Comparison between Actigraphic Records, the Evaluation of Behavior and Attention, and the Use of Psychostimulants in ADHD Patients: A Pilot Study

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ABSTRACT

Introduction:
Attention deficit hyperactivity disorder (ADHD) leads to cognitive problems in childhood and adolescence, and due to its associated hyperkinesias, it may also result in behavioral problems, which can lead to negative impressions amongst one’s peers. Objective: To assess the impact of hyperkinesia reduction on the attention and behavior profiles of three children with the combined type of ADHD following an intervention featuring psychoactive medication.

Methods:
This pilot study was conducted at the Laboratory of Learning Difficulties and Disabilities and Attention Disorders (DISAPRE-UNICAMP). Objective data (including mean values of amplitude and frequency of movement over 24 hours) were obtained using an actigraph (a clock-like device), a behavioral assessment scale (the Child Behavior Checklist [CBCL]), and the Strength and Weakness and ADHD Symptoms Normal Behavior (SWAN) rating scale (which was administered by clinicians and school staff members); these were cross-referenced to compare the children’s performance before and after the use of psychoactive medication. The treatment was introduced after 15 days and maintained thereafter for 30 days, and the results were statistically analyzed by means of actigraphic variables (L5 and M10) and by student’s t-test (P < 0.05).

Results:
There was a simultaneous reduction in the actigraphic index, the attention deficit scores of hyperactivity for both the CBCL and SWAN, and the somatic disorder symptom scores of the CBCL. These results were statistically significant when examining the pre- and post-medication data for each individual in the sample.

Conclusion:
The reduction in hyperkinesias in the three patients with ADHD resulted in improvements in inattention, somatic symptoms, and emotional symptoms.