

Nasendoscopy proves useful in predicting treatment success in sleep apnea patients

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According to new research that will be presented on Saturday, June 5, at the 19th Annual Meeting of the American Academy of Dental Sleep Medicine, nasendoscopy may help dentists predict oral appliance therapy success in sleep apnea patients. Nasendoscopy involves a flexible endoscope being inserted through the nasal cavity. The tip of the scope is placed at the level of the velopharynx and oro-/hypopharynx.

OAT has been shown to be a safe and effective treatment for patients with obstructive [sleep apnea](#) (OSA). This therapy is indicated for use in patients with mild to moderate OSA on the basis of the apnea-hypopnea index (AHI). However, it has been reported that some patients with severe OSA also benefit from OAT. Such findings suggest that patients should not be selected for OAT based on AHI alone.

This Japan-based study included 21 severe OSA patients (AHI>30) comprised of 18 men and three women. OSA severity was diagnosed with overnight polysomnography (PSG). Subjects ranged from 35 to 78 years of age.

During the nasendoscopy, patients laid supine in a dental chair. Researchers observed changes in the width of the velopharynx and oro-/hypopharynx.

After several weeks of wearing an oral appliance during sleep, each subject took a second PSG with the device. AHI reduction rates from OAT were compared between patients who did and did not show throat

widening during the nasendoscopy.

All severe OSA patients showed improved AHI following OAT. All subjects experienced oro-/hypopharyngeal widening, but only 16 subjects demonstrated velopharyngeal widening.

The AHI reduction rate for patients with velopharyngeal widening was 79 percent. The reduction rate for patients without velopharyngeal widening was 45 percent. The difference between the two groups was significant. The direction of the velopharyngeal widening, 'all-round' or 'lateral dominant,' was independent of patient response.

Results indicate that patients who showed velopharyngeal widening during a nasendoscopy responded most effectively to OAT. These findings suggest that velopharyngeal widening observed when advancing the mandible from the centric occlusal position is associated with better OAT outcome.

Lead author Yasuhiro Sasao, DDS, PhD, suggests that nasendoscopies can help dentists predict patient response to OAT, reducing waste of resources and time.

"In Japan, nasendoscopy is used in dentistry and medicine to diagnose or evaluate oral function such as speech and swallowing - the system is simple and relatively inexpensive," said Sasao.

Provided by American Academy of Sleep Medicine

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