

[O23] SCREENING OF OBSTRUCTIVE SLEEP APNEA SYNDROME WITH RESPECT TO THE INCIDENCE OF MACROVASCULAR COMPLICATIONS AND IMPAIRMENT OF MICROCIRCULATION IN PATIENTS WITH THE DIABETIC FOOT

Vladimira Fejfarova¹, Alexandra Jirkovská¹, Jan Polák², Robert Bém¹, Michal Dubský¹, Veronika Wosková¹, Andrea Němcová¹, Marta Křížová¹, Jelena Skibová¹

¹*Diabetes Center, Institute for Clinical and Experimental Medicine, Prague, Czech Republic*

²*3rd Medical Faculty, Charles University, Prague, Czech Republic*

Obstructive sleep apnea syndrome (OSAS) is closely connected not only with diabetes mellitus, but also with cardiovascular diseases. It occurs in approximately 2-4% of the general population, the incidence in diabetic patients is much higher. OSAS is usually detected by validated tests (polysomnography), but prescreening (questionnaires) may indicate the risk patients.

The aims: of our study were to assess subjectively described sleep disorders, the possible occurrence of OSAS in patients with the diabetic foot (DF) and its possible association with macrovascular complications and the impairment of microcirculation.

Methods: We included consecutively into our study 105 patients with the DF (mean age 63±8.8years, BMI 31.2±4.7kg.m⁻²) who were treated in our foot clinic (1/2016-3/2016), completed screening questionnaires (for detection of OSAS Berlin questionnaire-assessed three domains, at least 2 must be positive; STOP-Bang questionnaire stating the low, medium and high risk of OSAS; and Epworths sleepiness scale(ESS) detecting excessive daytime sleepiness), questionnaires subjectively evaluating the quality of sleep and tiredness, and in whom we performed basic anthropometric examinations (neck, waist, hips circumferences). The presence of cardiovascular heart disease (CHD was present in 28.2% of all patients with the DF), strokes(in 9.7%), peripheral arterial disease (PAD in 58.3%) and the values of transcutaneous oxygen pressure determining the microcirculation (TcPO₂-an average 40.9±14.3mmHg) were examined in all study patients. Based on the results of screening questionnaires, patients were divided into 3 groups (category 1 - patients with positive Berlin and STOP-Bang questionnaires referring to the high risk of OSAS, category 2 - patients with a positive one questionnaire, category 3 - both questionnaires negative).

Results: Based on the screening questionnaires belonged to category 1 29.8% of patients (31/105), to category 2 63.5% (67/105) and to category 3 6.7% (7/105) of patients with the DF. Only category 1 correlated significantly with subjectively described awakening(p=0.03), poor quality of sleep(p=0.0064), lack of sleep(p=0.001), tired feeling(p=0.0001) and with higher excessive daytime sleepiness(ESS;p=0.0039). Selected anthropometric measurements positively correlated with category1-BMI(p=0.0012), neck circumference(p=0.001), waist circumference (p=0.0004) and hip circumference(p=0.0099). Category 1 correlated significantly only with the presence of PAD(p=0.023) but not with CHD and strokes. Compared to category 3 (0%), significantly more patients with the DF had TcPO₂ below 40 mm Hg-in category 1 (62.5% of patients;p=0.017), marginally significantly in category 2 (45.6%of patients;p=0.068).

Conclusions: The incidence of OSAS is probably higher in risk group of patients with the DF. Used screening tests for OSAS correlated significantly in patients with the DF with subjectively described sleep disorders, selected anthropometric parameters, the occurrence of PAD and with the impairment of microcirculation. Therefore we should try to detect OSAS in such high-risk patient population focusing especially on patients with the DF combined with PAD and lower TcPO₂.

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