Proprioceptive diagnostics in attention deficit hyperactivity disorder.

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Abstract
BACKGROUND:
Previous studies have shown the importance of motor control in children with attention deficit hyperactivity disorder. The objective of our study was to verify any statistically significant differences of fine motor performance in children with attention deficit hyperactivity disorder (ADHD) symptoms compared to the control group in proprioceptive sensory condition.

METHOD:
Proprioceptive Diagnostics of Temperament and Character was used for the measurement of fine motor precision (proprioceptive sensory condition). The biases from the linear models (lineograms) and line length were registered for three movement types (frontal, transversal and sagittal) in both hands. Line length variability was obtained from the parallels.

RESULTS:
MANOVA with Bonferroni correction for multiple comparisons revealed significant statistically differences between the ADHD and control group in fine motor graphical performance in four variables. Age and sex differences were taken into account and discussed. Discriminant analysis confirmed that both groups can be classified at a statistically significant level.

CONCLUSION:
This is the first empirical study to compare differences between children with and without ADHD symptoms in fine motor precision performed in the proprioceptive condition. Discriminant analysis confirmed the capacity of some specific movement type to classify the groups.