Antidepressant Use in Pregnancy and the Risk of Attention Deficit with or without Hyperactivity Disorder in Children.

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Abstract

BACKGROUND:
The association between antidepressant (AD) use during pregnancy and the risk of attention deficit with or without hyperactivity disorder (ADHD) in children is debated. We investigated the risk of ADHD associated with overall and class-specific antidepressant exposure in utero.

METHODS:
We designed a register-based cohort study using the Quebec Pregnancy/Children Cohort (QPC). A total of 144,406 singletons full-term live-born from 1998 to 2009 were included. Cox proportional hazards regression models were used to estimate unadjusted and adjusted hazard ratio with 95% confidence intervals (CI).

RESULTS:
During 542,897 person-years of follow-up, 4,564 (3.2%) infants were identified with ADHD. The mean age at first ADHD diagnosis was 6.3 ± 2.3 years (range 0-11 years), and the mean age at first ADHD medication use was 7.0 ± 1.5 years. Adjusting for potential confounders, including maternal history of depression/anxiety and ADHD, AD use during the 2nd or 3rd trimester of pregnancy was associated with an increased risk of (HR 1.3, 95% CI 1.0, 1.6; 134 exposed cases). More specifically, tricyclic use was associated with an increased risk of ADHD (HR 1.8, 95% CI 1.0, 3.1; 16 exposed cases); SSRI and SNRI use were not associated with increased ADHD risk.

CONCLUSION:
This study suggests that AD use during the 2nd and 3rd trimester of pregnancy, specifically tricyclics, is an independent risk factor for ADHD in children above and beyond the risk associated with maternal depression/anxiety or ADHD. However, residual confounding by indication severity could not be completely ruled out.