Examining the association between attention deficit hyperactivity disorder and substance use disorders: A familial risk analysis

Amy M. Yule, MaryKate Martelon, Stephen V. Faraone, Nicholas Carrellas, Timothy E. Wilens, Joseph Biederman

Journal of Psychiatric Research, October 2016
DOI: http://dx.doi.org/10.1016/j.jpsychires.2016.10.018

Abstract

Objective
The main aim of this study was to use familial risk analysis to examine the association between attention deficit hyperactivity disorder (ADHD) and substance use disorders (SUDs) attending to sex effects and the specificity of alcohol and drug use disorder risks.

Methods
Subjects were derived from two longitudinal case-control family studies of probands aged 6–17 years with and without DSM-III-R ADHD of both sexes and their first degree relatives followed from childhood onto young adult years. Cox proportional hazard models were used to estimate rates of ADHD and SUDs (any SUD, alcohol dependence, and drug dependence). Logistic regression was used to test both co-segregation and assortative mating.

Results
Our sample included 404 probands (ADHD: 112 boys and 96 girls; Control: 105 boys and 91 girls) and their 1336 relatives. SUDs in probands increased the risk for SUDs in relatives irrespective of ADHD status. The risk for dependence to drug or alcohol in relatives was non-specific. There was evidence that even in the absence of a SUD in the proband, ADHD by itself increased the risk of SUDs in relatives. Proband sex did not moderate the familial relationship between ADHD and SUDs. There was evidence of co-segregation between ADHD and SUD.

Conclusions
Findings indicate that various independent pathways are involved in the transmission of SUD in ADHD and that these risks were not moderated by proband sex. ADHD children and siblings should benefit from preventive and early intervention strategies to decrease their elevated risk for developing a SUD.