

## **MASK LEAKAGE IN CPAP AND C-FLEX**

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**Introduction:** Many patients with obstructive sleep apnea syndrome (OSAS) receiving continuous positive airway pressure (CPAP) complain of leaky masks or too high pressure during expiration. C-Flex is a breathing mode with a constant CPAP pressure during inspiration and a reduced pressure during expiration. We compared the leakage data between CPAP and C-Flex and their influence on patients' compliance. **Methods:** 30 patients (22 men, 8 women, age  $55.4 \pm 11.7$  yrs, BMI  $32.0 \pm 7.4$  kg/m<sup>2</sup>) with polysomnographically diagnosed OSAS got a CPAP or C-Flex therapy in a randomized double-blind trial. After 6 weeks an adjustment to the other mode followed. Leakage data were sampled during all polysomnographic examinations. **Results:** 12 patients stopped the study (7 after C-Flex, 5 after CPAP), 4 of them gave up CPAP therapy completely (2 after CPAP, 2 after C-Flex). The leakage in CPAP mode was  $27.5 \pm 11.5$  l/min and in C-Flex mode  $28.0 \pm 10$  l/min (n.s.). The average nightly use in CPAP mode was  $350.0 \pm 70.2$  min and in C-Flex mode  $347.0 \pm 70.8$  min (n.s.). In the final decision of therapy 9 patients chose C-Flex and 4 patients CPAP ( $p=0.001$ ). 5 patients had no preference regarding the therapy mode. **Conclusion:** There is no difference in leakage and compliance between CPAP and C-Flex. But significantly more patients decided for a therapy with the C-Flex mode. There must be other actually unknown factors that influence the decision for the mode of therapy.