The effect of methylphenidate-OROS® on the narrative ability of children with attention-deficit hyperactivity disorder.

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Abstract

BACKGROUND AND OBJECTIVE:
Children with attention-deficit hyperactivity disorder (ADHD) experience difficulty with expressive language, including form (e.g. grammatical construction) and content (e.g. coherence). The current study aimed to investigate the effect of methylphenidate-Osmotic Release Oral System® (MPH-OROS®) on the narrative ability of children with ADHD and language impairment, through the analysis of microstructure and macrostructure narrative elements.

METHOD:
In a single group off-on medication test design, narratives were obtained from 12 children with ADHD, aged 7-13 years, using wordless picture books. For microstructure, number of words, type-token ratio and mean length of utterance were derived from narrative samples using Systematic Analysis of Language Transcripts conventions. For macrostructure, the narratives were coded according to the Narrative Scoring Scheme, which includes seven narrative characteristics, as well as a composite score reflecting the child's overall narrative ability.

RESULTS:
The administration of MPH-OROS® resulted in a significant difference in certain aspects of language macrostructure: cohesion and overall narrative ability. Little effect was noted in microstructure elements.

CONCLUSION:
We observed a positive effect of stimulant medication on the macrostructure, but not on the microstructure, of narrative production. Although stimulant medication improves attention and concentration, it does not improve all aspects of language abilities in children with ADHD. Language difficulties associated with ADHD-related to language content and use may be more responsive to stimulant medication than language form, which is likely to be affected by cascading effects of inattention, hyperactivity and impulsivity beginning very early in life and to progress over a more protracted period. Therefore, a combination of treatments is advocated to ensure that children with ADHD are successful in reaching their full potential.