Role of physiotherapy in post-traumatic stress disorder-induced functional motor disorder

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Dear Editor,

Traumatic events significantly impact functioning both psychologically and physiologically, resulting in alterations to brain circuits like the hippocampus, amygdala, and right frontal cortex. The hippocampus is involved in recording memories (Edwards et al., 2014). In PTSD, the reduced volume of the hippocampus is seen with the amygdala, which processes emotional stimuli, for instance, trauma-related events. Elevated activity in the right visual cortex often explains re-experiencing trauma. Chronic pain and PTSD are increased in people who suffer from motor vehicle accidents, with a higher prevalence than in the general population. Functional neurological disorders predominantly occur in women and may manifest late in the 30s; functional epilepsy presents earlier in life (Nielsen et al., 2015).

We would like to present an interesting case of a patient in early adulthood. The patient's name and other demographic details are not revealed to maintain anonymity. The patient presented with paresis of the bilateral proximal muscle weakness of upper and lower limbs, along with poor control of sitting balance, and a history of seizures before the onset of paresis. All vitals and investigations remained unchanged. The patient's history was instrumental in clarifying the cause of the symptoms. This patient had a major public school examination at hand, which would significantly decide their future career; a road traffic accident occurred, in which they incurred fractures to the forearm and leg. In India, health is often more important than education; thus, this patient failed to make it to the examination and consequently suffered from a backlog of school. Meanwhile, their classmates continued their studies without interruption, causing the patient to fall behind by a year. This situation triggered post-traumatic stress disorder (PTSD), manifested through sleep disturbances, such as hearing horn sounds at night, midnight screaming, and a phobia of traveling alone on a bike. The patient also had feelings of social exclusion from their age mates, and this affected their psychological state, making them develop a PTSD-induced functional neurological disorder. The patient was cognitively intact with minimal emotional disturbance and no improvement in muscle tone. Despite this, the muscle strength assessment using the Modified Medical Research Council (MMRC) scale showed rapid deterioration of proximal muscles in both the upper and lower limbs.

The role of physiotherapists is crucial in educating patients and their families about psychiatric conditions, especially in a culture where mental health issues are often misunderstood as divine punishment or evil forces (Spurio, 2021). Education is key to improving patient prognosis, as it helps patients recognize that such symptoms are common and aids in identifying aggravating factors that could worsen the condition. Physiotherapy plays a crucial role in retraining the nervous system to help patients regain control over movement. Words hold much power in healing, especially in therapy. Language affects the chemistry of the brain and can spur meaningful changes in its structure and function. Psychotherapy, a form of treatment that utilizes dialogue, has been proven to directly affect the brain (Spurio, 2016). In understanding how individuals handle personal, social, and work challenges, reframing those experiences with healing words helps focus on solutions and personal growth. The traditional separation of mind and body has evolved, with modern neuroscience emphasizing the integration of emotions and bodily functions; however, training the mind to heal remains a challenging task, as mental health education is still evolving (Spurio, 2015). Motor weakness could be managed by weight-bearing activities, functional retraining, Active Assisted Range of Motion Exercises, Motor relearning programs, and relaxation techniques like Jacobson's relaxation techniques. These play a crucial role in relaxing body muscles and providing a significant prognosis (Vaegter et al., 2018).

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