Brain Injuries and Disaster Events

Information for Clinicians

Brain Injury Facts

- An estimated 1.5 million Americans sustain a traumatic brain injury (TBI) each year, most often due to motor vehicle crashes, falls and violence.
- TBIs can range from mild to severe. The term mild traumatic brain injury (MTBI) refers to the relatively minor presenting symptoms of the individuals, and not to the long-term consequences, which may be serious.
- In disaster events such as the World Trade Center attack or the Oklahoma City bombing, MTBIs can be caused by flying debris, falls or blast waves from an explosion.
- In the chaos following mass casualty events, diagnosis of MTBIs may be missed.
- Timely diagnosis and treatment of long term consequences of MTBI is needed.

Signs and Symptoms After an MTBI

Early MTBI symptoms may appear mild, but they can lead to a significant, life-long impairment, affecting an individual's ability to function cognitively, physically, and psychologically. In addition to the obvious, look for these signs and symptoms:

Cognitive	Physical	Behavioral
Attention difficulties	Headaches	Irritability
Concentration problems	Dizziness	Depression
Memory problems	Insomnia	Anxiety
Orientation problems	Fatigue	Sleep disturbances
	Uneven Gait	Problems with emotional control
	Nausea	Loss of initiative
	Blurred vision	Problems related to employment, marriage, relationships, and home or school management

Diagnosis

Diagnosing an MTBI can be a challenge because symptoms are often common to other medical problems, and the severity of the symptoms can change over time. Any patient with a history of head trauma suffering from confusion, disorientation, or amnesia of events around the time of injury, loss of consciousness of 30 minutes or less, neurological or neuropsychological problems, or with a Glasgow Coma Scale (GCS) Score of 13 or higher, may have an MTBI. Taking a careful medical history can be key to detecting an MTBI. Any unusual or unexplained signs or symptoms should be evaluated further.

Treatment

MTBI treatment varies from person to person. Educating the patient and his/her family about the possibility of a brain injury and the symptoms that may be experienced as a result of such an injury is critical. Referral to specialists in neurology, neuropsychology, or rehabilitation may be appropriate.

Additional Resources for Clinicians

American Academy of Family Physicians, American Academy of Pediatrics. Management of Minor Closed Head Injury in Children (AC9858), 1999. (also available onlne at: http://www.aap.org/policy/ac9858.html).

Brian Injury Association of America: www.biausa.org.

Centers for Disease Control and Prevention: www.cdc.gov/ncipc/factsheets/tbi.htm.

Centers for Disease Control and Prevention Heads Up: Facts for Physicians About Mild Traumatic Brain Injury (MTBI), 2002. Available online January 2003.

Glascow Coma Scale (adapted from Womack Army Medical Center, internet version).

Gordon WA, et al. The Enigma of "Hidden" Traumatic Brain Injury, 1998.

Jagoda AS, Cantrill SV, Wears, RL, et al. Clinical Policy: Neuroimaging and Decision Making in Adult Mild Traumatic Brain Injury in the Acute Setting, 2002.

Kibby MY, Long CJ. Review: Minor Head Injury: Attempts at Clarifying the Confusion, 1996.

Kushner D. Mild Traumatic Brain Injury, 1998.

McCrea M, Kelly JP, Randolph C, Cisler R, Berger L. Immediate Neruocognitive Effects of Concussion, 2002.

National Institutes of Health Consensus Development Conference Statement: Rehabilitation of Persons with Traumatic Brain Injury, 1998. (also available online at: http://odp.od.nih.gov/consensus/cons/109/109_statement.htm).

Thurman DJ, et al. Traumatic Brain Injury in the United States: A Report to Congress. Centers for Disease Control and Prevention, 1999.

Resources for Patient Education

Facts About Concussion and Brain Injury, 1999.
http://www.cdc.gov/ncipc/tbi/default.htm

ATENCIÓN: Prevención de lesiones cerebrales, 2002.
http://www.cdc.gov/ncipc/lesion_cerebral/lesion_cerebral.htm

Heads Up: Preventing Head Injuries (patient information on tear-off pads)*, 2002.* Available January 2003.