
MODULATION IN ATTENTION RELATED EYE VERGENCE IS DISRUPTED IN CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER

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Introduction

The oculomotor system is closely linked to the neural circuits of attention. Recent evidence shows a novel role for eye vergence in orienting visual attention.

Objectives

Identify patterns of attention disruption through eye vergence.

Aim

We investigated whether modulation in attention related eye vergence is disrupted in ADHD.

Methods

We measured eye vergence in children previously diagnosed with ADHD while performing a cue/no-cue task and compared the results to age-matched controls.

Results

We observed a strong modulation in the angle of vergence in the control group but not in the ADHD group. In addition, in the control group the modulation in eye vergence was different between the cue and no-cue condition. This difference was absent in the ADHD group.

Conclusions

Our study supports the observation of deficient binocular vision in ADHD children. We argue that the observed disruption in eye vergence modulation in ADHD children is proof of a deficient cognitive processing of sensory information. Our work may provide new insights into attention disorders, like ADHD.