

EVALUATION OF THE RELATIONSHIP BETWEEN BRUXISM AND OBSTRUCTIVE SLEEP APNEA

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Introduction: Sleep bruxism (SB) as well as obstructive sleep apnea (OSA) are phenomena that occur during sleep. However, the relationships between them are not fully investigated.

Aim: The aim of the study was to assess the relationship between bruxism and obstructive sleep apnea and to assess the time dependence of these two phenomena.

Material and methods: The material for the study consisted of 21 patients with suspected obstructive sleep apnea determined after clinical examination. Patients were subjected to PSG examination with electrodes on the masticatory muscles in order to evaluate the episodes of bruxism verified by the analysis of audio-video records.

Results: Statistical analysis of the PSG study confirmed a significant ($p = 0.003$), strong correlation of the apnea index and shortness of breath per hour of sleep (AHI) with the number of bruxism episodes ($r = 0.62$). It has been shown that as the AHI index increases, the number of episodes of bruxism increases. The individual increase in AHI caused an increase in the number of bruxism episodes. on average, by 1.21 and the increase of the bruxism index by an average of 0.03. In addition, there was a strong correlation between bruxism episodes before apnea and apnea before bruxism (up to 5s interval between events), ($r = 0.98$, $p = 0.000$).

Conclusions: Occurrence of OSA is strongly correlated with SB episodes, but causal relationships can not be identified.