

Traumatic Brain Injury: The Silent Epidemic

Traumatic brain injury (TBI) has become the hallmark injury of both the Iraq and Afghanistan wars, and as compared with previous conflicts, the chances of surviving a TBI have greatly improved. However, the numbers of soldiers with TBIs, described as “staggering” by the media, belie the true scope of the problem. According to data from the Centers for Disease Control (2004) civilians sustain an estimated 1.4 million TBIs annually in the US, resulting in 50,000 fatalities, 235,000 hospitalizations, and 1.1 million patients who are treated and then released from the ER to an uncertain future. “We see miracles every day,” said Ross Bullock, MD, PhD, University of Miami, Miami, FL. “But it’s very difficult to predict how these patients will turn out.”

As physical disabilities improve over time, psychological symptoms emerge: 10% to 20% of TBI patients develop post-traumatic stress disorder; 5% to 15% develops anxiety disorders; 9% engages in substance abuse; and as many as 15% will experience major depression. “For severe TBI, over one-third will have some degree of depression, and it’s often the depression rather than the physical sequelae that holds these people back from returning to a normal life.”

Compounding issues related to a proper diagnosis and treatment of TBI-induced psychopathology is the fact that many traumas go unrecognized or are underappreciated; these injuries generally are described as “mild” TBI. Consider the current wartime scenario: 1.5 million men and women have served, and of these, over 25% has experienced proximity to an explosion without overt wounding. “The natural tendency amongst these soldiers is to minimize their symptoms,” said Dr. Bullock, “to internalize [the shock] in order to remain on duty.” Many do not realize that a physical impact has actually occurred, and there are no objective tests for mild TBI.

Many of these patients self-classify as depressed at 2 years. Personality changes, subtle and otherwise, often precipitate a decline in social behavior, which affects families and extends out into the community. “When you do a CAT scan on those individuals, you’ll usually see the hallmarks of a contusion in the limbic or temporal structures,” said Dr. Bullock, though such information is not necessarily helpful. “Often, they won’t accept medication, and if they do, response is limited.” Treatments for acute short-term behavior resolution can include trazodone, carbamazepine, or haloperidol (in that order of severity), and there are medications to avoid. “I’ve seen the behavioral difficulties made much worse when you try Aricept with those severe disability patients.”

There is a temptation to use lithium in TBI, but Dr. Bullock pointed out that there aren’t even animal data to support its use. Lamotrigine has been suggested for depression and mood disturbance, but again, there are no TBI data, and the anticonvulsive topiramate would not be suitable because of its profound slowing effect on cognition. Sertraline has been used for TBI depression, but response rates do not exceed 30%.

Until more therapeutic options have been validated in the TBI setting, Dr. Bullock advised clinicians to address the most common symptom—memory impairment. “Tell patients to keep a diary, an inventory, have them write down everything they have to do. If we could do one simple thing for these patients, it would be to improve their memory.”

Highlights from the
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