Gestational Diabetes Mellitus and Sleep-Disordered Breathing

Abstract

OBJECTIVE:

To examine the link between gestational diabetes mellitus (GDM) and sleep-disordered breathing using complete polysomnography and questionnaires in a case–control study of pregnant women.

METHODS:

Pregnant women (body mass index [BMI] less than 35, no prior diabetes or hypertension) were eligible as cases (n=26) if diagnosed with GDM by routine 75-g oral glucose tolerance test. Women in the control group without GDM (n=26) were matched for gestational age at polysomnography, BMI, and age. Polysomnography were conducted at home at 24–32 weeks of gestation. Sleepiness score (Epworth Sleepiness Scale), subjective sleep quality (Pittsburgh Sleep Quality Index), risk for depression (Edinburgh Postnatal Depression Scale), and restless legs syndrome were assessed by questionnaire.

RESULTS:

Primary outcome apnea–hypopnea index (4.2±3.9 events per hour in women in the case group compared with 3.8±2.3 events per hour in women in the control group) as well as other objective and subjective sleep measures, including oxygen desaturation index, snoring, and flow limitation, were not significantly different between groups. Sleepiness was greater in women in the case group than in women in the control group (9.8±3.6 compared with 7.2±3.6, P=.05). Additionally, 23% of women in the case group compared with 0% of women in the control group (P<.01)

reported an Edinburgh Scale score of at least 10 (suggesting significant depression) and 46% of women with GDM reported restless legs syndrome compared to 19% of women in the control group (P=.07).

CONCLUSION:

There was no association between GDM and sleep-disordered breathing in pregnant women with prepregnancy BMIs under 35 and no medical comorbidities.

LEVEL OF EVIDENCE:

II