Violence-Related Mild Traumatic Brain Injury

- Detecting a hidden pandemic: The current state and future direction of screening and assessment tools for intimate partner violence-related brain injury
- Pathophysiology, blood biomarkers, and functional deficits after intimate partner violence-related brain injury: Insights from emergency department patients and a new rat model
- Epidemiology of Intimate Partner and Domestic Violence-Related Traumatic Brain Injury in the United States, 2018 to 2021: A National Trauma Data Bank Cohort Analysis of 3891 Patients
- Mild traumatic brain injury increases engagement in criminal behaviour 10 years later: a case-control study
- Prevalence and Risk Factors for Intimate Partner Physical Violence-Related Acquired Brain Injury Among Visitors to Justice Center in New York
- COVID-19-induced surge in the severity of gender-based violence might increase the risk for acquired brain injuries
- Impact of mild traumatic brain injury on physical, mental and cognitive functioning of abused women admitted to emergency units
- Acute Alcohol Intoxication in Patients with Mild Traumatic Brain Injury: Characteristics, Recovery, and Outcome

Mild Traumatic Brain Injury over the lifetime increases the number of subsequent violence-related charges and convictions but not for all offense types in males but not for females. These findings highlight the need for improved recognition and treatment of mTBI to prevent future engagement in antisocial behavior [1)].

Data indicate a high prevalence of IPV-related ABI among visitors to a New York Justice Center. An overrepresentation of African Americans/Blacks and refugees in a sample relative to the region signified a higher prevalence of IPV in these populations and warrants a provision of more trauma-informed ABI resources to these groups/communities. Intimate partner violence survivors visiting Justice Centers should be screened for motor/neurocognitive symptoms suggestive of mild traumatic brain injury. Further research to identify the prevalence and risk factors of IPV-related ABI statewide and nationwide is urgently needed to improve resource allocation and clinical management [2)].

Case reports from the HGUA

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77-year-old female Medical History: Hypertension (HTA), Type 2 diabetes, Dyslipidemia (DLP), Hypothyroidism, Aortic Stenosis, Hiatal Hernia, Ischemic Stroke. The patient presented to the emergency department after experiencing craniofacial trauma from an assault in a public place. Symptoms included a left periorbital hematoma, dizziness, nausea, and vomiting.

Clinical Examination on Admission:

Awake and bradypsychic. Scalp wound, managed with metallic sutures. Left orbital hematoma.

A craniofacial CT scan revealed a hemorrhagic contusion focus in the right temporal region with vasogenic edema, minimal mass effect, and extension of bleeding into the subarachnoid space and through the cerebellar tentorium. A 4mm subdural extra-axial laminar collection on the right convexity was also noted. Increased soft tissues were observed in the left frontoparietal and orbital regions.

Throughout the hospitalization, the patient remained neurologically stable, conscious, and oriented. A follow-up cranial CT was performed, revealing near-resolution of the subdural hematoma. However, the contusive intraparenchymal hematoma in the right temporal region showed slight enlargement of its hyperdense component, causing a mild mass effect with compression of adjacent sulci and partial involvement of the ipsilateral lateral ventricle's temporal horn. There was a minor extension of the hematoma into the subarachnoid space and the cerebellar tentorium. No new intracranial hemorrhagic foci or signs of acute ischemia were observed.

This case report documents the management and clinical course of a 77-year-old female with traumatic brain injury, cerebral contusion, and post-traumatic subarachnoid hemorrhage following an assault. The patient's neurological stability, along with the radiological findings, highlights the importance of careful monitoring and timely interventions in the management of such cases. Long-term follow-up will be crucial to assess the resolution of contusions and ensure optimal recovery in this elderly patient with multiple comorbidities.

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Theadom A, Meehan L, McCallum S, Pacheco G. Mild traumatic brain injury increases engagement in criminal behavior 10 years later: a case-control study. Front Psychiatry. 2023 May 2;14:1154707. doi: 10.3389/fpsyt.2023.1154707. PMID: 37215665; PMCID: PMC10197901.
2)
Saleem GT, Champagne M, Haider MN, Leddy JJ, Willer B, Asante I, Kent A, Joseph T, Fitzpatrick JM. Prevalence and Risk Factors for Intimate Partner Physical Violence-Related Acquired Brain Injury Among Visitors to Justice Center in New York. J Head Trauma Rehabil. 2022 Jan-Feb 01;37(1):E10-E19. doi: 10.1097/HTR.0000000000000750. PMID: 34985036.