Lack of an association between attention-deficit/hyperactivity disorder (ADHD) and amyotrophic lateral sclerosis (ALS)

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Abstract

Background
Lulé, Ludolph, and Ludolph (2008) hypothesized that there may be a pathophysiological link between attention-deficit/hyperactivity disorder (ADHD) and amyotrophic lateral sclerosis (ALS). They summarized common clinical features, specifically enhanced physical and psychological activity, which have been described typically for ADHD patients and also as common personality traits before disease onset in patients with ALS.

Methods
We assessed the lifetime prevalence rate of ADHD in 104 patients with ALS using valid self-report instruments for ADHD symptoms in childhood (WURS-k) and adulthood (ADHD-SB). Results were compared with a population-based sample (n = 2069) and with patients with Parkinson's disease (PD, n = 52) using regression analyses and adjusting for sociodemographic differences. Physical activity was assessed by the 21-item exercise dependency scale (EDS-21).

Results
ALS patients reported a lower prevalence of childhood ADHD compared to the general population. Both clinical groups reported significantly lower scores on the WURS-k scale and the attention deficit subscale of the ADHD-SB. The EDS-21 showed significantly longer exercise times in ALS and PD patients.

Conclusions
We could not show that ADHD is more common in ALS patients. However, our results revealed shared personality traits in ALS and PD with lower rates of premorbid attention deficit symptoms and increased physical activity.