**Prenatal Maternal Smoking Increases Risk for Tourette’s Disorder, Chronic Tic Disorder in Offspring**

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By Frances Morin

NEW YORK -- October 31, 2016 -- Women who smoke while pregnant may be putting their offspring at risk for Tourette’s disorder and chronic tic disorder, according to a study presented here on October 27 at the 63rd Annual Meeting of the American Academy of Child and Adolescent Psychiatry (AACAP).

“Our study is the largest to date to investigate the association between prenatal maternal smoking and childhood risk for Tourette’s disorder, chronic tic disorder, and to suggest a dose-response relationship in the association of prenatal maternal smoking with tic disorders,” wrote Dorothy E. Grice, MD, Icahn School of Medicine at Mount Sinai, New York, New York, and colleagues in their presentation.

While prenatal maternal smoking is associated with a variety of neuropsychiatric disorders, including schizophrenia, attention-deficit/hyperactivity disorder (ADHD), and autism, research on a link to Tourette’s or chronic tic disorder is lacking.

For the current study, researchers evaluated data on 73,073 singleton pregnancies from the Danish National Birth Cohort. After adjusting for risk factors including maternal psychiatric history and socioeconomic status, and stratifying according to light or heavy smoking, the results showed that heavy smoking was associated with as much as a 66% increased risk for developing Tourette’s disorder and chronic tic disorder (adjusted hazard ratio [HR] = 1.66; 95% confidence interval [CI], 1.17-2.35).

A dose-response relationship was indicated, with the risk reduced with light smoking (adjusted HR = 1.01; 95% CI, 0.77-1.33) and for any smoking (adjusted HR = 1.18 (95% CI, 0.94-1.48).

In looking at comorbid psychiatric disorders, the authors found that heavy smoking was associated with a 2-fold increased risk of Tourette’s disorder and chronic tic disorder with comorbid ADHD. Heavy and light smoking were both associated with more than a 2-fold increased risk of Tourette’s disorder and chronic tic disorder with any non-ADHD psychiatric comorbidity.

“Prenatal maternal smoking was associated with increased risk of Tourette’s disorder and chronic tic disorder even after correction for important potential confounders, including maternal psychiatric history, socioeconomic status, and partner smoking,” the authors wrote.

They added that the findings confirm previous evidence that prenatal maternal smoking, particularly heavy smoking, increases the risk for Tourette’s disorder with comorbid ADHD.

“Importantly, however, we show that the risk relationship is not limited to ADHD but, rather, that prenatal maternal smoking increases risk for complex presentations of Tourette’s disorder and chronic tic disorder, plus any comorbid psychiatric disorder,” the authors wrote. “Our findings point to a pathway linking prenatal tobacco exposure and altered brain development.”

[Presentation title: Prenatal Maternal Smoking and Increased Risk for Tourette’s Disorder and Chronic Tic Disorder. Symposium 1.4]