Abstract

Aim: It has been known that the oral appliances are effective especially in the treatment of mild to moderate obstructive sleep apnea syndrome. The aim of this study was to evaluate the effectiveness of an oral appliance (OA) “mandibular advancement devices (MADs)” for treatment of severe obstructive sleep apnea syndrome (OSAS) in patients who refused continuous positive airway pressure treatment.

Material and Methods: The patients with the symptoms of snoring, witnessed sleep apnea and excessive daytime sleep, were evaluated by polysomnography and diagnosed as OSAS. The patients with severe OSA who refused continuous positive airway pressure (PAP) treatment were recruited. An oral appliance “mandibular advancement devices (MADs)” were prepared by the dentist. Polysomnograms with OA were repeated at the first month and 6 months. The following variables were assessed: AHI, ODI, oxygen saturation at sleep, percentage of REM sleep.

Results: Eleven patients (nine men and two women) with mean age 53.73±2.90 years old were selected to the study. AHI and ODI were measured as 50.66±4.46 and 54.97±2.71 respectively at baseline. OA reduced AHI significantly from 50.66 to 23.97, (p<0.05) at the first month and to 13.45 at sixth month. There was an improvement in AHI, Stage 3 (p<0.05), REM (p>0.05) and SatO2 % at sleep (p>0.05).

Conclusion: Treatment with oral appliances, i.e., MADs, can be an effective in patients with severe OSAS, who refuse to use or can not tolerate PAP therapy. We think that OA can be chosen as an alternative therapy for severe OSA.