

Prevalence of persistent post-concussion syndrome in adults after mild traumatic brain injury

ABSTRACT

Background: Although mild Traumatic Brain Injury (mTBI) is one of the primary causes of death and disability worldwide, research on the prevalence of post-concussion syndrome (PCS) after mTBI is still extremely limited. Previous studies have shown that approximately 10-15% of mTBI patients experience PCS, yet these studies often have different methodologies and sample sizes. Purpose: This study aimed to determine and compare the prevalence of persistent PCS (more than one month post-injury) with those without PCS in mTBI patients. Methods: This study employed a retrospective cohort design and analyzed patient data from hospital records between July and December 2022, yielding a sample of 316 participants with mTBI. Patients with complete medical record data and active health checks for one month after being treated were taken as research subjects. PCS measurement was conducted using the Rivermead Post Concussion Symptoms Questionnaire (RPQ). Data were analyzed using an independent t-test with a two-tailed distribution to compare variables between groups (groups with PCS and without PCS). Results: The prevalence of persistent PCS in mTBI patients was 112 (35.4%) patients. The occurrence of persistent PCS was found to be most prevalent in the second month and in motor vehicle accident-related injuries, with 49 (43.7%) patients and 80 (71.4%) patients, respectively. Problems concentrating (37.5%), headache (30.3%), and light sensitivity (32.1%) were the most common symptoms of PCS. Conclusions: A significant proportion of persistent PCS was found, with the most prevalent occurring in the second month after mTBI and involving motor vehicle-related injuries. These findings warrant better screening guidelines and practices that patients can adopt after mTBI.