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LETTERS TO THE EDITOR

Predictors of Obstructive Sleep Apnea on Home Sleep Apnea Test After a Negative Attended Polysomnography: Not So Fast

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I read the article by Lipatov et al.[1] with interest. The authors question the current recommendations for repeat testing after a negative polysomnography (PSG). They suggest repeat testing using a home sleep apnea test (HSAT) in older patients with hypertension be considered if initial PSG is negative for obstructive sleep apnea (OSA) and there is a high clinical suspicion. They do make a paradoxical recommendation, as with a high clinical suspicion an HSAT (not PSG) can be used in the absence of comorbid conditions per American Academy of Sleep Medicine (AASM) guidelines.

The authors base their recommendations on a retrospective study. They do not report the reason why the patients underwent PSG instead of HSAT, as only 8.5% of patients had congestive heart failure as the condition for undergoing PSG. This is contrary to the current guidelines regarding the type of sleep study that needs to be performed.[2]

They do report that when a sleep physician ordered an HSAT based on clinical suspicion after negative PSG, OSA was diagnosed 83.7% of the time. The diagnosis of OSA included all severities (mild, moderate, and severe), with most patients having a diagnosis of mild OSA (64%). They do report that the time between PSG and HSAT ranged from 1 to 1,043 days with a mean of 84.7 days, which by itself may be responsible for discordant results between PSG and HSAT. Prasad et al.[3] as well as others report as much as 31% of the night-to-night variability, which was not considered in their study.

In their zeal to promote the HSAT, the authors fail to prove why PSG should not be the gold standard. The vast detailed parameters regarding sleep architecture obtained in PSG have clear clinical implications. Currently AASM guidelines do recommend HSAT in most patients as the first choice of sleep test in appropriately selected patients. The limitations of PSG such as "first-night phenomenon"[4] are well understood. The results of HSAT (true negative) can also be a false positive test (when compared to PSG), which was not considered by the authors. The only way to determine whether there is overall agreement between PSG and HSAT is to perform a clinical study prospectively using PSG and HSAT at the same time. To mitigate first-night phenomenon, a type II sleep study at home (type II monitors have a minimum of seven channels, for example, electroencephalography, electrooculography, electromyography, electrocardiography-heart rate, airflow, breathing/respiratory effort, SaO_2) can be used. This type of device monitors sleep staging, so that apnea-hypopnea index can be calculated. Controlled trials of different HSAT devices in direct comparison with one another is needed. The role of HSAT in value-based disease management is already taking place all over the nation, with many sleep centers closing.[5] In both clinical research as well as in complex patients, PSG should remain the gold standard test until another universally accepted test is available.

CITATION

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DISCLOSURE STATEMENT

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