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- SLEEP 2017: 31st Annual Meeting of the Associated Professional Sleep Societies

Sleep-Disordered Breathing Linked to Persistent Teen Depression

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BOSTON — Sleep-disordered breathing (SDB) may play a role in persistent depressive symptoms and poor response to standard pharmacologic treatments in adolescents, new research suggests.

Screening adolescents with treatment-resistant depression (TRD) for SBD "may be clinically valuable, since SDB is readily treatable," said Teena Chase, MD, PhD, Department of Psychiatry, University of Ottawa, Ontario, Canada, during her oral presentation here at SLEEP 2017: 31st Annual Meeting of the Associated Professional Sleep Societies.

Diagnosing and treating SDB may improve clinical outcomes early in the course of mood disorders in adolescents and lead to better long-term prognosis, she said.

The prevalence of SDB in the adolescents is estimated to range from 1% to 7%, but data are inconsistent. Major depressive disorder affects 5% to 8% of adolescents, and 40% may be treatment resistant. A recent meta-analysis found a significant relationship between depressive symptoms and obstructive sleep apnea (OSA) in children (*J Clin Sleep Med.* 2013;9:1213-1220).

To investigate further, Dr Chase and colleagues did a retrospective chart review, exploring breathing disturbances during sleep assessed with polysomnography in adolescents with TRD and their relation to depressive symptom severity.

Participants were 20 outpatient adolescents with TRD (no response to two 6-week trials of antidepressants) and 20 healthy controls matched for sex and age. The severity of depressive symptoms was rated on the Beck Depression Inventory (BDI-II).

They found that rates of SDB (respiratory disturbance index > 10) were significantly higher in the TRD group than the control group (50% vs 15%; $P = .018$). In the TRD group, respiratory disturbances correlated with depressive symptoms (controlling for body mass index, $r = 0.59$; $P = .007$).

Interventional studies are required to determine whether SDB treatment could improve clinical outcomes early in mood disorders, Dr Chase said.

Good Observation, Not a Surprise

Reached for comment, Melisa Moore, PhD, psychologist, Department of Child and Adolescent Psychiatry and Behavioral Sciences, Children's Hospital of Philadelphia in Pennsylvania, said the relationship between both quality and quantity of sleep and depressive symptoms is well known.

"What this study adds is a specific cause for poor sleep quality (OSA) and its relationship to a specific kind of depression (TRD)," she said.

"Because it is a small, retrospective, case-controlled study, we have to be careful about jumping to conclusions that are beyond the study findings. Given that context (in addition to the larger body of research on sleep and depression in adolescents), what I think we can say is that every mental health professional should be screening for sleep disorders as a standard practice," Dr Moore said.

Sanjeev Kothare, MD, director of pediatric sleep medicine at the NYU Langone Comprehensive Epilepsy Center-Sleep Center in New York City, said this is a "good observation and not surprising. If you have sleep-disordered breathing and you don't sleep well at night, you will be depressed. It's kind of a two-sided thing; if you fix one, the other will get fixed, but if you don't fix one, the other is going to get worse, so it makes complete sense."

"The problem is these teenagers are either seen by psychiatric professionals or pediatricians. Pediatricians may screen for a sleep disorder, or maybe sometimes for depression but not for both. I do, but most doctors don't," added Dr Kothare, who was not involved in the study.

"I would treat the sleep apnea first and see if the mood improves and then take it from there. It would be nice to have a prospective study where you treat one symptom, in this case sleep apnea, and see if depression improves," Dr Kothare said.

The study had no commercial funding. Dr Chase, Dr Moore, and Dr Kothare have disclosed no relevant financial relationships.

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