Outcome after Mild Traumatic Brain Injury: the Interplay of Concussion and Post-traumatic Stress Symptoms

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(Signature) …………………………………………………………………………………………………………………
Abstract

Background and aims

The provenance of post-concussion symptoms (PCS) and post-traumatic stress (PTSD) after mild traumatic brain injury (mTBI) is controversial. This thesis investigated factors influencing these two conditions separately, as well as the interplay between PCS and PTSD, in individuals with mTBI and a control sample without mTBI (orthopaedic injuries).

Method

Consecutive adult attendees of an Emergency Department with mTBI or orthopaedic injury were prospectively recruited and completed the Rivermead Post-concussion Questionnaire (RPQ) and Trauma Screening Questionnaire (TSQ) for PTSD at two weeks (T1) and three months (T2) post-injury. The sample at T1 consisted of 34 with complicated mTBI, 76 with uncomplicated mTBI and 47 with orthopaedic injury, and 18 with complicated mTBI, 43 with uncomplicated mTBI and 33 orthopaedic controls at T2.

Results

Although there were no differences in overall PCS symptomology between groups, a subset of PCS symptoms (headaches, dizziness and nausea) was found to be specific to mTBI at both time points. These symptoms are proposed to have a neurological basis, as opposed to a psychological basis. PTSD interacted with PCS, particularly in mTBI, such that PTSD was associated with
greater “neurogenic” and “psychogenic” symptomology in this group, but only a moderate increase in psychogenic symptoms for controls. A model of the influence of PTSD on PCS is presented. PTSD was influenced by poor memory quality for the traumatic event and attribution of blame to others, but not by mTBI.

Discussion and conclusions

Though mTBI may set the scene for at least neurogenic symptoms of PCS to occur, psychological mechanisms, particularly PTSD, have a significant role in the persistence of PCS. Our findings suggest the need for a clear story and sense of meaning for a traumatic event for good recovery from PTSD. Taken together, the results suggest that psychological interventions, particularly aimed at PTSD, may be most effective after mTBI.
For my wonderful wife, Ruthie.
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