92,5; 96,5] | 91,5 [89,0; 93, 0] |
| T2DM | 21,2 [9,7; 37,6] | 93,0[91,0; 94,0] | 91,0 [88,0; 92,0] |

CONCLUSION

Sleep disorders, snoring and excessive daytime sleepiness are often detected in hospitalized patients with T1DM and T2DM. Sleep apnea is diagnosed with T1DM are much less frequent than in T2DM, and sleep disturbances and daytime sleepiness in T1DM patients associated with other pathologies.

CONTACT INFORMATION

Moscow Region Research Clinical Institute,
Endocrinology Department
Address: 129110, Shchepkina St., 61/2, Moscow, Russia
Professor Alexander Dreval', tel.: +7 (495) 681-13-08; e-mail: dreval@diabet.ru
PhD, Inna Misnikova, tel.: +7 (495) 688-95-93; e-mail: inna-misnikova@mail.ru
PhD Yulia Kovaleva, tel.: +7 (495) 688-95-93; e-mail: yulia.kovaleva@mail.ru
PhD Valeria Gubkina, tel. +7(495)688-95-93; e-mail: gubkinava@mail.ru
company Aston Consulting Mihail Isacov