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Title Eye movement deficits in postconcussion syndrome.

Text This study examined eye movements in patients meeting the diagnostic criteria for postconcussion syndrome (PCS) at 3-4 months after mild closed head injury (CHI), including 20 PCS patients and 20 controls (i. e., CHI patients of similar injury severity but good recovery, matched for age, gender, education, and time post-injury). Our aim was to identify disparities in saccadic function and oculomotor smooth pursuit (OSP) between these groups, and compare these with neuropsychological function and self-perceived health condition.

The groups differed markedly in postconcussive symptom levels and problems with activities of daily living. The PCS group had poorer performance on measures of antisaccades, self-paced saccades, and memory-guided sequences, with marginal deficits on OSP. Some neuropsychological group differences were present but smaller than anticipated. Effect sizes of significant oculomotor and neuropsychological differences were equivalent. Whilst oculomotor function and neuropsychological tests partially overlapped in identifying foci of impaired brain function, eye movements suggested impaired function in areas not obvious based on neuropsychological testing. The oculomotor deficit profile of the PCS group was not consistent with that observed in non-trauma patients with major depression disorder.

Eye movement assessment may provide additional information about brain function in patients with PCS, offering objective markers of ongoing cerebral impairment. These would be independent of patient self-report and neuropsychological assessment and might be useful in supplementing patient evaluation, providing external confirmation of incomplete recovery. Eye movement testing might be of particular interest in patients who report high symptom levels and cope poorly with activities of daily living but whose neuropsychological test profile is unremarkable.

Theme C - Disorders of the nervous system
Trauma - Brain