

## Sleep Disorders

TYPE: Late Breaking Abstract

TOPIC: Sleep Disorders

### PHENOTYPING PATIENTS WITH OSAH DURING WAKEFULNESS

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**PURPOSE:** This pilot study aims to find a simpler daytime approach to obtain a meaningful, similar pathophysiological phenotypic profile in OSAH patients.

**METHODS:** In a group of 15 consecutive OSAH patients, after obtaining diagnostic polygraphy, we performed the dial-downs CPAP technique during nocturnal polysomnography as reference method to assess upper airway collapsibility, loop-gain (LG), arousal threshold (AT) and upper airway muscle gain (UAG). We compared these results 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 who accurately completed the two procedures, 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.

**CONCLUSIONS:** It is possible to phenotype OSAH patients from a pathophysiological point of view when awake. 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.

**CLINICAL IMPLICATIONS:** Although simplified methods to measure the pathophysiological traits that sustain the occurrence and maintenance of obstructive sleep apnea-hypopnea (OSAH) have been recently provided, they remain difficult to implement in routine practice.

**DISCLOSURE:** Nothing to declare.

**KEYWORD:** OSAH

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