

Certain factors may help identify patients for surgical procedure for obstructive sleep apnea

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Patients with more severe obstructive sleep apnea are more likely to receive greater benefit from the surgical procedure known as maxillomandibular advancement, according to a study published online by *JAMA Otolaryngology-Head & Neck Surgery*.

Maxillomandibular advancement (MMA) is an invasive yet potentially effective surgical option in the treatment of [obstructive sleep apnea](#) (OSA) for [patients](#) who have difficulty tolerating continuous positive airway pressure. Maxillomandibular advancement achieves enlargement of the upper airway by physically expanding the facial skeletal framework. Assessment of whether any preoperative factors could be consistently associated with postoperative outcomes could help to shape patient selection criteria and to counsel patients regarding their chances to achieve a significant improvement with MMA, according to background information in the article.

Soroush Zaghi, M.D., of the David Geffen School of Medicine at the University of California, Los Angeles, and colleagues conducted a meta-analysis that included 45 studies with individual data for 518 patients/interventions. Patients in the studies had undergone MMA as treatment for OSA. Among patients for whom data were available, 197 of 268 (74 percent) had undergone prior surgery for OSA. The researchers analyzed the changes in the apnea-hypopnea index (AHI) and respiratory disturbance index (RDI) (measures of the severity of

OSA) after MMA.

The authors found that MMA is associated with substantial improvements to AHI and RDI. Among 518 patients, 512 experienced improvement in outcomes. Patients with less severe measures of OSA experience a smaller magnitude of change in AHI or RDI postoperatively, but they have the highest chance of achieving surgical success and cure. The average reduction for AHI and RDI outcomes was 80 percent and 65 percent, respectively. Patients with high residual RDI and AHI scores (despite prior surgical procedures) were highly likely to benefit from management of OSA by means of MMA.

"Maxillomandibular advancement is a highly effective treatment for OSA," the researchers write. "Those patients with the most severe measures of OSA tend to benefit to the greatest degree."

"Future studies will provide additional insights to help optimize patient selection for this treatment option."

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