

P202. Obstructive sleep apnea is a risk factor of preterm delivery

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Context: Preterm birth is a global problem and the most common adverse pregnancy outcome. Although there is identified several risk factors, the underlying etiology is still unknown. It's known that poor sleep quality, including sleeping disorders, correlate with adverse health outcomes. Therefore, we evaluated whether obstructive sleep apnea (OSA) is associated with preterm birth.

Objective: To investigate the relationship between obstructive sleep apnea (OSA) in pregnant women and pregnancy outcomes, including preterm delivery.

Method and Intervention: A survey of women up to one year after delivery was conducted. The self-composed questionnaire consisting of 65 questions, regarding demographic data, chronic diseases, pregnancy complications, sleeping habits, sleeping disorders occurring before and during pregnancy, as also Berlin Questionnaire (BQ) for OSA detection, was distributed via internet between July and August 2017. The questions concerned the last pregnancy. Pregnancy complications were compared between the groups of women with and without OSA according to the BQ results.

Patients: 5898 woman up to one year after delivery divided into two groups: without (5703) and with OSA during last pregnancy (195).

Main Outcome Measures: The primary outcome was preterm delivery. Secondary outcomes included low birth weight, occurrence of gestational diabetes and cholestasis as also mode of delivery.

Results: 5898 women completed the questionnaire. 195 (3.3%) of them suffered from OSA during pregnancy according to the BQ. Women suffering from OSA were significantly older (mean 28.2, SD 5.2 vs 29.1, SD 4.7 years; $p=0.001$), had higher body mass index (66.9, SD 13.3 vs 79.5, SD 16.5 kg/m²; $p<0.0001$) and gained more kilograms during pregnancy (14.7, SD 6.7 vs 15.8, SD 7.8 kg; $p=0.003$). They delivered significantly earlier (39.2, SD 1.9 vs 38.8, SD 2.2; $p=0.003$) newborns with lower birth weight (3.4, SD 0.5 vs 3.3, SD 0.6 kg; $p<0.0001$). OSA was associated with significantly higher incidence of preterm delivery (11.7% vs 6.1%; $p=0.001$) and low birth weight (9.2% vs 5.3%; $p=0.0038$). There were no differences in the occurrence of gestational diabetes or cholestasis of pregnancy between the groups. Women with OSA delivered significantly more often via caesarian section than women without OSA (58% vs 34%; $p<0.0001$).

Conclusions: Obstructive sleep apnea during pregnancy is a risk factor of preterm delivery and newborns' low birth weight.

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