Duloxetine May Improve Patients' Sleep Quality

BY KERRI WACHTER
Senior Writer

WASHINGTON — Not only does duloxetine appear to reduce the severity of pain, especially during the night, but it may also help patients with diabetic peripheral neuropathy get a better night's sleep, according to a poster presentation at the annual meeting of the American Pain Society.

After 12 weeks of treatment, patients on 60 mg of duloxetine once or twice daily had improvements in average daily pain severity, night pain severity, and pain-related sleep interference, wrote Dr. David A. Fishbain, professor of psychiatry and behavioral sciences at the University of Miami, and his colleagues at Eli Lilly, maker of duloxetine (Cymbalta).

Although causality cannot be demonstrated between duloxetine and better sleep, the findings suggest that improvements in pain will be associated with less interference in sleep, the authors wrote.

The researchers pooled data from three double-blind, placebo-controlled trials of duloxetine in patients with diabetic peripheral neuropathic pain (DPNP). In the first study, 457 patients were randomized to receive 20 mg of duloxetine once daily, 60 mg of duloxetine once or twice daily, or placebo. In studies two and three, 334 and 348 patients, respectively, were randomized to receive 60 mg of duloxetine once daily, 60 mg of duloxetine twice daily, or placebo. Although the primary efficacy measure for the studies was the reduction in the weekly mean of the 24-hour average pain score, secondary end points included average daily night pain severity (measured on an 11-point Likert scale) and the Brief Pain Inventory sleep interference item.

Patients were included in the trials if they were 18 years or older with pain because of bilateral peripheral neuropathy caused by type 1 or type 2 diabetes mellitus. Pain had to have begun in the feet with

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relatively symmetric onset. Diagnosis was confirmed by a score of at least three on the Michigan Neuropathy Screening Instrument. Daily pain had to be present for at least 6 months. Patients also had to have at least a 4 on the 24-hour average pain severity (11-point Likert) scale and stable glycemic control. Notably, patients with a current or recent (within the last year) diagnosis of major depressive disorder as defined by the DSM-IV were excluded from the studies.

The researchers identified a subset of nonsomnolent patients by excluding those who reported treatment-emergent somnolence or who were on concomitant sedating medications. Treatment-emergent somnolence included reports of daytime sleepiness, drowsiness, being drowsy upon awakening, excessive daytime sleepiness, a feeling of residual sleepiness, groggy, groggy and sluggish, groggy on awakening, hard to awaken, less alert on rising, sleepiness, sleepy, and somnolence.

In all three studies, 339 patients received placebo. Of these, 307 met the criteria for the nonsomnolent subset. A total of 685 patients received 60 mg or 120 mg per day of duloxetine in all three studies. Of these, 607 met the criteria for the nonsomnolent subset. Patients in the nonsomnolent/nonsedating subgroup who were on duloxetine showed improvements in daily average pain and night pain severity, compared with those on placebo. The improvements started as early as 1 week and were maintained for 12 weeks. At 12 weeks, subset patients on 60 mg of duloxetine once and twice daily had improvements in daily average pain severity of 47% and 50%, compared with 29% for those on placebo.

Also at 12 weeks, subset patients on 60 mg of duloxetine once and twice daily had improvements in night pain severity of 47% and 51%, respectively, compared with 34% for those on placebo. ■

Arnold-Chiari Raises Sleep Apnea Risk

BY HEIDI SPLETE
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MINNEAPOLIS — Adults with Arnold-Chiari type I malformations are at greater risk for sleep-disordered breathing, compared with healthy controls, based on data presented at the annual meeting of the Associated Professional Sleep Societies.

In light of this finding, "We should be screening all Arnold-Chiari I patients for sleep-disordered breathing," said Dr. Nate Watson, a neurologist at the University of Washington, Seattle.

The displaced brain structures that characterize Arnold-Chiari I (AC-1), a benign developmental brain anomaly, can compress the brainstem, impeding breathing, he said.

To better assess the risk of sleep-disordered breathing in AC-1 patients, Dr. Watson and his colleagues compared 18 women with AC-1 (mean age 36 years) with 35 age- and sex-matched controls.

The researchers used several subjective questionnaires including the Epworth Sleepiness Scale to assess sleep-disordered breathing and sleepiness. Based on these results, the AC-1 patients were at significantly greater risk for sleep-disordered breathing, compared with controls (69% vs. 20%). Specifically, the results from the questionnaires showed that three factors—snoring, sleepiness, and obesity/hypertension—were significantly more common among AC-1 patients vs. controls, and occurred in 44% vs. 6%, 78% vs. 46%, and 64% vs. 34%, respectively.

The AC-1 patients were significantly more likely to report other symptoms associated with sleep-disordered breathing, including nighttime choking or gasping and nighttime shortness of breath, compared with controls. And when they woke up, the AC-1 patients also reported sore throats, heartburn, and headaches significantly more often than did the control patients.

In addition, the AC-1 patients reported sleeping significantly fewer hours (6.3 hours versus 7.6 hours) and taking significantly longer to fall asleep (61.4 minutes versus 18.6 minutes), compared with controls.

Consider decompressive surgery for patients if respiration is their main complaint, but remember that they need to be followed, said Dr. Watson during the discussion after his presentation. Previous studies indicate that decompression surgery makes a difference. Data from 16 consecutive patients with AC-1 malformations showed a significant improvement in the central apnea index from 14.9 to 1.3 based on full-night polysomnography conducted approximately 200 days after decompression surgery (Neurology 2006;66:136-8).

Future studies of AC-1 patients need to continue to focus on objective measures and comparison of patients before and after they have decompressive surgery, Dr. Watson said. ■