



Implications of Traumatic Brain Injury and Cognitive Impairments

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Description

TBI (Traumatic brain injury) can result in a number of complications, or health consequences that are not caused by the TBI but occur as a result of it. The likelihood of problems increases with the severity of the trauma; nevertheless, even minor traumatic brain injury can result in difficulties that interfere with social relationships, employment, and daily functioning. TBI can result in a wide range of difficulties, including physical, cognitive, emotional, and behavioral issues. Post-concussion syndrome refers to symptoms that may arise following a concussion, which is a mild kind of traumatic brain injury.

Effects on unconsciousness

In general, a TBI can result in six aberrant states of consciousness. Stupor is a state of semi-consciousness in which the patient is lethargic, inert, and has a diminished responsiveness to stimuli. Coma is a state in which the patient is completely unconscious and cannot be woken even by strong stimuli. A persistent vegetative state occurs when waking people are oblivious and unaware of their surroundings, and the cerebral cortex is not functioning. A vegetative state can develop from diffuse brain injury to the cerebral hemispheres without causing damage to the lower brain or brainstem. The vegetative state is considered permanent if it lasts for 12 months after a TBI or 3 months after a cause other than trauma. A minimally aware state is a condition in which patients have a low level of arousal and may appear to be in a chronic vegetative state on the surface, but are capable of actively processing information.

Locked-in syndrome is a condition in which a patient is conscious and alert but unable to move or communicate due to total body paralysis. Voluntary control

of eye movements or blinking may be preserved, allowing conscious awareness to be detected and functional communication to be established. Brain death is defined as the irreversible loss of quantifiable brain function, as well as the absence of any integrated activity between separate parts of the brain. Assistive equipment must be used to preserve breathing and cardiac function.

Cognitive deficits

Most patients who recover consciousness from severe TBI have cognitive deficits, including the loss of many higher-level mental capabilities. TBI can cause cognitive deficits such as impaired attention, impaired insight, judgment, and thought, decreased processing speed, distractibility, and deficiencies in executive functions such as abstract reasoning, planning, problem-solving, and multitasking. Memory loss, the most prevalent cognitive disability in head-injured patients, affects 20-79% of those who have suffered closed head trauma, depending on severity. PTA (Post-traumatic amnesia) is a confused state with impaired memory that is defined by the loss of specific memories or the partial inability to form or store new ones

Alzheimer's disease (AD) is a neurological illness that causes dementia, memory loss, and decline in cognitive ability. According to research, there is a link between brain damage in early adulthood and the development of Alzheimer's disease later in life; the more serious the head injury, the greater the chance of acquiring Alzheimer's. Some data suggests that a head injury may interact with other factors to initiate the disease and may speed the disease's onset in people who are already at risk. Those who have had a head injury and have a specific version of the protein Apo lipoprotein E are at a higher risk.