

Post-Traumatic Epilepsy (PTE) and Quality of Life after Traumatic Brain Injury (TBI)

Mini Review

Traumatic Brain Injury (TBI), a complex neurotrauma worldwide, commonly occurs in social life and shows several symptoms, long-term neuropsychological disability, and also causes mortality [1]. The prevalence of TBI is 10 million individuals per year and is one of the major causes of death amid young adults [2,3]. TBI damages brain in two ways: 10 brain damage, the damage which occurs at the time of insult, and 20 brain damage, the damage that develops few time after the injury [4]. TBI is classified into 3 categories i.e. mild, moderate, and severe based on the 15-point Glasgow Coma Scale (GCS), commonly used for rating the severity of brain insult [5]. The common areas which are injured during TBI are contusion, focal shear injury, edema, vascular compromise, Diffuse Axonal Injury (DAI), and excitotoxic reaction, along with diffuse brain injury (DBI) [6]. Post-Traumatic Epilepsy (PTE) is one of the common prognosis of TBI but the mechanisms are not known and followed by PTE. Epileptogenesis refers to the latent period followed by brain damaging injury in which the brain experiences molecular and cellular modifications, causes its excitability then leads to the occurrence of repeated spontaneous seizures. Post-traumatic epileptogenic components linked with severe TBI, enhance seizure susceptibility and lead to PTE. The categories of epilepsy which are associated with TBI are symptomatic, partial seizure with consciousness and without consciousness and generalized seizures. Absence seizures are not associated with head trauma [7]. TBI is believed to be a 'silent epidemic,' as individuals are mostly unaware of this problem [8]. It also decreases the quality of life (QoL) of the affected patients. Patients become unacceptable to the society which leads to their social boycott, sometimes leads to suicidal attempt. It interferes with the normal brain function also [9]. The important factors which affect QoL are memory disorders [10], fatigue [11], self-awareness deficits, feeling, emotions etc [12].

The combination of innovations in TBI-associated clinical trial design, elaboration of established models, and the evolution of the new clinically relevant models, and functional tests, are required by which the researchers can come to know the hidden mechanism of PTE and can improve the quality of life.

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