Choice of Imaging Modality

Children presenting to the emergency department who have sustained a head injury.

Are any of the following risk factors present?

- Suspicion of non-accidental injury
- Post-traumatic seizure, but no history of epilepsy
- On initial assessment GCS <14, or for children under 1 year GCS (paediatric) < 15
- At 2 hours after the injury GCS < 15
- Suspected open or depressed skull injury or tense fontanelle.
- Any sign of basal skull fracture (haemotympanum 'panda' eyes, cerebrospinal fluid leakage from the ear or nose, Battle's sign).
- Focal neurological deficit
- For children under 1 year, presence of bruise, swelling or laceration of more than 5 cm on the head

Perform CT head scan within 1 hour of risk factor being identified. A provisional written radiology report should be made available within 1 hour of the CT head scan taking place.

Observe for a minimum of 4 hours post head injury.

Are any of the following risk factors present during observation?
- GCS < 15
- further vomiting
- further episodes of abnormal drowsiness

Yes

Perform CT head scan within 8 hours of the injury. A provisional written radiologist’s report should be made available within 1 hour of the CT head scan taking place.

Yes, > 1 factor

Witnessed loss of consciousness > 5 minutes
Abnormal drowsiness
3 or more discrete episodes of vomiting
Dangerous mechanism of injury (high-speed road traffic accident either as a pedestrian, cyclist or vehicle occupant, fall from height of > 3 metres, high speed injury from an object
Amnesia (ante-grade or retrograde) lasting > 5 minutes (assessment not possible in pre-verbal children and unlikely in any child < 5 years).

No imaging required. Use clinical judgement to determine when further observation is required.

Yes

No

Yes, 1 factor

Current warfarin treatment?

No

Yes