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RELATIONSHIP BETWEEN SLEEP STATUS AND THE TYPE 2 DIABETES COURSE

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Background. Type 2 diabetes mellitus (DM2) is a current disease and a priority problem of the global health care system, given the steady growth of its prevalence. Since 2016, more than 2 million patients with DM have registered in Ukraine, 90% are patients with DM2. According to a report by the World Health Organization, DM2 is one of the four priority noncommunicable diseases included in the Global Action Plan for the Prevention and Control. At the present stage, the algorithm for combating DM2 involves, above all, early diagnosis and detection of relatively healthy population risk factors (RF), their correction, as well as dynamic control of carbohydrate metabolism. Among the important FR should be noted sleep deprivation - the most severe stressor that contributes to the formation of a number of pathological changes in the body. Determining the impact of sleep disorders on the development and course of DM2 will contribute to the creation of effective preventive measures and treatment recommendations in the future.

The aim. To evaluate the relationship between sleep status and type 2 diabetes course.

Materials and methods. To provide an integrated approach for researching influence of the quality of sleep on clinical and anamnestic parameters in DM2, we created a questionnaire that assessed the sleep regime of patients, anamnestic data, HbA1c, systolic blood pressure (SBP) and complications of DM. Was examined and interviewed 30 patients with DM2 from the endocrinology department of the Kharkiv Regional Hospital, whose average age was 55.1 ± 1.3 years, with a disease duration of 5.5 ± 1.7 years, with a body mass index (BMI) $19, 1 \pm 2.8$ (12 men, 18 women) and 20 healthy individuals of the control group, representative by age, sex and BMI. Statistical analysis of the results was performed in the Microsoft Office Excel.

Results. It was found that patients with DM2 had minor (60%) and severe sleep disorders (30%), in contrast to 85% of healthy people who did not have such complaints ($p \leq 0.05$). In the structure of sleep disorders, patients noted difficulty falling asleep (23.3% of respondents), frequent night awakenings (33.3%) and difficulty getting up (33.3%). At the same time, 70% of the patients had a combined spectrum of sleep disorders. The analysis of anamnesis of sleep quality has shown that worsening of sleep began long before the onset of diabetes in 70% of patients. Ranking of patients according to the level of HbA1c depending on the quality of sleep showed that in group with the level of HbA1c 7-8% prevalence of sleep disorders (33.3%), and in group with the level of HbA1c > 8% - middle and severe disorders (26.7% of respondents).

Ranking of patients according to the level of SBP depending on the quality of sleep showed that deterioration of sleep associated with high values of SBP. 30% of patients with middle and in 26.7% of patients with severe sleep disorders had SBP > 160 mm Hg.

Regarding the ranking of patients by the presence of DM2 complications depending on the quality of sleep, there was a tendency to predominate more complications in patients with severe sleep disorders (hypertension in 63.3% of patients, retinopathy - in 50%, nephropathy - in 46.7%). The presence of combined complications rapidly deteriorated the quality of sleep ($p \leq 0.05$).

Conclusions. Our study found that sleep disorders can be regarded as one of the important FR of the development and progression of DM2. Patients with severe sleep disorders have high levels of HbA1c, SBP and an increased incidence of complications. Measures to improve sleep quality should be included in the program of prevention and treatment DM2 patients.