Case-control study of attention-deficit hyperactivity disorder and maternal smoking, alcohol use, and drug use during pregnancy.

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OBJECTIVE: To address the putative association between attention-deficit hyperactivity disorder (ADHD) and prenatal exposure to maternal cigarette smoking, drugs of abuse, and alcohol attending to potential confounding by familial ADHD, maternal depression, conduct disorder, and indicators of social adversity in the environment. METHOD: A retrospective, hospital-based, case-control study was conducted with 280 ADHD cases and 242 non-ADHD controls of both genders. The case and control children and their relatives were systematically assessed with structured diagnostic interviews. Logistic regression analysis was used to determine the adjusted effect of prenatal exposure to substance use and ADHD. RESULTS: ADHD cases were 2.1 times (95% confidence interval = 1.1-5.5; p = .03) more likely to have been exposed to cigarettes and 2.5 times (95% confidence interval = 1.1-5.5; p = .03) more likely to have been exposed to alcohol in utero than were the non-ADHD control subjects. Adjustment by familial psychopathology, Rutter's indicators of social adversity, and comorbid conduct disorder did not account for the effect of prenatal exposure to alcohol or the products of cigarettes. CONCLUSIONS: ADHD may be an additional deleterious outcome associated with prenatal exposure to alcohol independently of the association between prenatal exposure to nicotine and smoke products and other familial risk factors for the disorder.