Sleep Board Review Question: CPAP adherence in OSA

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Which of the following has been shown to be associated with a better adherence to positive airway pressure (PAP) therapy in adults with obstructive sleep apnea (OSA)?

1. Use of auto-titrating positive airway pressure (autoPAP) instead of CPAP.
2. Cognitive behavioral therapy prior to initiation of PAP therapy.
3. Severe sleep apnea on diagnostic polysomnography.
4. Epworth Sleepiness Scale (ESS) score at initiation of PAP therapy.

Correct!
2. Cognitive behavioral therapy

Obstructive sleep apnea (OSA) is associated with several adverse outcomes (1,2). Adherence to continuous positive airway pressure (CPAP) therapy is a key to improving outcomes in patients with OSA. Adherence to CPAP is commonly (and empirically) defined as use of CPAP machine for ≥4 hour every night, ≥70% of the nights, However, data support that more hours of use of CPAP every night result in better clinical outcomes (3).

Studies suggest that pattern of adherence to CPAP is developed as early as 3 days after the initiation of the therapy (4). The use of newer PAP devices including autoPAP (5,6), severity of OSA on diagnostic polysomnography or ESS score at initiation of PAP therapy have not been consistently shown to predict adherence to CPAP therapy.

Cognitive behavioral therapy (CBT) is a useful intervention to improve CPAP adherence (7). A Cochrane review concluded that educational and behavioral interventions can increase average CPAP use by almost 3 hours at night, and found a number need to treat of 3 patients for one additional person to increase machine use to 6 or more hours a night (8). Telephone linked communication and eszopiclone treatment for 2 weeks at the beginning of CPAP therapy have also shown significant positive effect on CPAP adherence (9). Finally, use of heated humidification has been suggested to improve adherence in small studies, and is recommended in American Academy of Sleep Medicine practice parameter (10).

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