Improved adherence to CPAP by Telemetric Support in Newly diagnosed OSAS Patients

Otto Schoch, Florent Baty, Jolanda Niedermann, Martin Brutsche

Introduction: The acceptance of positive airway pressure therapy (CPAP) within the first month is a critical aspect of successful OSAS therapy. Telemedicine is a novel tool to supervise CPAP use at patient's home. We report 30-day results of a pilot study, comparing CPAP use in telemetrically supervised vs. conventionally treated patients.

Methods: Between 1/2012 and 12/2012, of 293 newly diagnosed OSAS patients, 170 were started on CPAP treatment with a telemetric 3G-device (ResTraxx OnlineTM, ResMed) and 123 were treated conventionally. For telemedicine patients, the downloaded hours of CPAP use and leak flow were checked on a protected online data depository 3 days/week. Patients received phone calls in case of <4h-CPAP usage or average leak >0.4L/s after 2 consecutive nights. After 30 days, average CPAP use/night and the number of nights without CPAP were compared between both groups.

Results: At baseline, OSAS severity (ESS, AHI, ODI) was not different between groups, but telemedicine patients were younger and more often outpatients (Table 1).
Within the first 30 days telemedicine patients used CPAP 48 minutes/night longer (5.2 [3.5-6.3] vs 4.6 [2.6-6.1] h/night, p=0.05) and for more nights (28 [23-30] vs 26 [18-30], p<0.001) compared to conventionally treated patients. A stronger telemedicine effect was found after adjusting for age and proportion of outpatients (p=0.02).

Conclusion: In this non-randomised pilot study, a telemetric support for the first month of CPAP was technically feasible and increased CPAP adherence. To determine the direct effects of telemedicine on medium and long-term CPAP use, a randomised prospective study is necessary.

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