Characteristics of post-traumatic headaches following mild traumatic brain injury in military personnel

Saeid Rezaei Jouzdani[1]; Ali Ebrahimi[2]; Maryam Rezaee[3]; Mehdi Shishegar[4]; Abbas Tavallaii[5]; Gholamreza Kaka[6]

[1] Saeid Rezaei Jouzdani MD, Corresponding author, Neuroscience Research Center, Baqiyatallah University of Medical Sciences ,Tehran, Iran
[2] Ali Ebrahimi MD , Associate professor ,Plastic Surgery Ward and Trauma Research Center, Baqiyatallah University of Medical Sciences, Tehran , Iran
[3] Maryam Rezaee MD, Research fellow, Trauma Research Center, Baqiyatallah University of Medical Sciences, Tehran, Iran
[4] Mehdi Shishegar, MD, Neurologist, Shariati Hospital, Azadi .Sq, Isfahan, Iran
[5] Abbas Tavallaii, MD, Psychiatrist, Behavioral Sciences Research Center, Baqiyatallah University of Medical Sciences, Tehran, Iran
[6] Gholamreza Kaka PhD, Associate professor of Neuroscience Research Center, Baqiyatallah University of Medical Sciences, Tehran ,Iran ,Postal code : 19568-37173 , Tel/Fax: 98-21-26127286
E-mail: s.rezaei.jouzdani@gmail.com

Objectives: This study evaluated the prevalence and characteristics of posttraumatic headaches attributed to mild brain injury in military personnel in Isfahan.

Methods: A prospective, observational, descriptive study was conducted with a cohort of military personnel in military training during a 6-month period at the Military Training Center in Isfahan, Iran. A total of 322 military personnel were selected randomly and given a 13-item mild brain injury questionnaire and headache questionnaire, and reevaluated after a 3-month period.

Results: A total of 30 (9.3%) of the 322 military personnel met the criteria for a mild brain injury. Among them, 18 personnel (60%) reported headaches during the 3-month re-evaluation. PTHs were defined as headaches beginning within 1-week after a head trauma and were present in 5.6% of military personnel during the 6-month study period; 67% of PTHs were classified as migrainous or having possible migrainous features. Patients with disorders such as PTSD and depression were at a higher risk for developing PTH following mild brain injury ($p<0.05$). PTH did not relate to demographic factors such as age or type of trauma.

Conclusions: PTH attributed to mild brain injury is a common disorder in military personnel. Migrainous features are predominant among them when compared to the general population. PTH is not related to a particular type of trauma, but is associated with affective disorders.

Keywords: Posttraumatic headache, Mild traumatic brain injury, Blast injury, Migraine, affective disorders.