Latency Test Costly, but Best in Daytime Sleepiness

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RANCHO MIRAGE, CALIF. — In diagnosing a child with an extreme case of daytime sleepiness, there’s no good substitute for the multiple sleep latency test, Dr. Timothy F. Hoban said at a conference on sleep disorders in infancy and childhood sponsored by the Annenberg Center for Health Sciences.

Although a simple clinical evaluation can provide a fairly good indication as to whether the child has daytime sleepiness, it’s often difficult to estimate how severe the problem is. “The multiple sleep latency test (MSLT) can help answer that question in an objective way that’s been standardized and well validated,” said Dr. Hoban of the sleep disorders center at the University of Michigan in Ann Arbor.

Unlike certain questionnaire-based assessments, the MSLT has been validated in children, and provides reliable results as long as the child is at least 6 or 7 years old. However, the test is expensive and time consuming to perform and must be conducted in a sleep lab. The MSLT may be useful when a child has excessive daytime sleepiness but the clinical history, examination, and polysomnography reveal no specific cause. Dr. Hoban recommended the use of the MSLT in evaluations of sleep-disordered breathing, circadian rhythm disorders, narcolepsy, and other disorders of excessive sleepiness.

Developed initially at Stanford (Calif.) University in the 1970s, the MSLT has a simple premise: People who are sleepy will fall asleep faster than those who are not. After a night of polysomnography to screen for some sleep disruptors and to ensure that the patient has had a good night’s sleep, the child is given four or five chances to nap in a dark, quiet environment with each nap separated by about 2 hours. If the child fails to fall asleep (as measured by EEG tracings) within 20 minutes, the nap opportunity ends. Otherwise the child is allowed to sleep for 15 minutes following the first epoch of sleep.

In addition to the latency of sleep, the MSLT records the presence of sleep-onset REM periods (SOREMPs). The presence of SOREMPs correlates strongly with the presence of narcolepsy. Narcoleptic patients also typically have a sleep latency of 5 minutes or less.

Normal adults have a sleep latency of about 15 minutes, but normal latencies in children can be much longer. Detailed studies have correlated multiple factors with this latency.

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