

Mild Traumatic Brain Injury and Posttraumatic Stress Disorder Responding to Vortioxetine Treatment: A Case Report

Khouzam HR

Geisel Dartmouth School of Medicine, Hanover, New Hampshire, Staff Psychiatrist, Behavioural Health Bureau, Monterey County Department of Health, CA, USA

E-mail: hrmdkhouzam@gmail.com

ABSTRACT

Although sport-related concussion or mild traumatic brain injury are common, they are infrequently associated with posttraumatic stress disorder (PTSD). This report describes the case of a 17-year-old male high school football player who sustained a sport-related concussion complicated by the development of PTSD. The association between PTSD and mild traumatic brain injury is briefly reviewed. The diagnosis and resolution of his PTSD symptoms in response to the treatment with the antidepressant vortioxetine and its mechanism of action are summarized.

Mild traumatic brain injury (MTBI) or concussions are becoming common contact sports injuries and have emerged as major health care concerns in the United States and Worldwide. The incidence of sports-related concussions is estimated to be 1.6 to 3.8 million annually. The danger associated with premature return to play and emerging evidence of long-term consequences of MTBI has led to the institution of state and national legislations to regulate youth athletics. These legislations also prompted youth athletics' administrators to propose new guidelines that expanded the use of emergency assessment with emphasis on neuropsychological testing, and requiring high school football coaches to attend courses on concussion management. Despite these significant changes in the identification and management of concussions, in many instances MTBI can be difficult to recognize due in part to an absence of a unified and universal definition. Research of high school football players has shown that

even without clinically observed symptoms of concussion, blows to the head can lead to demonstrated measurable neurocognitive, physiological and psychological impairments. Among the various scholastic sports, football has the highest MTBI concussion rate. Furthermore, there is a lack of well documented studies that delineate the differences between the cognitively and psychologically based symptoms resulting from MTBI versus the primary psychologically based symptoms that are a consequence of developing PTSD during and after the course of a concussion event. There is also limited empirical prospective data to guide the different treatments for MTBI and its complications including PTSD. Consequently the separation of the PTSD cognitively and psychologically based symptoms from the MTBI induced symptoms can be difficult and clinically challenging. This case illustrates the difficulties in delineating MTBI concussion induced symptoms from PTSD based symptoms. The MTBI, cognitive difficulties which were attributed to the patient's concussion, were consistent with PTSD psychological symptoms which improved with vortioxetine treatment. Further research would be needed to confirm the effectiveness of vortioxetine in treating the cognitive and psychological symptoms related to PTSD in the context of a concussion event and MTBI.

Keywords: Neurodegenerative Diseases, Immersive technologies, Treatment