



Managing Mood Disorders After Traumatic Brain Injury

Brooke Luckhardt, M.S., CBIS
Associates in Physical Medicine and Rehabilitation, P.C.

Mood Disturbance After Traumatic Brain Injury

Mood disturbance after traumatic brain injury (TBI) can cause ongoing disruption to an individual's vocation, pain, sleep, and social interactions. A common misconception is that mood disturbance only refers to depression, but mood disturbance occurring after TBI can include depressive, mood, and anxiety disorders. Developing a mental illness after sustaining traumatic brain injury is common with individuals who have sustained even one mild TBI, such as a concussion, being four times more likely to develop a mental illness (Orlovska et al., 2014). Schizophrenia, psychosis, and mania can occur in more extreme cases. TBI and resulting mood disorders affect not only the individual and their quality of life, but the relationships they have with everyone around them. It can affect their thinking, behavior, and ability to function in their daily lives.

The following are key points professionals should consider when screening, managing, and treating individuals impacted by TBI and co-occurring mood disorders.

Co-occurring Mood Disorders Are More Common Than You Think

Approximately one of every two individuals develop a mood disorder after traumatic brain injury. A study of 559 adults with complicated mild to severe TBI found that 53.1% developed a depressive disorder during the first year after TBI (Bombardier et al., 2010). About 40% of TBI victims suffer from two or more psychiatric disorders (Vaishnavi, Rao, & Fann, 2009). Devastating physical and cognitive injury often renders the inability to complete activities that once gave their lives purpose and direction. Vocation, hobbies, and personal relationships can all be severely compromised after a traumatic brain injury leading to loss of life satisfaction.

What Mood Disorders Are Most Common After TBI?

Not surprisingly, depressive disorders are significantly more frequent among individuals with a history of TBI. In a study conducted by Jorge and colleagues (2004), 33% of the 91 participants developed a major depressive disorder during the first year after injury, which was significantly higher than the control group of participants with orthopedic injuries. Some symptoms of mood disorders, especially apathy, can be mistaken for depression and misdiagnosed. A study of 187 individuals with mild to severe TBI revealed low satisfaction ratings in the domains of vocation, economy, leisure, contacts, and sex life with only 35% rating themselves as satisfied with their life status (Eriksson, Kottorp, Borg, & Tham, 2009).

Who Is Likely to Have Co-occurring TBI and Mood Disorders?

Anyone is vulnerable to developing a mood disorder after TBI, but those with premorbid substance abuse are at higher risk. Jorge and colleagues (2005) studied 158 patients who were followed for one year after TBI. Of the 55 TBI patients with a history of alcohol misuse, 60% developed a mood disorder during the first year of follow-up compared with 36.9% of 103 patients without a history of alcohol misuse (Jorge et al., 2005). A history of mood or anxiety disorders and previous poor social functioning are associated with the occurrence of major depression in the aftermath of TBI (Jorge & Arciniegas, 2014). Other risk factors after injury include unemployment, poorly controlled pain, poor quality of life, and poor support system.

Why Do Mood Disorders Develop After TBI?

Most traumatic brain injuries are to the frontal lobe area of the brain, which includes the prefrontal cortex and limbic system. This area is the control center for our personalities, mood, and behavior. It is hypothesized, since noradrenergic and serotonergic projections from the brainstem enter the cortex by way of the frontal pole, that even a small lesion in the frontal lobe could potentially disrupt widespread cortical aminergic function (Rosenthal, Christensen, & Ross, 1998). Trauma to this area of the brain can also cause both physical and biological changes that can lead to the development of mental illness (Rosenthal, Christensen, & Ross, 1998). Silver and Yudofsky noted that several studies report neurochemical changes after TBI with indications that neurotransmitters such as norepinephrine, serotonin, dopamine, and acetylcholine are dramatically affected by TBI (van Reekum, Cohen, & Wong, 2000).

Injury Severity Plays a Role in Prevalence

While those who have sustained a mild TBI are at risk for developing a posttraumatic mood disorder, the more severe the injury is, the higher the risk becomes. The New Haven NIMH Epidemiologic Catchment Area Study looked at 386 respondents who self-reported a severe TBI, discovered increased rates of drug abuse or dependence compared with community controls even after controlling for alcohol use prior to injury (Silver et al., 2001).

Potential Treatments

Exercise has been a proven mood elevator when suffering from posttraumatic mood disorder symptoms (Hoffman et al., 2010). Pharmacology and psychotherapy, often used together, are the most common treatments to lessen symptoms, and for many, these are quite effective. Many medicinal options are available including SSRIs and first- and second-generation antipsychotics. Electroconvulsive therapy (ECT) is a method still being used today to treat severe symptoms that are unresponsive to other therapies. In an eight-week trial, individuals treated with clozapine and ECT together had a 47% decrease in symptoms versus patients treated with clozapine alone (Petrides et al., 2015). Additionally, brain stimulation techniques, such as transcranial magnetic stimulation, transcranial direct current stimulation, vagus nerve stimulation, and deep brain stimulation are also used to lessen severe symptoms of posttraumatic mood disorders. Many of these treatments are used in conjunction with pharmacological methods.

Author Biography:

Brooke Luckhardt, M.S., CBIS, obtained her master's in forensic psychology at Walden University. She specializes in traumatic brain injury and has worked with the physicians at Associates in Physical Medicine and Rehabilitation, P.C. in Ypsilanti, Michigan for 24 years. She has been a certified brain injury specialist through the Brain Injury Association of America for the last 14 years. She is a member of the St. Joseph Mercy Hospital Concussion Committee in Ann Arbor, Michigan and is co-founder of the Ann Arbor Concussion Clinic. Brooke is a member of the Society for Police and Criminal Psychology, the National Society of Leadership and Success, and the American Congress of Rehabilitation Medicine. She is an expert trainer for the American Institute for the Advancement of Forensic Studies. She also serves as an advisory board member for the Forensic Behavioral Health Program at Concordia University, St. Paul in St. Paul, Minnesota and has been a co-author on multiple peer-reviewed articles relating to traumatic brain injury.

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