



Randomized Controlled Study of an Oral Jaw-Positioning Appliance for the Treatment of Obstructive Sleep Apnea in Children with Malocclusion

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To evaluate the clinical usefulness and tolerability of an oral jaw-positioning appliance in the treatment of obstructive sleep apnea syndrome in children, we studied 32 patients (mean age, 7.1 ± 2.6 yr; 20 males) with symptoms of obstructive sleep apnea, malocclusion, and a baseline apnea index >1 event/h. A group of 19 subjects was randomly assigned to a 6-mo trial of an oral appliance; the remainder acted as control subjects. At baseline and after the trial all patients underwent physical examination, a standard polysomnography, and orthodontic assessment. A modified version of the Brouillette questionnaire related to obstructive sleep apnea symptoms was administered to parents before and after the trial and a clinical score was calculated. Of the 32 subjects enrolled, 4 treated subjects and 5 control subjects were lost to follow-up. Polysomnography after the trial showed that treated subjects all had significantly lower apnea index ($p < 0.001$) and hypopnea index values ($p < 0.001$) than before the trial, whereas in untreated control subjects these values remained almost unchanged. Clinical assessment before and after treatment showed that in 7 of the 14 subjects (50%) the oral appliance had reduced (a fall of at least 2 points in the respiratory score) and in 7 had resolved the main respiratory symptoms, whereas untreated patients continued to have symptoms. In conclusion, treatment of obstructive sleep apnea syndrome with an oral appliance in children with malocclusion is effective and well tolerated.

**SI TRATTA PROBABILMENTE DEL PRIMO LAVORO AL MONDO CHE DIMOSTRA
L'EFFICACIA DELL'APPROCCIO OCCLUSALE NELL'OSAS IN ETÀ PEDIATRICA.
IL DISPOSITIVO IMPIEGATO È LA PLACCA DI BERNKOPF**

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