Effect of oculomotor vision rehabilitation on the visual-evoked potential and visual attention in mild traumatic brain injury.

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Abstract

PRIMARY OBJECTIVE:

The purpose of the experiment was to investigate the effect of oculomotor vision rehabilitation (OVR) on the visual-evoked potential (VEP) and visual attention in the mTBI population.

RESEARCH DESIGN AND METHODS:

Subjects (n = 7) were adults with a history of mild traumatic brain injury (mTBI). Each received 9 hours of OVR over a 6-week period. The effects of OVR on VEP amplitude and latency, the attention-related alpha band (8-13 Hz) power (μV(2)) and the clinical Visual Search and Attention Test (VSAT) were assessed before and after the OVR.

RESULTS:

After the OVR, the VEP amplitude increased and its variability decreased. There was no change in VEP latency, which was normal. Alpha band power increased, as did the VSAT score, following the OVR.

CONCLUSIONS:

The significant changes in most test parameters suggest that OVR affects the visual system at early visuo-cortical levels, as well as other pathways which are involved in visual attention.