



Traumatic Head Injury

◆ What is traumatic brain injury?

Traumatic brain injury (TBI) occurs when a physical assault on the head causes damage to the brain. The damage can be focal, confined to one area of the brain, or diffuse, involving more than one area of the brain. TBI can result from a closed head injury or a penetrating head injury. A closed head injury occurs when the head suddenly and violently hits an object, but the object does not break through the skull. A penetrating head injury occurs when an object pierces the skull and enters the brain tissue. Several types of traumatic injuries can affect the head and brain. A skull fracture occurs when the bone of the skull cracks or breaks. A depressed skull fracture occurs when pieces of the broken skull press into the tissue of the brain. This can cause bruising of the brain tissue, called a contusion. A contusion can also occur in response to shaking of the brain within the confines of the skull, an injury called "countercoup." Shaken baby syndrome is a head injury that occurs when a baby is shaken forcibly. Damage to a major blood vessel within the head can cause a hematoma, or heavy bleeding into or around the brain. The severity of a TBI can range from a mild concussion to the extremes of coma or even death. A coma is a profound or deep state of unconsciousness. Symptoms of a TBI may include headache, nausea, confusion or other cognitive problems, a change in personality, depression, irritability, and other emotional and behavioral problems. Some people may have seizures as a result of a TBI.

◆ Is there any treatment?

Immediate treatment for TBI involves surgery to control bleeding in and around the brain, monitoring and controlling intracranial pressure, insuring adequate blood flow to the brain, and treating the body for other injuries and infection.



◆ What is the prognosis?

The outcome of TBI depends on the cause of the injury and on the location in the brain, severity, and extent of neurological damage: outcomes range from good recovery to death. Doctors often use the Glasgow Coma Scale to rate the extent of injury and chances of recovery. The scale (3-15) involves testing for three patient responses: eye opening, best verbal response, and best motor response. A high score indicates a good prognosis and a low score indicates a poor prognosis.

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Disclaimer: This information is for health educational purposes only. If you have questions, you should ask your doctor, nurse, or other persons whom you see for your health care needs. Each clinician caring for the patient is responsible to determine the most appropriate care.

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