

Oral Session 5

Research Study

Title: "Associations Between Urinary Tract Infections in Pregnant Women and Small for Gestational Age Infants"

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Category: Obstetrics & Gynecology; Pediatrics

Keywords: UTI; SGA Infant; Pregnancy; PRAMS; Prenatal care

Introduction and Objective. Small for gestational age (SGA) infants are at increased risk for developmental and neurologic disorders. This is one of many reasons why screening for size is a standard practice in the prenatal care visit. Being able to identify risk factors for having an SGA infant is an important public health concern which should be further investigated in order to prevent future adverse neonatal outcomes. This study focused on identifying if there is an association between urinary tract infections (UTI) in pregnancy and having an SGA infant

Methods. We used the CDC's Pregnancy Risk Assessment Monitoring System (PRAMS) database which gathers state-specific, population-based data on random samples of pregnant women such as their attitudes and experiences before, during and after pregnancy. This was a retrospective cohort study limited to at-term singleton pregnancies in PRAMS phases 6, 7, and 8. The exposure was having a UTI in pregnancy and the outcome was an SGA infant. The association between the exposure and outcome was analyzed obtaining odds ratios (OR) and 95% confidence intervals (CI) through bivariate analyses and logistic regression.

Results. Our study sample consisted of 130,156 US women who responded to questions regarding UTI during pregnancy and SGA infant. The unadjusted binary logistic regression showed that women with a UTI in pregnancy had 20% increased odds of having an SGA infant (OR 1.2, 95% CI 1.1-1.3, $p < 0.001$). However, after adjusting for confounders, there was no significant association between our outcome and exposure (aOR, 1.1, 95% CI 0.9-1.2 $p = 0.064$). Other variables found to be independently associated with SGA infants include age, race, education, smoking, prenatal care, gestational diabetes, hypertension in pregnancy and history of diabetes.

Conclusions-Implications. This study found that there's no association between UTI in pregnancy and having an SGA infant. Additional research is needed to identify if the type, the frequency, or the timing of UTI within the pregnancy have an association with SGA infants. Also, various covariates were found to be associated with SGA, which may be of interest for future research to confirm if such associations exist.