Sleep and quality of life in children with traumatic brain injury and ADHD - A comparison with primary ADHD

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Abstract

Objective
Attention problems are common in children who sustain a traumatic brain injury (TBI). The differential features of TBI-related Attention Deficit Hyperactivity Disorder (ADHD) and primary ADHD are largely unknown. This study aimed to compare sleep problems and quality of life between children with TBI and ADHD and children with primary ADHD.

Methods
Twenty children with TBI (mean age = 12.7 ± 3.1 years) who had clinically significant ADHD symptoms according to the structured diagnostic interview and rating scales and a control group with primary ADHD (n = 20) were included. Parents completed Children's Sleep Habits Questionnaire (CSHQ) and Kinder Lebensqualitätsfragebogen: Children’s Quality of Life Questionnaire-revised (KINDL-R). Neurology clinic charts were reviewed for TBI-related variables.

Results
When compared to children with primary ADHD, the Total Score and Sleep Onset Delay, Daytime Sleepiness, Parasomnias, and Sleep Disordered Breathing subscores of CSHQ were found to be higher in children with TBI and ADHD. The Total Score and Emotional Well-Being and Self-Esteem subscores of the KINDL-R were found to be low (poorer) in children with TBI and ADHD. The Total Score and certain subscores of KINDL-R were found to be lower in TBI patients with a CSHQ > 56 (corresponds to significant sleep problems) when compared to those with a CSHQ < 56. CSHQ Total Score was negatively correlated with age.

Conclusion
Children with TBI and ADHD symptoms were found to have a poorer sleep quality and quality of life than children with primary ADHD. ADHD in TBI may be considered as a highly impairing condition which must be early diagnosed and treated.