

## 4-year follow-up of treatment with dental appliance or uvulopalatopharyngoplasty in patients with obstructive sleep apnea: a randomized study.

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CHEST. 2002 Mar;121(3):739-46.

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**Study objectives:** To evaluate the effects of treatment with a dental appliance or uvulopalatopharyngoplasty (UPPP) on somnographic variables in patients with mild-to-moderate obstructive sleep apnea (OSA) followed up for 4 years, and compliance and complementary treatment. DESIGN: Randomized study.

**Patients:** Ninety-five male patients with confirmed mild-to-moderate OSA (apnea index [AI] > 5 and < 25) were randomized to treatment with a dental appliance or UPPP. Sleep studies were performed before and 1 year and 4 years after intervention. Thirty-two patients in the dental-appliance group and 40 patients in the UPPP group completed the 4-year follow-up.

**Results:** The success rate (percentage of patients with at least 50% reduction in AI) in the dental-appliance group was 81%, which was significantly higher than in the UPPP group, 53% ( $p < 0.05$ ). Normalization (AI < 5 or apnea/hypopnea index < 10) was observed in 63% of the dental-appliance group and 33% of the UPPP group after 4 years. The difference between the groups was significant ( $p < 0.05$ ). The compliance to use of the dental appliance was 62% at the 4-year follow-up. Thirty patients (75%) in the UPPP group continued without complementary treatment. The dental appliances had few adverse effects on the stomatognathic system, and the number of adjustments and repairs of the appliances over time was moderate. Pronounced complaints of nasopharyngeal regurgitation of fluid and difficulty with swallowing after UPPP were reported by 8% and 10%, respectively.

**Conclusions:** The dental-appliance group showed significantly higher success and normalization rates regarding the somnographic variables compared to the UPPP group, but the effectiveness of the dental appliance was partly invalidated by the compliance of 62% at the 4-year follow-up. However, the appliances had few adverse effects on the stomatognathic system and required only moderate adjustments. **Use of a dental appliance with regular follow-up can be recommended for long-term treatment of OSA.**