

Predictors for light sensitivity two months after mild traumatic brain injury

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Abstract

The overall prognosis is good after a mild traumatic brain injury (mTBI) but between 5% and 20% develops post-concussion symptoms (PCS) where light sensitivity are the most common symptom after headache. In the present literature, there is a debate whether PCS result from psychological factors, organic brain injury or both.

Objective: To predict light sensitivity two months after mTBI.

Method: A prospective cohort study including 162 patients with mTBI, age 16-58 consecutively included at an outpatient clinic at Haukeland University Hospital, Norway.

Demographic data and information about sick leave were collected from national registries. Injury characteristics were collected from medical records. Information about earlier disease and symptom profiles were obtained from self-report questionnaires. Light sensitivity from the Rivermead Post-concussion Questionnaire was used as the dependent variable in a stepwise linear regression analysis. Pre-, post- and injury-related factors were examined as potential predictors for light sensitivity.

Results: The final model indicated that light sensitivity was predicted by earlier head injury, pre-injury sickleave due to musculoskeletal disorder and self-reported anxiety and depression at HADS two months post-injury. Injury-characteristics like intracranial injury, location of braininjury or severity at Glasgow Coma Scale did not become significant.

Conclusion: Patients with earlier head injury, earlier sick-listed and self-reported anxiety or depression post-injury are at risk to develop a light sensitivity after mTBI. Consequences of PCS including light sensitivity may reduce social activities, participation and ultimately quality of life. These findings strongly suggest a biopsychosocial approach in the treatment of patients with mTBI.