Tune In to Sleep Problems in ADHD Patients

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NEW YORK — Insomnia is a real and pressing concern for children with attention-deficit hyperactivity disorder and their families, Judith A. Owens, M.D., said at a psychopharmacology update sponsored by the American Academy of Child and Adolescent Psychiatry.

"At least 60% of the kids in our ADHD clinic have significant problems with sleep that really impact their quality of life," said Dr. Owens of the department of pediatrics at Brown University, and director of the pediatric sleep disorders clinic, Hasbro Children's Hospital, Providence, R.I.

The problem is multifaceted and bidirectional. Insufficient or fragmented sleep can lead to excessive daytime sleepiness, which in turn can result in ADHD-like symptoms. The medications, such as psychostimulants used to control ADHD themselves, can affect sleep onset and continuity. Methylphenidate, for example, has been shown to delay sleep onset by 30 minutes, Dr. Owens said.

Other psychotropic medications can affect sleep architecture, altering percentages of rapid eye movement (REM) and slow wave sleep, and can interfere with the neurochemicals responsible for regulation of sleep and wakefulness.

Comorbid conditions may further complicate the situation, with bedtime resistance seen in oppositional defiant disorder, insomnia and early awakening in depression, and night waking in anxiety disorders.

A subset of children with ADHD may have a primary sleep dysfunction involving homeostatic dysregulation, she said.

"But no sleep medications are approved for use in the pediatric population, which some of us have been trying to change," she said. This has proved difficult, at least in part because of the perception that insomnia in ADHD children is largely a parent-driven complaint. "It has been very difficult to convince the Food and Drug Administration that there is a need for these," Dr. Owens said.

The lack of approved drugs leaves clinicians relying on drugs that are less than effective and those that may have problematic side effects and questionable long-term safety.

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Preliminary data from a recent survey of 1,271 practicing members of the American Academy of Child and Adolescent Psychiatry suggest that 51% use insomnia medications in more than half of their ADHD patients, she said.

On the list of drugs used, clonidine (Catapres) topped the list, with 86%, followed by antihistamines, at 67%.

The central $_2$-agonist clonidine has various effects on sleep architecture, including slowing sleep-onset latency, increasing slow-wave sleep, and decreasing REM sleep, she said. Its side effects include hypotension, bradycardia, anticholinergic effects, and dysphoria. It can interact with CNS depressants and stimulants, and tolerance often develops.

"I don't have a lot of arguments to suggest that other things are much better, but I do think there are some problems with this drug," Dr. Owens said. Interestingly, recent reports have identified a 10-fold increase in overdoses seen in emergency rooms, she said.

Antihistamines generally are viewed as benign by parents and physicians, and they are used quite often in cases when sleep-onset latency problems are less severe. "But they're not terribly effective," she said.

Trazodone (Desyrel) is also used, though it tends to cause morning hangover. Benzodiazepines are little used in children, nor are zolpidem (Ambien) and zaleplon (Sonata), although the latter appear to be safe and well tolerated in adults and have little effect on sleep architecture.

"We worry about sleep architecture in children because if slow-wave sleep is suppressed, it can alter their production of growth hormone," she said.

Melatonin is being evaluated as a possible sleep aid for children, but much more information is needed before this dietary supplement can be recommended. ■