

# Use of atypical antipsychotics in pregnancy and maternal gestational diabetes.

Alice Panchaud<sup>a</sup>, Sonia Hernandez-Diaz<sup>a</sup>, Marlene P. Freeman<sup>b</sup>, Adele Viguera<sup>c</sup>, Sarah Mac Donald<sup>a</sup>, Alexandra Z. Sosinsky<sup>b</sup>, Lee S. Cohen<sup>b</sup>

<sup>a</sup>*Department of Epidemiology, Harvard School of Public Health, Boston, USA.*

<sup>b</sup>*Center for Women's Mental Health, Department of Psychiatry Massachusetts General Hospital, Harvard Medical School, Boston, USA.*

<sup>c</sup>*Cleveland Clinic, Cleveland Clinic Neurological Institute, Cleveland, OH, USA.*

## Abstract

**Background:** Second generation antipsychotic medications (SGAs) are widely used by reproductive-age women to treat a number of psychiatric illnesses. Some SGAs have been associated with an increased risk of developing diabetes, although information regarding their diabetogenic effect in pregnant women is scarce.

**Objective:** To evaluate the risk of gestational diabetes (GDM) among women treated with SGA.

**Method:** The Massachusetts General Hospital (MGH) National Pregnancy Registry for Atypical Antipsychotics (NPRAA) collects data on drug use, pregnancy outcomes, and other characteristics from pregnant women, ages 18-45 years, using 3 phone interviews conducted at (1) enrollment during pregnancy, (2) 7 months' gestation, and (3) 2-3 months postpartum. Information on GDM was abstracted from obstetric and delivery medical records. The study population was restricted to women without pre-gestational diabetes. Pregnancies exposed to SGAs during the first trimester were compared with a reference group of women with psychiatric conditions but not treated with SGAs during pregnancy. Generalized linear models were used to estimate adjusted odds ratios (OR) and 95% confidence intervals (CI) for GDM.

**Results:** Of 303 women exposed to SGAs, 33 (10.9%) had GDM compared to 16 (10.7%) in the 149 non-exposed women. The crude OR of GDM for SGA was 1.02 (95% CI, 0.54-1.91). After adjustment for maternal age, race, marital status, employment status, level of education, smoking, and primary psychiatric diagnosis, the OR moved to 0.79 (0.40-1.56).

**Conclusions:** Findings did not suggest an increased risk of GDM associated with exposure to SGAs during pregnancy in women who had used SGA before pregnancy without developing diabetes, compared to psychiatrically ill women who were not exposed to SGA.

**Trial registration:** ClinicalTrials.gov identifier: NCT01246765.

Published in: [J Psychiatr Res.](#) 2017 Dec;95:84-90. doi: 10.1016/j.jpsychires.2017.07.025.

Contact: [Alice.Panchaud@chuv.ch](mailto:Alice.Panchaud@chuv.ch)