

Traumatic Brain Injury

By Laura Gomez, LCSW

Objectives

- Briefly describe TBI, and its incidence, severity, and treatments
- Describe the VHA system of specialized TBI care for active duty and veterans
- Describe the role of social work and neuropsychology in TBI evaluation and care



Key Iraq wound: Brain trauma

By Gregg Zoroya, USA TODAY

“A growing number of U.S. troops whose body armor helped them survive bomb and rocket attacks are suffering brain damage as a result of the blasts. It's a type of injury some military doctors say has become the signature wound of the Iraq war.”



Shaun Radhay , a Marine, suffered brain damage and other injuries in a mortar blast.

By H. Darr Beiser, USA TODAY

War Injuries: Explosive Blasts

- Most common cause of injury
- 64% of war injuries caused by blasts
- 41% of blast injured at Walter Reed Army Medical Center had TBI (01/05 - 02/06)
- 85% closed head injury

Traumatic Brain Injury

- Insult to the brain caused by an external physical force
- Produces a diminished or altered state of consciousness
- Results in impairments in physical, cognitive, behavioral, and/or emotional functioning

Mild/Moderate TBI

- Persons with a brain injury are often referred to as the “walking wounded.” Their greatest challenges are often invisible to those who come in contact with them.

Recognizing Mild/Moderate Traumatic Brain Injuries

- The diagnosis of MTBI may not always be obvious
- Subtle signs of Brain injury (dizziness, irritability, headaches) may be missed
- Keep high index of suspicion to refer if:
 - Blast injury or exposure, or
 - History of loss of consciousness

Criteria for Severity of TBI

Mild	Moderate	Severe
LOC \leq 30 min with normal CT &/or MRI	LOC \leq 6 hours with abnormal CT &/or MRI	LOC $>$ 6 hours with abnormal CT &/or MRI

Assessing for MTBI

- **Did the patient sustain a blow, have blast exposure or any traumatic injury to the head? Yes/No**
- **If yes, did the injury result in any of the following?**
 - Being dazed, confused or seeing stars
 - Not remembering events before or after of about the injury
 - Losing consciousness (knocked out) for less than a minute
 - Losing consciousness for longer than 20 minutes
 - Having any symptoms of concussion afterwards

Mild TBI: Overlapping Symptoms across Conditions

■ Postconcussion Syndrome (PCS)

- Insomnia
- Impaired memory
- Poor concentration
- Depression
- Anxiety
- Irritability
- Headache
- Dizziness
- Fatigue
- Noise/light intolerance

■ PTSD

- Insomnia
- Memory problems
- Poor concentration
- Depression
- Anxiety
- Irritability
- Stress symptoms
- Emotional numbing
- Avoidance

Consequences of TBI

■ Cognitive

- Attention
- Information processing (speed & efficiency)
- Memory and Learning
- Abstract Reasoning
- Executive Functions
 - Problem solving, planning, insight/awareness, set shifting, sequencing

Consequences of TBI

■ Behavioral-emotional

- Irritability

- Impulsivity

- Affect Regulation: apathy, agitation, aggression

- Depression, Anxiety

- Social Pragmatics

Cognitive and behavioral impairments are the most disabling long-term, more so than physical injuries

Social Work and Psychology-Related Assessment Issues

- Determining original severity of injury
- Identifying past and present treatment, and the success or lack thereof
- Neuropsychological evaluation of current functioning
- Psychological functioning: Axis I & II, and coping resources
- Identifying and assessing family and systems issues

VA Multidisciplinary Approach to Assessment of MTBI:

- Physical Medicine & Rehab Physician
- Social Work Case Manager
- Physical and Occupational Therapist
- Speech and Language Pathologist
- Vision Rehabilitation Specialist
- Neuropsychologist

VA Multidisciplinary Approach to Assessment of MTBI

- Inpt vs. outpt multi-disciplinary effort to assess for mild to moderate TBI
- Two week inpt stay on the TBI unit
- The Polytrauma Network Site (PNS) outpt clinic

Treatment Considerations

- Treatment varies based upon:
 - Severity of injury
 - Time since injury
 - Constellation of impairments

Treatment for MTBI

Pharmacological Interventions

- can be used to treat specific symptoms following MTBI such as headaches, depression, irritability, or emotional dysregulation.

Treatment for MTBI

Non-Pharmacological Interventions

- **Psychoeducational intervention, combined with support and cognitive-behavioral intervention can significantly reduce the extent of post TBI symptoms.**

Treatment for MTBI

Non-Pharmacological Interventions

- Use of memory prosthetics such as a digital recorder, palm pilot
- Memory Books: In the book, patients keep a schedule and write down reminders for themselves.
- Processing of information: speak slowly and don't overload clt with information.