



MINIMAL HEAD INJURY

Aim

To provide clear criteria to categorizing head injuries in paediatric patients
To define criteria for safe discharge home, and deliver appropriate advice on discharge.
To educate staff on concussion or 'mild traumatic brain injury' that may be missed if not queried

Definition of terms

Head Injury Severity Scale (HISS)¹

Minimal Head Injury	=	GCS 15, no LOC, no amnesia, asymptomatic
Mild TBI	=	GCS 14-15, amnesia or LOC <5mins, or impaired alertness
Moderate TBI	=	GCS 9-13, LOC >5mins or focal deficit
Severe TBI	=	GCS 5-8
Critical TBI	=	GCS 3-4

AVPU
AVPU
AVPU
AVPU

Minimal Head Injury = A Head Injury which does not affect the functioning of the brain, and therefore does not result in any symptoms.

Mild TBI/Concussion =

- May be caused either by a direct blow to the head, face, neck or elsewhere on the body with an impulsive force transmitted to the head.
- Results in the rapid onset of short-lived impairment of neurological function.
- Acute clinical signs and symptoms largely reflect a functional disturbance rather than a structural injury and, as such, no abnormality is seen on standard structural neuroimaging studies.
- May or may not result in loss of consciousness.
- Signs and symptoms may evolve over minutes, hours or days and resolution may be spontaneous or prolonged².

Target Patient Population

This evidence summary applies to children aged 0-16 with minimal head injuries.

Target Users

This guide is directed at health-care professionals engaged in the care of children in the acute Emergency Department/Outpatient setting. A separate guideline will address symptomatic [mild/moderate TBI](#) and the ongoing management of severe TBI GCS<8 in the ICU setting. A separate guideline deals with [concussion and post concussive syndrome](#).

Assessment

Introduction

3% of all children under 5 present to the Emergency Departments each year with head injury. The key aim in management is determine the category of head injury by assessing conscious level and symptoms. Exclude mild head injury by assessing if head injury is symptomatic, and therefore considered a mild TBI.

History

History of presenting complaint	Time of and mechanism of injury Area of head hit and speed of impact
Differentiating factors in mild v moderate	GCS/ AVPU at time of event, since, and now Loss of Consciousness and its duration Amnesia pre or post event, specifically ask to recall events and duration Seizure
History typical of concussion (Always consider need for CT brain separately as per head injury guideline)	Headache (early post traumatic) Disorientation/ Confusion Reported pallor/ 'dazed' look Nausea/ Vomiting including number of discreet episodes and timing Ataxia/ Dizziness Visual symptoms/ Blurring/ Light insensitivity Fatigue
Evolution of symptoms	Clinical course improving/deteriorating?
Special considerations in history	Consider seizure or arrhythmia as precedent to injury Circumstances- child protection concerns? Previous head injuries/ concussions Medical conditions / Medications/ pain relief Past hx of bleeding disorder /warfarin tx Other injuries

Categories of TBI:

MINIMAL	MILD/minor	MODERATE	SEVERE
GCS 15, no symptoms	GCS 14-15 AVPU	GCS 9-13 AVPU	GCS 3-8 AVPU
Discharge advice SEE BELOW	Guidelines for imaging in Mild/moderate TBI guideline	ABCDE as per APLS/ATLS <i>Organise Imaging</i> <i>Secondary Survey</i>	ABCDE as per APLS/ATLS <i>See TBI IPAT algorithm</i> <i>Contact PICU 1890 213213</i> <i>Earliest Neurosurgery input</i> <i>Secondary Survey</i>

Minimal

A minimal or trivial head injury *without symptoms or signs* can be discharged directly with head injury +/- safety in the home advice

Always consider if the injury is consistent with the story, and if the level of supervision was appropriate for the age of the child. Where you are unsure about any element of this, discuss the patient with a senior medical colleague.

Advice

An asymptomatic head injury in a child with or without a laceration or bruising is considered minimal.

If symptoms are present consider assessing for and diagnosing concussion. (See [concussion](#) / [mild TBI](#))

Beware of missing concussion in the under 6 population who may not report symptoms.

Advise parents that the head injury can be considered minimal.

Advise that concussion can occur in the days following an injury even when not present initially, and to return or attend GP if doubt.

Observe the child as per [parent advice leaflet](#) and return to the hospital if any of the following are present:

1. Inability to wake your child
2. Extreme drowsiness
3. Headache getting worse that will not go away with paracetamol and/or ibuprofen
4. Vomiting - more than one episode.
5. Convulsion/seizure/twitches
6. Blood or clear fluid coming from the nose or ears
7. Dizziness or double vision
8. Confusion, not being able to answer questions they usually can for their age.
9. Difficulty understanding or speaking
10. Loss of balance or problems walking or weakness of any arm or leg

See [Parent information leaflet when to return to hospital in the case of a head injury](#)

DISCHARGE REQUIREMENTS

- Normal conscious state
- Appropriate social circumstances
- *Any consideration of NAI must be brought to a senior member of staff*
- A TRIVIAL HEAD INJURY WITHOUT SYMPTOMS OR SIGNS CAN BE DISCHARGED DIRECTLY WITH HEAD INJURY +/-SAFETY IN THE HOME ADVICE
- Parental advice sheet/link

Companion Documents

- [Parent information leaflet "Head Injury General Advice"](#)
- [Parent information leaflet "Concussion / Mild Traumatic Brain injury"](#)
- [Parent information leaflet when to return to hospital in the case of a head injury](#)
- [Mild / Moderate TBI guideline](#)
- [Concussion guideline](#)
- [References](#)