



Helping patients move forward following traumatic brain injury

Although the potential negative consequences of TBI are many, positive patient outcomes can be achieved through careful interviewing and a combined treatment approach.

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> THE CASE

Declan M*, a 42-year-old man, presents as a new patient for general medical care. One year ago, he sustained a severe frontal traumatic brain injury (TBI) when he was hit by a car while crossing a street. He developed a subdural hematoma and was in a coma for 6 days. He also had fractured ribs and a fractured left foot. When he regained consciousness, he had posttraumatic amnesia. He also had executive function deficits and memory difficulties, so a guardian was appointed.

Mr. M no longer works as an auto mechanic, a career he once greatly enjoyed. Mr. M's guardian reports that recently, Mr. M has lost interest in activities he'd previously enjoyed, is frequently irritable, has poor sleep, is socially isolated, and is spending increasing amounts of time at home. When his new primary care physician (PCP) enters the examining room, Mr. M is seated in a chair with his arms folded across his chest. He states that he is "fine" and just needs to "get a doctor."

○ HOW WOULD YOU PROCEED WITH THIS PATIENT?

**This patient is an amalgam of patients for whom the author has provided care.*

TBI ranges from mild to severe and can produce a number of profound effects that are a direct—or indirect—result of the physical injury.¹ The location and the severity of the injury affect symptoms.² Even mild TBI can cause impairment, and severe TBI can lead to broad cognitive, behavioral, and physical difficulties. As numbers of TBI cases increase globally, primary care providers need to recognize the symptoms and assess accordingly.¹ The Acute Concussion Evaluation (ACE; Physician/Clinician Office Version) facilitates a structured evaluation for patients presenting with possible TBI symptoms. It can easily be accessed on the Centers for Disease

Control and Prevention website.³

Direct effects of TBI include impulsivity, depression, reduced frustration tolerance, reduced motivation, low awareness, and insomnia and other sleep difficulties.^{4,5} Depression may also result indirectly from, or be exacerbated by, new posttraumatic limitations and lifestyle changes as well as loss of career and community.⁴ Both direct and indirect depression often manifest as feelings of hopelessness and worthlessness and a lack of interest in once enjoyable activities. Depression can worsen other TBI sequelae such as difficulty concentrating, lack of initiation, flat affect, irritability, reduced independence, reduced

functional performance, loss of inhibition, and physical pain.⁶

Nationwide, most mental health concerns continue to be addressed in the primary care setting.⁷ Individuals with TBI experience major depression at a rate 5 to 6 times higher than those in the general population, with a prevalence rate of 45%.⁸

■ **Suicide.** The subject of suicide must be explored with survivors of TBI; evidence suggests a correlation between TBI, depression, and increased risk for suicide.⁹ Among those who have TBI, as many as 22% experience suicidal ideation; the risk of suicide in survivors of severe TBI is 3 to 4 times the risk in the general population.¹⁰ Additionally, suicidality in this context appears to be a chronic concern; therefore, carefully assess for its presence no matter how long ago the TBI occurred.¹⁰

ADDITIONAL TBI-ASSOCIATED HEALTH CONCERNS

■ **Grief and loss.** We so often focus on death as the only cause for grief, but grief can occur for other types of loss, as well. Individuals with TBI often experience a radical negative change in self-concept after their injury, which is associated with feelings of grief.¹¹ Helping patients recognize that they are grieving the loss of the person they once were can help set a framework for their experience.

■ **Relationship loss.** Many people with TBI lose close relationships.¹² This can be due to life changes such as job loss, loss of function or ability to do previously enjoyed activities, or personality changes. These relationship losses can affect a person profoundly.¹² Going forward, they may have difficulty trusting others, for example.

■ **Existential issues.** Many people with TBI also find that cognitive deficits prevent them from engaging in formerly meaningful work. For example, Mr. M lost his longstanding career as an auto mechanic and therefore part of his identity. Not being able to find purpose and meaning can be a strong contributor to coping difficulties in those with TBI.¹³

■ **Chronic pain.** More than half of people with TBI experience chronic pain. Headaches are the most common pain condition among all TBI survivors.¹⁴

■ **Substance use disorders.** The directionality of substance use disorders and TBI is not always clear; however, most evidence suggests that substance abuse is highly prevalent, premorbid, and often a contributing factor in TBI (eg, car accidents).¹⁵ Alcohol abuse is the most common risk factor, followed by drug abuse.¹⁶ Substance abuse may be exacerbated after TBI when it becomes a coping mechanism under worsening stressors; additionally, executive function deficits or other neurologic problems may result in poor decision-making with regard to substance use.¹⁵ While substance abuse may decline in the immediate post-TBI period, it can return to pre-injury levels within a year.¹⁷

SELECTIVE SEROTONIN REUPTAKE INHIBITORS MAY HELP

Few studies have explored the efficacy of antidepressant medication in TBI survivors. In a controlled study of patients with TBI, Fann and colleagues¹⁸ found no significant improvement in depression symptoms between sertraline and a placebo. However, they did note some possibilities for this lack of significance: socially isolated TBI survivors in the placebo group may have demonstrated improvement in depression symptoms because of increased social interaction; members of both the sertraline and placebo groups had many psychosocial difficulties; and the study had a relatively small sample size. Worth noting: Subjects given sertraline did demonstrate improvement in information processing.

Other research has found that sertraline improved both depression and quality of life for men with post-TBI depression.¹⁹ In a meta-analysis of 4 studies, Paraschakis and Katsanos²⁰ found that sertraline demonstrated a “trend toward significance” in the treatment of depression among patients with TBI. Silverberg and Panenka²¹ argue that selective serotonin reuptake inhibitors should be used as first-line treatment for depression in survivors of TBI. They note that in non-randomized studies, treatment effects with antidepressants are significant. Additionally, patients who do not respond to the first antidepressant prescribed will often respond to adjunctive or different medications. Finally, they argue that

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Suicidality in TBI is a chronic concern. Assess for its presence no matter how long ago the TBI occurred.

depression measures can capture symptoms related to the physical brain injury, in addition to symptoms of depression, thus confounding results.

THE CASE

Mr. M's chart showed that he was not taking any medication and that he had no history of substance abuse or tobacco use. He refused to fill out the Patient Health Questionnaire (PHQ)-2. His guardian said that Mr. M was spending much of his time at home, and that he used to be an avid painter and guitar player but had not engaged in either activity for months. Furthermore, Mr. M used to enjoy working out but did so rarely now.

During the interview, the PCP was careful to make eye contact with Mr. M as well as his guardian, thereby making sure Mr. M was part of the conversation about his care. Pacing of questions was deliberate and unhurried; a return visit would be scheduled to further explore any concerns not covered in this visit. This collaborative, inclusive, patient-centered approach to the clinical interview seemed to place Mr. M at ease. When his guardian said he thought Mr. M was depressed, Mr. M agreed. Although Mr. M still refused to fill out the PHQ-2, he was now willing to answer questions about depression. He acknowledged that he was feeling hopeless and took little pleasure in activities he used to enjoy, thereby indicating a positive screen for depression.

The PCP opted to read the PHQ-9 questions aloud, and Mr. M agreed with most of the items but strongly denied suicidal ideation, citing his religious faith.

The PCP determined that Mr. M's depression was likely a combination of the direct and indirect effects of his TBI. A quantitative estimate based on Mr. M's report yielded a PHQ-9 score of 17, indicating moderately severe depression.

In addition to building rapport, careful listening garnered important information about Mr. M. For example, until his accident and subsequent depression, Mr. M had long prioritized his physical health through diet and exercise. He followed a vegetarian diet but recently had little appetite and was eating one microwaveable meal a day. He had an

irregular sleep schedule and struggled with insomnia. He lost his closest long-term relationship after his accident due to difficulties with affect regulation. He also lost his job as he could no longer cognitively handle the tasks required.

Hearing Mr. M's story provided the opportunity to customize education about self-management skills including regular diet, exercise, and sleep hygiene. Due to limited visit time, the PCP elected to use this first visit to focus on sleep and depression. As cognitive behavioral therapy (CBT) for insomnia is first-line treatment for both primary insomnia and insomnia due to a medical condition such as TBI,⁵ a sleep aid was not prescribed. Fortunately, the clinic psychologist who offered CBT was able to join the interview to meet Mr. M and explain the treatment.


Mr. M expressed some initial reluctance to try an antidepressant. However, acknowledging he "just hasn't been the same" since his TBI, he agreed to a prescription for sertraline and said he hoped it could make him "more like [he] was."

RETURN VISIT

Four weeks after Mr. M began taking sertraline and participating in weekly CBT sessions, he returned for a follow-up visit with his PCP. He had a noticeably brighter affect, and his guardian reported that he had been playing the guitar again. Mr. M said that he had more energy as a result of improved sleep and mood, and that he felt like his "thinking was clearer." Mr. M noted that he never thought he would meet with a psychologist but was finding CBT for insomnia helpful.

The psychologist's notes proposed a treatment plan that would also include targeted grief and existential therapies to address Mr. M's sudden life changes. At this visit, Mr. M admitted that his reading comprehension and speed were negatively affected by the accident and said this is why he did not wish to fill out the PHQ-2. But he was again willing to have the PHQ-9 questions read to him with his guardian's support. Results showed a score of 6, indicating mild depression.

A follow-up appointment with Mr. M was scheduled for 6 weeks later, and the team was

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confident he was getting the behavioral and mental health support he needed through medication and therapy. **JFP**

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