

Observed Specific Pattern of cognitive impairment in patients with Mild Traumatic Brain Injury: a prospective study of 35 patients A Jawahar MS S. Kumar MD

Objective:

To determine the specific pattern of cognitive impairments in patients with mild traumatic brain injury.

Background:

Patients of mild traumatic brain injury (mTBI) are usually discharged from the ER without the advice to follow-up with a specialist in absence of overt physical symptoms. MTBI can cause a wide range of longer term functional and cognitive deficits that can significantly affect the quality of life.

Methods:

In past 12 months 35 patients (F: M = 17:18) presented at our center for the treatment of persistent symptoms following mTBI. Mean age was 41 years (range 19-72 years) and the mean period elapsed after mTBI was 19 months. Majority presented with persistent headaches, vertigo and seizures but only 4(8.7%) subjectively complained of memory loss. Patients were screened for cognitive impairment with Montreal Cognitive Assessment (MoCA) followed by Wechsler Memory Scale assessment (WMS-IV), WMS-IV assesses the auditory, visual, immediate and delayed recall memories in detail. Patients are allotted index score in each modality. A score of 100 is considered average.

Results:

19 patients (54%) had abnormal MoCA scores (<27). The mean score for auditory, visual, visual working, immediate recall and delayed recall memories were 85, 75, 76, 81 and 75 respectively that are in the bottom 25th percentile for all modalities. Visual memory and the delayed recall memory (11th percentiles) are the most affected cognitive functions followed by the working visual memory (13th percentile). Auditory memory (22 percentile) was the least affected cognitive modality.

Conclusion:

A majority of MTBI patients continue to suffer from occult cognitive impairment long after the initial injury. Impairment of Visual memory and delayed recall (V-DIP) is the significant pattern seen in patients with mTBI. Patients with mTBI with persistent symptoms after 4 weeks should have assessment of cognitive functioning as a standard protocol with specific emphasis on V-DIP.