Abstract

**Aim:** The aim of this study was to investigate the effects of anthropometric measurements and otorhinolaryngological examinations on the appropriateness of and the choice between OAT (oral appliance therapy) and CPAP treatment in patients diagnosed with severe OSAS (obstructive sleep apnea syndrome).

**Materials and methods:** The patients diagnosed with severe OSAS (n=23) were enrolled in the present study and divided into two groups as OAT (n=11) and CPAP (n=12) by the random envelope method. Then, the patients who were ineligible for OAT were assigned to CPAP treatment, thus constituting a third group (n=7). They were examined by PSG at one month and underwent controls at 3 and 6 months. At the first month control, the patients who showed no improvement of AHI or those who could not tolerate the treatment were shifted to the other treatment.

**Results:** There were no significant differences between the treatment groups in terms of demographic characteristics, otorhinolaryngological examinations and nasopharynx CT. It was found that, of PSG findings, REM was increased and AHI and stage 2 sleep were decreased during the first month of treatment in all treatment groups (p>0.05). All treatment groups showed improvement in oxygen saturation, which reached statistical significance only in the CPAP group (p<0.05).

**Conclusion:** We concluded that anthropometric changes and results of otorhinolaryngological examinations had no effect on treatment choice in patients with severe OSAS. Since CPAP treatment is more effective in patients with severe OSAS, OAT would be more appropriate in patients who can not tolerate CPAP treatment.