Sleep apnea may increase the risk of adverse pregnancy outcomes

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Sleep apnea is associated with an increased risk of adverse pregnancy outcomes, suggests a research abstract that will be presented Monday, June 13, in Minneapolis, Minn., at SLEEP 2011, the 25th Anniversary Meeting of the Associated Professional Sleep Societies LLC (APSS).

Results show that women with severe sleep apnea had the highest incidence of adverse pregnancy outcomes. This increased prevalence was principally driven by a higher incidence of gestational diabetes and early preterm birth.

The authors noted that sleep apnea has been associated with heart disease, metabolic syndrome and mortality in non-pregnant populations. However, few studies have examined the relationship between sleep apnea in pregnancy and adverse obstetrical outcomes.

"Our findings suggest that moderate to severe sleep-disordered breathing may be associated with adverse pregnancy outcomes, particularly gestational diabetes and preterm birth," said principal investigator Dr. Francesca L. Facco, assistant professor in the department of obstetrics and gynecology at Northwestern University in Chicago. "However, it is unclear if sleep-disordered breathing is a risk factor for adverse pregnancy outcomes independent of obesity."

According to the American Academy of Sleep Medicine, sleep apnea is a form of sleep-disordered breathing that involves partial reductions (hypopneas) and complete pauses (apneas) in breathing during sleep. The most common form of sleep apnea is obstructive sleep apnea, which occurs when the muscles relax during sleep, causing soft tissue in the back of the throat to collapse and block the upper airway. The breathing pauses that result can produce abrupt reductions in blood oxygen saturation and reduce blood flow to the brain. Most people with OSA snore loudly and frequently, and they often experience excessive daytime sleepiness.

Facco and colleagues searched a medical records database and identified 150 women who had received a sleep evaluation by overnight polysomnography and had given birth between January 2000 and June 2009. About 87 percent of the women were overweight or obese at delivery with a body mass index of 25 or more. Seventy-two percent of the women had undergone the sleep study within three years of their delivery. For women with more than one pregnancy during the study period, the first pregnancy with outcome information was selected for analysis.

Women with an apnea-hypopnea index of five to 14.9 breathing pauses per hour of sleep were considered to have mild to moderate sleep apnea, and those with an AHI of 15 or more were classified as having severe sleep apnea. The analysis assessed the associations between sleep apnea and three adverse pregnancy outcomes: pregnancy induced hypertension, gestational diabetes, and early preterm birth at 34 weeks or less.

Facco added that more research is needed to clarify how sleep apnea and obesity interact with maternal and neonatal health.

"Further studies, principally large prospective studies utilizing objective measures of sleep-disordered breathing, are needed to confirm this relationship, and to examine the interaction between sleep-disordered breathing and body mass index," said Facco. "If a relationship is confirmed, further studies would be needed to ascertain the role of treatment of sleep-disordered breathing in pregnancy."

The treatment of choice for obstructive sleep apnea is CPAP therapy, which provides a steady stream of air through a mask that is worn during sleep. This airflow keeps the airway open to prevent pauses in breathing and restore normal oxygen

levels. Help for people with sleep apnea is available at more than 2,200 AASM-accredited sleep disorders centers across the U.S.

Provided by American Academy of Sleep Medicine