The Impact of Pharmacotherapy on Substance Use in Adolescents with Attention-Deficit/Hyperactivity Disorder: Variations Across Subtypes.

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Abstract

OBJECTIVE:
The primary purpose of this study was to investigate the impact of attention-deficit/hyperactivity disorder (ADHD) pharmacotherapy on the risk of substance use within each ADHD subtype.

METHODS:
The study used data from the National Comorbidity Survey-Adolescent supplement, a nationally representative sample of US adolescents (ages 13-18) collected from 6,483 adolescent-parent interviews conducted between 2001 and 2004. ADHD was categorised into three subtypes: ADHD-predominantly hyperactive-impulsive type (ADHD-H); ADHD-predominantly inattentive type (ADHD-I); and ADHD-combined type (ADHD-C) using Diagnostic and Statistical Manual of Mental Disorders-IV criteria. Substance use information was obtained from the adolescents’ interview. The impact of ADHD-pharmacotherapy on substance use was examined using multivariable logistic regression analysis.

RESULTS:
Among the adolescents with ADHD, ADHD pharmacotherapy significantly associated with reduced risk of substance use (OR = 0.53, 95%CI [0.31-0.90]); with regards to ADHD subtypes, ADHD pharmacotherapy is negatively associated with substance use in adolescents with ADHD-C (OR = 0.53, 95%CI [0.24-0.97]) and those with ADHD-H (OR = 0.23, 95% CI [0.07-0.78]), but it did not have statistically significant effect on risk of substance use in those with ADHD-I subtype (OR = 0.49, 95%CI [0.17-1.39]). Among the group who never received ADHD-pharmacotherapy before the interview, individuals with ADHD-H and ADHD-C had a similar risk of substance use compared to adolescents with ADHD-I (ADHD-C: OR = 1.5, 95%CI [0.77-2.95] and ADHD-H: OR = 2.10, 95%CI [0.87-4.95]).

CONCLUSIONS:
Adolescents with ADHD were equally susceptible to future substance use disregard their ADHD subtypes. Receipt of pharmacotherapy could decrease the risk of substance use in adolescents with ADHD-H and ADHD-C, but it may not affect the risk of substance use among individuals with ADHD-I.