

**CLINICAL SKILLS: ACUTE MANAGEMENT OF HEAD INJURY**

*Head injury is a common presentation to A&E departments. Different hospitals have different policies on which team looks after head injuries, but the general principles remain the same. The NICE guidelines (right) are very helpful!*

*When approaching a 'head injury' scenario in OSCEs, there are a few key points to be aware of and discuss as you carry out your assessment. Use these tips in conjunction with our [ABCDE proforma](#).*

**\*\*These tools are for revision purposes only and should be supported by use of National and Local Guidelines\*\***

**Wash hands / wear gloves**



**Ask for senior support early**

In A&E, these patients often come in on a 'trauma call'  
Do you need to call the anaesthetists early? (GCS <8)



**Assess for danger**

Approach with care



**Evaluate patient response**

To speech/shoulder squeeze



**Assess airway**

*If basal skull fracture or cervical spine injury suspected then do not perform head-tilt/chin-lift (use jaw thrust). Consider immobilizing the C-Spine using hard collar/sand bags.*

Look, listen and feel for breathing for 10 seconds

Examine mouth for evidence of foreign bodies/trauma/vomit

If airway is not patent - trial an oropharyngeal airway & call anaesthetist

The patient may require intubation if airway obstructed/GCS <8

*There are cases of nasopharyngeal airways penetrating the cerebral cortex in patients with basal skull fractures - avoid these!*



**Assess breathing**

Carry out brief respiratory assessment as per ABCDE assessment

Consider high flow oxygen, 10-15 L/minute, mask with reservoir bag  
If in respiratory distress - consider ABG  
In cases of polytrauma - consider early CXR for chest trauma



### **Assess circulation**

BP, HR, UO, CRT, temperature, etc. As per ABCDE assessment  
Insert 2 wide bore cannulae, take bloods – FBC, U&Es, clotting,  
toxicology screen  
Consider analgesia if severe



### **Disability**

Check BM  
What is the GCS? (More appropriate than AVPU in this situation)  
Assess pupillary responses, and monitor GCS regularly if GCS <15



### **Expose**

Injuries elsewhere? ('Secondary survey'). Consider non-accidental injury in children  
*Examine head/scalp thoroughly – swelling may suggest underlying fracture of the skull*  
*Assess for Battles sign, rhinorrhoea and otorrhoea (CSF leak)*  
*Full neurological examination, including cranial nerves, upper and lower limbs*



Consider CT Head (see below)



Consider Cervical Spine imaging (see NICE guidelines)



If there is persistently low GCS, ongoing confusion, abnormalities on head/spine imaging or concerns on examination, then discuss with neurosurgical centre



Consider admitting to monitor, or discharge home if low risk and accompanied by responsible adult (see NICE guidelines for further details)

## Cranial imaging

Urgent (<1 hour) CT head should be obtained where possible for patients with:

- GCS < 13 when first assessed in emergency department
- GCS < 15 when assessed in emergency department 2 hours after the injury
- Suspected open or depressed skull fracture
- Sign of fracture at skull base (haemotympanum, 'panda' eyes, cerebrospinal fluid leakage from ears or nose, Battle's sign)
- Post-traumatic seizure
- Focal neurological deficit
- > 1 episode of vomiting
- ANY amnesia or loss of consciousness in patients with coagulopathy/on warfarin

CT head should also be arranged if:

- Amnesia of events before injury (greater than 30 minutes)
- Dangerous mechanism of injury (e.g. road accident/fall from >1 m)
- Age >65 and amnesia/episode of loss of consciousness

## Ongoing observation

After initial management monitor patient with regular neurological observations - any drop in GCS may warrant CT head.

## Advice

If the injury does not warrant admission or treatment (see NICE guidelines), then the patient could be sent home with the following advice:

- Reassure that trauma to the head is relatively common and rarely causes problem
- Advise to have bed rest at home, with analgesia is recommended until you feel better
- Advise that they must stay with a responsible adult for the first 48h after injury
- They should not play contact sports for the first 3 weeks after injury
- Advise them to seek urgent medical attention if they develop new symptoms.

Symptoms may include:

- Loss of consciousness
- Confusion
- Seizures
- New neurological symptoms such as weakness in one side
- Vomiting
- Severe headache
- Hearing problems
- Eyesight problems
- Rhinorrhea
- Otorrhoea
- Warn patients who have undergone severe head injury that there may be future, long term changes, including irritability, change in personality or memory problems.
- Provide advice on prevention of future head injuries:
  - Protective helmets when playing contact sports or riding a bicycle
  - Teaching of good road safety
  - Wearing seatbelt in the car
- Provide with leaflets and contact details
- Advise to have follow up in 1 week with their GP if they were admitted or had imaging.