Incidence of Chronic Pain Following Traumatic Brain Injury

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FROM ABSTRACT

Objective:
To index the frequency of reported chronic pain in patients with traumatic brain injury (TBI).

Design:
A case series study was conducted on consecutive patients with TBI.

Patients:
A consecutive sample of 132 patients who attended a brain injury rehabilitation center after TBI.

The sample included 53 mild and 79 moderate/severe TBI patients.

Outcome Measures:
Patients were administered a protocol that indexed pain site, frequency, severity, and duration.

Results:
Chronic pain was reported by 58% of mild TBI and 52% of moderate/severe TBI patients.

Headaches were the most commonly reported pain problem.

Chronic headaches were reported by 47% of mild TBI patients and 34% of moderate/severe TBI patients.

Neck/shoulder, back, upper limb, and lower limb pain were reported similarly by mild and moderate/severe TBI patients.

Conclusions:
Findings indicate that chronic pain is a significant problem in mild and moderate/severe TBI patients.

More effective diagnosis of TBI patients with chronic pain may facilitate rehabilitation of these patients.
THESE AUTHORS ALSO NOTE:

Events that cause traumatic brain injury (TBI) often result in physical injuries.

A 1993 study found that 95% of patients with mild head injuries suffered from chronic pain, but that chronic pain was observed in 22% of moderate/severe head injured patients.

“The reported low prevalence of chronic pain associated with moderate/severe head injury may be possibly attributed to these patients' inadequate self-monitoring.”

“While brain injury can be obscured by chronic pain, it is also feasible that head injury may impede the identification of pain.”

Traumatic brain injury (TBI) is characterized by memory deficits.

In this study:
73% sustained TBI in motor vehicle accidents
18% sustained TBI in falls
9% sustained TBI in assaults

Assessment of chronic pain in this study included the use of a pain diagram and a visual analogue scale.

RESULTS

“Chronic pain was defined as constant pain that had been experienced for at least 6 months.”
58% of mild TBI patients reported chronic pain.
52% of moderate/severe TBI patients reported chronic pain.

“Of those patients reporting chronic pain, 85% of the mild TBI group and 87% of the moderate/severe TBI group reported experiencing pain on a daily basis.”

The primary chronic pain sites noted in this study were:
1) Headaches
2) Neck/shoulder
3) Back
4) Upper limb
5) Lower limb

DISCUSSION

This study found that “approximately half of the moderate/severe TBI patients reported chronic pain, and 58% of the mild TBI patients reported chronic pain.”
“The current findings call into question previous reports that moderate/severe TBI is not generally associated with chronic pain.”

“It is possible that inadequate pain management may compound the psychosocial stress that TBI patients experience and that rehabilitation efficacy may be consequently impeded.”

KEY POINTS FROM DAN MURPHY

1) 58% of mild TBI patients report chronic pain.

2) 52% of moderate/severe TBI patients report chronic pain.

3) Headaches are the most common chronic pain problem following TBI:
   A) 47% of mild TBI patients
   B) 34% of moderate/severe TBI patients

4) Chronic neck, shoulder, back, upper limb, and lower limb chronic pain are experienced by mild and moderate/severe TBI patients.

5) “Chronic pain is a significant problem in mild and moderate/severe TBI patients.”

6) “The reported low prevalence of chronic pain associated with moderate/severe head injury may be possibly attributed to these patients' inadequate self-monitoring.”

7) “While brain injury can be obscured by chronic pain, it is also feasible that head injury may impede the identification of pain.”

8) Traumatic brain injury (TBI) is characterized by memory deficits.

9) In this study:
   73% sustained TBI in motor vehicle accidents
   18% sustained TBI in falls
   9% sustained TBI in assaults

10) Assessment of chronic pain in this study included the use of a pain diagram and a visual analogue scale.

11) “Of those patients reporting chronic pain, 85% of the mild TBI group and 87% of the moderate/severe TBI group reported experiencing pain on a daily basis.”

12) This study found that “approximately half of the moderate/severe TBI patients reported chronic pain, and 58% of the mild TBI patients reported chronic pain.”
13) “The current findings call into question previous reports that moderate/severe TBI is not generally associated with chronic pain.”

14) “It is possible that inadequate pain management may compound the psychosocial stress that TBI patients experience and that rehabilitation efficacy may be consequently impeded.”

COMMENTS FROM DAN MURPHY:

Nearly 3/4 of traumatic brain injuries are caused by motor vehicle accidents. In this study, 58% of those suffering from mild traumatic brain injury also suffered from chronic pain, including headache, neck pain, shoulder pain, back pain and extremity pain, symptoms that are classically associated with whiplash injuries. Each of our chronic whiplash patients should be evaluated for potential traumatic brain injury. Likewise, it appears that the presence of traumatic brain injury is adverse for the symptomatic recovery from whiplash injuries.

It is reasonable to include pain drawings and visual analogue scales in the assessment of both our whiplash-injured patients as well as for patients with potential traumatic brain injury.