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Maxillomandibular advancement as surgical treatment for obstructive sleep apnea in active duty military personnel: a retrospective cohort

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Abstract

Objective: The objective of our study is to assess the surgical outcomes of active duty military personnel undergoing maxillomandibular advancement (MMA) for the treatment of obstructive sleep apnea.

Methods: Pre- and postoperative data on 37 military personnel who underwent MMA were assessed for changes in apnea-hypopnea index (AHI) and minimum oxygen saturation. A surgical success was defined as a reduction of AHI by 50% or a postoperative AHI of <20.

Results: 83.7% had an AHI greater than 20 (n = 33; range 7.6-118) with a mean preoperative AHI of 50.5 per hour. The postoperative AHI decreased by 36.3 to a new value of 14.2 (p < 0.001). Most service members experienced a postoperative AHI of less than 20 (n = 28; 76%). Sixteen (43%) had a surgical cure (AHI < 5). The number of surgical successes for this study was 81% (n = 30). The mean minimal nocturnal oxyhemoglobin saturation did not significantly change from preoperative 85% (SD = 6.8%) to postoperative 86% (SD = 7%; p = 0.21).

Conclusion: MMA represents a viable surgical treatment option for military personnel in whom continuous positive airway pressure is either not tolerated or for those who desire a fully deployable status.

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