Post-traumatic stress disorder in children following road traffic accidents: a comparison of those with and without mild traumatic brain injury

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FROM ABSTRACT

Background:
It is now recognized that post-traumatic stress disorder (PTSD) can occur following road traffic accidents, but controversy exists about the possibility of PTSD in people sustaining traumatic brain injury (TBI).

The present investigation examined the frequency, course and co-morbidity of PTSD in children with and without mild TBI after traffic accidents.

Method:
Interviews were conducted with 43 children and their parents 6 weeks after a traffic accident, assessing PTSD and associated symptomatology.

Results:
Children both with and without TBI reported PTSD symptomatology, but no significant group differences were found.

At initial assessment, 74% of children were classified as having clinically significant PTSD symptomatology (86% and 69% in groups with and without TBI, respectively), which was strongly associated with report of general anxiety.

At follow-up, PTSD symptomatology decreased, but 44% remained symptomatic (38% and 46% for those with and without TBI, respectively).

Child and parental report of PTSD symptomatology were not significantly correlated.

Conclusions:
Presence of mild TBI did not influence the likelihood of experiencing PTSD symptomatology following a traffic accident.

THESE AUTHORS ALSO NOTE:

Post-traumatic stress disorder (PTSD), as defined by the development of three clusters of symptoms following exposure to an extreme traumatic stress:
1) Persistent re-experiencing of the event
2) Avoidance of stimuli associated with the trauma
3) Increased arousal
“The symptoms are present for longer than 1 month and are of sufficient severity to cause clinically significant distress and/or disruption to psychosocial functioning. “

“When such symptoms are present for less than 1 month and occur in conjunction with dissociative symptoms (e.g. emotional numbing, depersonalization, derealization), they are classified as Acute Stress Disorder.”

“It is now well established that children and adolescents can manifest symptoms of PTSD after experiencing a life-threatening stressor, such as a road traffic accident.”

Previous studies on children with PTSD found that symptoms persist for more than 1 month in 34% to 49%.

“Traffic accidents are the most common cause of TBI in civilians,” causing about 40.2%.

“It has been argued that TBI and PTSD are mutually incompatible disorders, since patients who sustain PTSD simply cannot “forget” the traumatic event, whereas patients who sustain TBI (e.g. cerebral concussion) have no recollection of the traumatic event.”

Some suggest that patients with brain injuries that have caused retrograde and post-traumatic amnesia should be immune from PTSD.

Depression and anxiety occur frequently in children with PTSD.

RESULTS

“69% of children from the NBI group and 85.7% of children from the TBI group were classified as experiencing significant PTSD symptomatology.”

Of the 32 children assessed at follow-up, 44% were classified as having PTSD symptomatology (37.5% TBI, and 45.8% NBI).
DISCUSSION

“The results from this study provide firm evidence for the presence of significant PTSD symptomatology in children and adolescents following relatively minor injuries sustained in traffic accidents.”

“The finding that 74% of children displayed significant PTSD symptomatology 6 weeks after the accident is higher than previous reports.”

This study “provides evidence to dispute the claims that PTSD and TBI are mutually incompatible disorders.”

“Although PTSD symptomatology decreased significantly during the 7-week interval between the initial and follow-up assessment, significant symptomatology persisted in 44% of children (37.5% TBI and 45.8% NBI).”

“Comparison of child and parental initial assessments of PTSD revealed that 74% of children reported PTSD symptomatology ranging from mild to very severe, compared with 42% of parents reporting significant PTSD symptoms in their children.”

KEY POINTS FROM DAN MURPHY

1) A significant number of children (74% in this study) injured in a motor vehicle accident will suffer from PTSD, whether they suffer traumatic brain injury or not.

2) In this study, 86% of the injured children with TBI experienced PTSD, while only 69% in groups without TBI experienced PTSD. This indicates that loss of memory of the collision caused by TBI does not protect a child from experiencing PTSD.

3) At follow-up, PTSD symptomatology decreased, but 44% remained symptomatic (38% and 46% for those with and without TBI, respectively).

4) Depression and anxiety occur frequently in children with PTSD.

5) Children and adolescents experience significant PTSD symptomatology following relatively minor injuries sustained in traffic accidents.