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COMPARING DIFFERENT FLOW RATES (20 AND 35 L/MIN) UNDER HIGH-NASAL FLOW THERAPY FOR THE OBSTRUCTIVE SLEEP APNOEA SYNDROME (OSAS)

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Introduction: We have demonstrated that 20 l/min nasal insufflation of airflow (HNF) can treat a subgroup of OSAS patients (Nilius G et al. Chest. 2010; 137:521-8). The aim of this study was to compare the effect of two flow rates (20 l/min (HNF20) and 35 l/min (HNF35)) on sleep disordered breathing..Methods: 18 CPAP-naïve patients (6 women, age 56.6±7.3, BMI 32.6±3.8 kg/m², ESS 9.3±5.2) with more than 50% Hypopnoeas during a diagnostic night were recruited. During the treatment night both HNF20 and HNF35 were administered in a random order for a minimum of three hours each.Results: The total event rate (AHI) in NREM/REM sleep was at baseline 25±13/37±23, at HF20 L/min 23±14/22±22 and at HF35 L/min 19,0±13/15±18 (P<0.05 for REM). There were significant improvement HI, but AI at 35 L/min versus 20 L/min in NREM and REM sleep. The lack of AI responses was associated with a significant increase in cenctral AI(baseline vs HNF20 vs HNF35; 1 vs 8 vs 6 events/hour). Nevertheless Oxygenation (T90) improved considerably with HNF35 compared to HNF20 and baseline in both sleep states.