

## **Mandibular advancement splint improves indices of obstructive sleep apnoea and snoring but side effects are common.**

NEILL A, WHYMAN R, BANNAN S, JEFFREY O, CAMPBELL A.

*Department of Medicine, Wellington School of Medicine and Health Sciences, Wellington. wellsleep@wnmeds.ac.nz*

**AIM:** To assess the efficacy of a mandibular advancement splint (MAS) in the treatment of obstructive sleep apnoea syndrome (OSAS).

**METHODS:** Nineteen patients using a MAS for symptomatic OSAS underwent polysomnography, with MAS use randomised to one half of the night. Indices of snoring and OSAS were compared. Side effects, compliance and treatment response were evaluated by questionnaire.

**RESULTS:** Use of the MAS improved total respiratory disturbance index (RDI) from 22.2 +/- 19.8 (SD) events per hour to 16.5 +/- 21.4/hr ( $p = 0.03$ ), supine RDI (30.8 +/- 23.8/hr to 18.8 +/- 22.1/hr,  $p = 0.01$ ), arousal index (25.2 +/- 18.9/hr to 19.3 +/- 14.2/hr,  $p = 0.01$ ) and snoring intensity (52.7 +/- 4.1 to 50.7 +/- 2.7 dB,  $p = 0.02$ ) but not total snore frequency ( $p > 0.05$ ). Using polysomnographic criteria, MAS treatment was completely successful in four (21%) patients, partially successful in ten (52.6%) and a failure in five (26.3%). Treatment over a median of 6.5 weeks (range 2-48) was perceived as beneficial by ten of eleven partners. Fifteen patients (79%) reported side effects, 9 (46%) did not use the device every night and four (21%) used the device less than three nights per week.

**CONCLUSION:** The use of the MAS resulted in significant reductions in indices of OSAS and snoring. However, a significant number of patients had difficulty tolerating and regularly using the device.