

In utero exposure to ADHD medication and long-term offspring outcomes

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Commentary by Dr. Sara Binder*: *Many women are entering reproductive age with a diagnosis of Attention Deficit Hyperactivity Disorder (ADHD). As a result, it is important to clarify the risk/benefit of ADHD treatment during pregnancy. This study included over one million babies from Danish national registries between 1998-2015. The authors looked at the connection between ADHD medications (methylphenidate, amphetamine, modafinil, atomoxetine and clonidine) and adverse outcomes with a focus on neurodevelopment and growth. The main outcomes included neurodevelopmental disorders, vision or hearing impairment, epilepsy, seizures, or growth impairment. They compared outcomes in offspring of those who maintained treatment during pregnancy (898) to those who discontinued treatment prior to pregnancy (1270). The two populations were adjusted for demographic and psychiatric characteristics of the mother. The authors found no increased risk of any neurodevelopmental disorders and growth did not differ between groups. The conclusion of this study was reassuring for individuals who require ADHD treatment throughout pregnancy in order to maintain adequate symptom control and avoid functional impairment.*

ABSTRACT

Attention Deficit Hyperactivity Disorder (ADHD) medication is increasingly being used during pregnancy. Concerns have been raised as to whether ADHD medication has long-term adverse effects on the offspring. The authors investigated whether in utero exposure to ADHD medication was associated with adverse long-term neurodevelopmental and growth outcomes in offspring. The population-based cohort study in the Danish national registers included 1,068,073 liveborn singletons from 1998 to 2015 followed until any developmental diagnosis, death, emigration, or December 31, 2018. Children of mothers who continued ADHD medication (methylphenidate, amphetamine, dexamphetamine, lisdexamphetamine, modafinil, atomoxetine, clonidine) during pregnancy and children of mothers who discontinued ADHD medication before pregnancy were compared using Cox regression. Main outcomes were neurodevelopmental psychiatric disorders, impairments in vision or hearing, epilepsy, seizures, or growth impairment during childhood or adolescence. In total, 898 children were exposed to ADHD medication during pregnancy compared to 1270 children whose mothers discontinued ADHD medication before pregnancy. After adjustment for demographic and psychiatric characteristics of the mother, no increased risk of any offspring developmental disorders was found combined (aHR 0.97, 95% CI 0.81 to 1.17) or for separate subcategories. Similarly, no increased risk was found for any sub-categories of outcomes in the negative control or sibling controlled analyses. Neurodevelopment and growth in offspring do not differ based on antenatal exposure to ADHD medication. These findings provide reassurance for women with ADHD who depend on ADHD medication for daily functioning and who consider continuing medication in pregnancy.

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