Split-night polysomnography for Continuous Positive Airway Pressure (CPAP) titration in adults with obstructive sleep apnea

Record Status
This is a bibliographic record of a published health technology assessment. No evaluation of the quality of this assessment has been made for the HTA database.

Citation

Authors’ conclusions
Obstructive sleep apnea (OSA) is a chronic disorder affecting 2% to 4% of adults. Untreated OSA is associated with daytime sleepiness, insomnia, decreased quality of life (QOL), and a host of comorbidities including cardiovascular disease. Risk factors for OSA include anthropometric factors such as obesity, increased neck circumference, and maxillofacial characteristics, and underlying morbidities such as coronary artery disease, hypertension, and diabetes. In patients with symptoms suggesting OSA, diagnostic tests may be performed in a sleep laboratory or in the home using instruments designed for portable use. Monitoring during testing can include electroencephalography (EEG), electrooculography, chin electromyography (EMG), airflow, oxygen saturation, respiratory effort, electrocardiography (ECG), body position, and leg EMG derivations. For an attended study in a sleep laboratory, a trained technologist is present to monitor the technical adequacy of the test and the patient’s behavior. During testing, the number of respiratory events/hour (apneas, hypopneas, or respiratory effort-related arousals) is measured; these values are reported as the apnea-hypopnea index (AHI) or the respiratory disturbance index (RDI). If 15 events/hour are observed, or if 5 events/hour are observed in a patient who has clinical signs and symptoms of OSA, the diagnosis of OSA is established. OSA may be mild (AHI 5 to 14), moderate (AHI 15 to 30), or severe (AHI > 30). The reference standard for diagnosis of OSA is in-laboratory, dual-night, attended polysomnography (PSG). Diagnosis of OSA is labor-intensive and expensive. Other strategies have been explored to lower costs and reduce patient waiting times for testing. Other options are split-night PSG and portable home sleep testing, also called portable monitoring.

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