Association of Parkinsons disease with symptoms of ADHD in childhood.


Source

Department of Child and Adolescent Psychiatry and Psychotherapy, University of Würzburg, Würzburg, Germany.

Citation:


Abstract

Methylphenidate (MPH) is a centrally acting (psycho)stimulant which reversibly blocks the dopamine re-uptake transporter. At present MPH is one of the most frequently prescribed drugs for the symptomatic treatment of attention deficit hyperactivity disorder (ADHD). Although MPH has been in use for about 50 years, there is no information available concerning the long-term benefits and risks of medication. Based on experiments in rats it has been suggested that MPH treatment may affect the maturation of central dopaminergic systems and may be a risk factor for the development of Parkinson's disease (PD).

The aim of the present case-control study was to gain information about

(1) ADHD-like symptoms that may precede PD motor symptoms, and

(2) the exposure to psychostimulants in childhood.

We used a German short version of the Wender Utah Rating Scale (WURS-k, Retz-Junginger et al., 2002) which is a reliable measure for the retrospective diagnosis of childhood ADHD, and another questionnaire including a rating scale for symptoms of ADHD in childhood (Q-ADHD-Child) according to DSM-IV and ICD-10 criteria.

A total of 92 patients with PD and 115 control subjects were enrolled in this study. Ninety-six percentage of PD patients (N = 88) completed the two rating scales. The data of these patients and of 88 randomly selected individuals of the controls were included for analysis.

In the WURS-k, the PD group showed higher total scores compared to control subjects. In addition, we found increased scores in PD patients regarding the items attention deficit, hyperactivity and anxious and depressive symptoms, but not regarding impulsivity, oppositional behaviour and deficits in social adaptation.

The results of the Q-ADHD-Child also showed increased scores in PD patients regarding attention deficit and hyperactivity.
However, one cannot conclude that the PD patients enrolled in this study had suffered from childhood ADHD, since the average total WURS-k score of (14.4) was far below the cut-off score of 30 or higher which is considered to identify childhood ADHD.

Finally, we found no evidence that PD patients had been exposed to psychostimulants such as MPH and amphetamine.

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