Association between AD and attention deficit hyperactivity disorder in US Children and Adults.

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Abstract

BACKGROUND:
Atopic dermatitis (AD) is associated with chronic itch, allergic disease and sleep disturbance, all of which might increase the risk of attention deficit (hyperactivity) disorder (ADD/ADHD). Previous analyses have found a consistent association between AD and ADD/ADHD, though the underlying factors contributing to such an association remain underexplored. Additionally, the relationship has been underexplored in adults.

OBJECTIVES:
To determine if childhood and adult AD and AD severity are associated with ADD/ADHD and to delineate the factors contributing to such an association.

METHODS:
We analyzed data on 354,416 children age 2-17 and 34,613 adults age 18+ from nineteen US population-based surveys, including the National Health Interview Survey 1997-2013 and the National Survey of Children's Health 2003/4 and 2007/8.

RESULTS:
In multivariate models adjusting for age, sex, sociodemographics, allergic disease, and healthcare utilization, AD was associated with ADD/ADHD in both children (adjusted OR [95% CI], 1.14 [1.03-1.26]) and adults (1.61 [1.25-2.06]). Children with both severe AD and only 0-3 nights of adequate sleep had much higher odds of ADD/ADHD (16.83 [7.02-40.33]) than those with 0-3 nights of adequate sleep (1.83 [1.47-2.26]) or mild-moderate AD alone (1.56 [1.22-1.99]). AD was most strongly associated with severe ADHD. AD unaccompanied by other allergic disease, was also associated with increased risk of ADD/ADHD in children. Among children with AD, history of anemia, headaches, and obesity were associated with even higher odds of ADD/ADHD. Asthma, insomnia, and headaches increased the odds of ADHD in adults with AD, though underweight BMI was protective.

CONCLUSIONS:
AD is associated with increased odds ADD/ADHD in adults and children. Several factors increase the risk of ADHD in adults and children with AD. This article is protected by copyright. All rights reserved.