

Simplified Daytime Approach in OSAH Phenotyping

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Rationale: Methods to measure the pathophysiological traits that sustain the occurrence of obstructive sleep apnea-hypopnea (OSAH) still remain difficult to implement in routine practice. This pilot study aims to find a simpler daytime approach to obtain a pathophysiological phenotypic profile in OSAH patients. **Methods:** In a group of 15 OSAH patients we performed diagnostic polygraphy and the dial-downs CPAP technique during nocturnal polysomnography to assess upper airway collapsibility, loop-gain (LG), arousal threshold (AT) and upper airway muscle gain (UAG). Subsequently, results have been compared with a daytime protocol based on negative expiratory pressure (NEP) technique for evaluating upper airway collapsibility and UAG, on maximal voluntary apnea for LG, and clinical predictors for AT. **Results:** In 13 OSAH patients, we found strong (all $r^2 > 0.75$) and significant (all $p < 0.001$) correlations for each phenotypic trait between the measurements obtained with the reference method and those achieved during wakefulness. **Conclusion:** From a pathophysiological perspective it is possible to phenotype OSAH patients. Cut-off values corresponding to those usually adopted using the reference method can be identified to detect abnormal traits with this approach, achieving profiles very similar to those obtained with the dial-downs CPAP technique.

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