Prenatal Paternal Selective Serotonin Reuptake Inhibitors Use and Risk of ADHD in Offspring

Fen Yang, Hong Liang, Jianping Chen, Maohua Miao, Wei Yuan, Mette Nørgaard, Jiong Li

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Abstract

OBJECTIVES:
It has been shown that maternal prenatal exposure to selective serotonin reuptake inhibitors (SSRIs) may be a risk factor for attention-deficit/hyperactivity disorder (ADHD) in offspring. Our goal was to examine whether paternal SSRI use before conception increases the risk of ADHD in offspring.

METHODS:
On the basis of Danish national registers, we conducted a cohort study of 781 470 singletons born between 1996 and 2008 with follow-up throughout 2013. The children whose fathers used SSRIs during the last 3 months before conception were identified as the exposed. Cox regression was used to estimate the hazard ratio (HR) of ADHD.

RESULTS:
A total of 7216 children (0.92%) were born to fathers who had used SSRIs during the last 3 months before conception. There were 12 520 children diagnosed with ADHD. Compared with unexposed children, the exposed had a 26% increased risk of ADHD (HR = 1.26, 95% confidence interval [CI]: 1.06–1.51) after adjusting for potential confounders. When extending the exposure window to 1 year before conception, paternal use of SSRIs only during the period of 12 to 3 months before conception was associated with the HR of 1.35 (95% CI: 1.10–1.66), whereas paternal use of SSRIs only during the last 3 months before conception was associated with a similarly increased risk of ADHD (adjusted HR = 1.31, 95% CI: 0.95–1.82).

CONCLUSIONS:
The mildly increased risk of ADHD in offspring associated with paternal SSRI use before conception could probably be due to the underlying indications related to SSRI use.