

Obstructive sleep apnea and maxillomandibular advancement: an assessment of airway changes using radiographic and nasopharyngoscopic examinations.

[Li KK](#), [Guilleminault C](#), [Riley RW](#), [Powell NB](#).

Stanford University Sleep Disorders and Research Center, Stanford, CA, USA.
kaseyli@hotmail.com

PURPOSE: The study aim was to evaluate the resultant changes in the upper airway after maxillomandibular advancement (MMA) for obstructive sleep apnea. **METHODS:** Twelve patients were evaluated before and after MMA using fiberoptic nasopharyngoscopy (NPG) with Müller maneuver. An inspiratory force meter was used to ensure the consistency of the inspiratory efforts between the 2 examinations. Preoperative and postoperative lateral cephalometric radiographs were also compared. **RESULTS:** Decrease in the airway obstruction was shown by the lateral cephalometric radiograph as well as by fiberoptic NPG during passive respiration. Fiberoptic NPG with Müller maneuver also revealed a decrease in airway collapsibility. Although the retrodisplacement of the tongue base was improved, the improvement in lateral pharyngeal wall stability was the most striking.

CONCLUSIONS: MMA achieved expansion of the upper airway. In addition, MMA decreased the collapsibility of the airway, especially the lateral pharyngeal walls. These findings may explain the highly successful outcomes of MMA for the treatment of obstructive sleep apnea. Copyright 2002 American Association of Oral and Maxillofacial Surgeons

PMID: 11988930 [PubMed - indexed for MEDLINE]