Drug Monitor

ONLINE EDITION

Eszopiclone and CPAP Adherence

Approximately 50% of patients discontinue continuous positive airway pressure (CPAP) use within the first year (and often within the first month) of initiating treatment—usually because of discomfort, intolerance, or lack of perceived benefit. Since early adherence to CPAP can be predictive of and important to long-term adherence, researchers from the CPAP Promotion and Prognosis—The Army Sleep Apnea Program (CPAP ASAP) trial investigated the effects of administering eszopiclone within the first two weeks of CPAP treatment in patients with newly diagnosed obstructive sleep apnea (OSA). Eszopiclone is a nonbenzodiazepine sedative-hypnotic drug that is FDA approved to treat insomnia, is effective at inducing sleep, and can be used safely in patients with OSA. The researchers hypothesized that the drug would improve patients' initial tolerability and use of CPAP, subsequently increasing their long-term adherence.

A total of 160 consecutive patients, aged 18 to 64 years, were recruited from Walter Reed Army Medical Center, Washington, DC for enrollment in the study. Patients were assigned randomly to receive eszopiclone 3 mg or placebo for two weeks. All patients underwent formal CPAP mask fitting and received a clinical evaluation at months one, three, and six. Measures of patients' CPAP use (including the date, time, and duration) were obtained from downloadable "smart cards," which are integrated into each CPAP unit and record all use of the device. The researchers also compared changes in each patient's Epworth Sleepiness Scale (ESS) score; self-reported fatigue; and Functional Outcomes of Sleep Questionnaire (a measure of sleep-related quality of life) score between baseline and six months.

The patients' mean (SD) age was 45.7 (7.3) years. A total of 154 patients received a study medication: 76 received eszopiclone and 78 received placebo. The number of patients included in the final analyses at one, three, and six months were 150, 136, and 120, respectively.

At six months, patients in the eszopiclone group used CPAP for 64% of nights, compared with 45% in the placebo group. The eszopiclone group used CPAP for a mean of 3.57 hours per night, compared with 2.42 hours in the placebo group. The mean duration of regular use of CPAP (defined as more than four hours per night for more than 70% of nights) was 13.3 weeks for the placebo group and 17.6 weeks for the eszopiclone group.

The researchers also found that patients' ESS scores decreased by 22.7% in the eszopiclone group, compared with a 7.6% decrease in the placebo group. In addition, the eszopiclone group had a greater decrease in self-reported fatigue than the placebo group (–17.7% versus –10.2%, respectively). The scores on the Functional Outcomes of Sleep Questionnaire increased by 12.6% in the eszopiclone group and by 9.4% in the placebo group.

The drug was well tolerated. Among the few adverse effects reported were bitter taste, grogginess, dry mouth, headaches, anxiety, and drowsiness. Two patients from the eszopiclone group withdrew from the study after two days of treatment due to adverse events, but the number of patients reporting adverse events did not differ between the treatment and control groups.

The researchers say the relatively greater improvements in subjective reports of sleepiness, fatigue, and quality of life in the eszopiclone group "probably [reflect] the increased use of CPAP." They note that the sedative effect of eszopiclone likely facilitated better comfort with the CPAP, leading to improved tolerance and adherence. Other studies have shown that quieter CPAP devices with better fitting masks and newer machines with adjustable settings and integrated heated humidifiers also improve patient comfort. The CPAP ASAP researchers point out, however, that these device improvements are costly, and they say research is still needed to determine whether this allocation of resources is cost-effective.

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