
**“NEUROLOGICAL CONSEQUENCES OF TRAUMATIC
BRAIN INJURIES IN SPORTS”**

1. DR. SUHAS HOUSERAO RAJMANE,
PhD Scholar, Dept. of Rachana Sharir

2. DR. SUBHASH PATKI (HOD & PROFESSOR)
Ph.D. Guide, Professor & HOD of Dept. of Rachana Sharir,
Hon. Shri. Annasaheb Dange Ayurved Medical College, Ashta. Dist: Sangli.

Corresponding Author : Dr. Suhas Rajmane no- 8830030530

ABSTRACT:

Traumatic brain injury is common in sports leads to chronic traumatic encephalopathy (CTE). It includes symptoms like dizziness, nausea, reduced attention, amnesia and headache. axonopathy may persist for years. This article provides an overview of the acute and long-term neurological consequences of TBI in sports. Clinical, neuropathological and the possible pathophysiological mechanisms are discussed.

Keywords: Chronic traumatic encephalopathy Dementia pugilistica ,Tau Concussion Traumatic brain injury.

‘SHORT COMMUNICATION: NEUROLOGICAL CONSEQUENCES OF TRAUMATIC BRAIN INJURIES IN SPORTS’

INTRODUCTION:

In recent years, traumatic brain injury (TBI) and chronic traumatic encephalopathy (CTE) in contact sports participants have received intense media, medical and scientific attention. It is divided into acute (concussion, subconcussion, hemorrhage or other structural brain damages.) and chronic (in which progressive clinical symptoms often begin several years after retiring from the sport with abnormal tau accumulation as the histological hallmark.)

REVIEW OF LITERATURE:

Researcher has reviewed the consequences happened related to traumatic brain injury and found the different symptoms of acute and chronic conditions as follows:

Acute sports-related TBIs:	Chronic sequelae of sports-related TBIs:
<ul style="list-style-type: none">○ Skull fracture○ Subdural haematoma○ Epidural haematoma○ Subarachnoid haemorrhage○ Intracranial haematoma	<ul style="list-style-type: none">○ Chronic postconcussive syndrome○ Chronic traumatic encephalopathy○ Chronic hypopituitarism especially growth hormone deficiency (Tanriverdi et al.,

‘SHORT COMMUNICATION: NEUROLOGICAL CONSEQUENCES OF TRAUMATIC BRAIN INJURIES IN SPORTS’

Acute sports-related TBIs:	Chronic sequelae of sports-related TBIs:
<ul style="list-style-type: none"> ○ Cerebral contusion ○ Juvenile head trauma syndrome ○ Second impact syndrome 	<p align="right">2007)</p> <ul style="list-style-type: none"> ○ • ○ Increased risk of neurodegenerative disorders including cognitive impairment, Alzheimer's disease, motor neuron disease and Parkinson's disease

AUTHORS CONTRIBUTION:

The author has explained the Traumatic brain injuries related to sport and are well classified . like Acute TBI, Catastrophic brain injuries, Juvenile head trauma syndrome, Second impact syndrome, Concussion, Postconcussive syndrome Pathophysiology of sports-related TBI. Biophysical mechanisms in risk sports. Neurobiology and neurometabolic cascade. Functional abnormalities following TBI, Biomarkers, Cerebrospinal fluid. Blood, Pathology of acute TBI, Microscopic findings, APP and A β , Mechanistic link between TBI and CTE, CTE, Historical aspects, Epidemiology, Clinical features, Neuropathological findings, Pathological diagnostic criteria, Clinicopathological correlations.

CONCLUSION:

‘SHORT COMMUNICATION: NEUROLOGICAL CONSEQUENCES OF TRAUMATIC BRAIN INJURIES IN SPORTS’

- Subdural haematoma is the leading cause of death in sports-related TBI, especially in boxers.
- Concussion (mild TBI) may cause prolonged functional disturbance and axonal injury.
- The developing brains of children are more vulnerable to TBI-related damage than adult brains.
- Mild TBI may lead to CTE which occurs years after cessation of head trauma exposure.
- CTE is a neurodegenerative condition that causes irreversible dementia and motor impairments.

REFERENCES:

1. Ling H, Hardy J, Zetterberg H. Neurological consequences of traumatic brain injuries in sports. *Mol Cell Neurosci*. 2015 May;66(Pt B):114-22. doi: 10.1016/j.mcn.2015.03.012. Epub 2015 Mar 12. PMID: 25770439.