
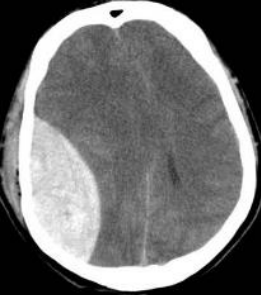



# Head Trauma

You may get a scenario of a head injury due to a fall or a RTA, and as in any other trauma case first **resuscitate the patient "ABCDE"** but with some considerations

<b>Assess Airway</b>	<ul style="list-style-type: none"> <li>If basal skull fracture or cervical spine injury suspected then <b>do</b> a jaw thrust (do <b>not</b> perform head-tilt/chin-lift)</li> <li>Consider immobilizing the C-Spine using hard collar/sand bags.</li> <li>Look, listen and feel for breathing (talk to the pt)</li> <li>Examine mouth for evidence of foreign bodies/trauma/vomitus.</li> <li>If airway is not patent - trial an oropharyngeal airway</li> <li>Intubation if airway <b>obstructed/GCS &lt;8</b></li> <li><b>Nasopharyngeal intubation is NOT done in trauma!</b> in patients with basal skull fractures you may penetrate the cerebral cortex</li> </ul>		
<b>Assess Breathing</b>	<ul style="list-style-type: none"> <li>Carry out brief respiratory assessment as per ABCDE assessment</li> <li>Consider high flow oxygen, mask with reservoir bag</li> <li>If in respiratory distress - consider ABG</li> </ul>		
<b>Assess Circulation</b>	<ul style="list-style-type: none"> <li>As per ABCDE assessment</li> <li>Insert 2 wide bore cannula, take bloods – FBC, U&amp;Es, clotting, toxicology screen</li> </ul>		
<b>Disability</b>	<ul style="list-style-type: none"> <li>What is the <b>GCS</b>? (know this by heart) (More appropriate than AVPU in head injury)</li> <li>Assess pupillary responses, and monitor GCS regularly if GCS &lt;15                             <ul style="list-style-type: none"> <li>15-13 = minor head injury</li> <li>12-9 = moderate head injury</li> <li>&lt;8 = severe head injury</li> </ul> </li> </ul>		
<b>Exposure</b>	<ul style="list-style-type: none"> <li>Injuries elsewhere? ('Secondary survey'). Consider non-accidental injury in children (shaken baby syndrome)</li> <li>Examine head/scalp – swelling may suggest underlying fracture of the skull</li> <li>Assess for <b>Battles sign</b>, <b>rhinorrhoea</b> and <b>otorrhoea</b> (CSF leak)</li> <li>Full neurological examination, including cranial nerves, upper and lower limbs</li> </ul>		
<b>Investigations</b>	<ul style="list-style-type: none"> <li>CT Head + Cervical spine (without contrast)</li> </ul>		
<b>Basilar skull fracture</b>	<b>Epidural hematoma</b>	<b>Subdural hematoma</b>	
<ul style="list-style-type: none"> <li>Fracture of base of the skull</li> <li><b>Raccoon eyes</b> (periorbital ecchymosis)</li> <li><b>Battle sign</b> (mastoid/postarticular ecchymosis)</li> <li><b>Otorrhoea</b> (blood or CSF)</li> <li><b>Rinorrhoea</b> (blood or CSF)</li> <li><b>Hemotympanum</b> (blood in the tympanic cavity)</li> <li>7th nerve palsy (facial paralysis)</li> <li>8th nerve palsy (hearing loss)</li> <li>Optic nerve entrapment (rare)</li> </ul>	<ul style="list-style-type: none"> <li>Blood collection between the skull and dura matter</li> <li><b>Lens</b> shaped hematoma</li> <li><b>Middle meningeal artery injury</b></li> <li>Skull fracture in 90%</li> <li><b>Lucid interval</b>-50% (temporary improvement). History will be loss of consciousness after the a traumatic brain injury &gt;&gt; pt will wake up "lucid interval" &gt;&gt; decrease mental states (deteriorate) &gt;&gt; coma.</li> <li><b>C/F</b>: headache, nausea, vomiting, convulsions, <b>herniation</b> expanding hematoma causes a <b>uncus herniation syndrome</b>:                             <ul style="list-style-type: none"> <li><b>ipsilateral fixed</b> pupil</li> <li><b>contralateral hemiparesis</b></li> </ul> </li> <li><b>Tx</b>: craniotomy or burr hole</li> </ul>	<ul style="list-style-type: none"> <li>Blood collection between the dura and arachnoid</li> <li><b>Crescent</b> shape hematoma</li> <li>Rupture of <b>bridging veins</b> (in elderly)</li> <li>Can cause midline shift</li> <li>loss of consciousness (<b>without</b> a lucid interval)</li> <li><b>Tx</b>: the goal is to <b>decrease ICP</b> (with elevation of the head, hyperventilation and mannitol) If there's a midline shift &gt;&gt; craniotomy</li> </ul>	
<p>Base of skull fracture signs</p>  <p>a: raccoon eyes b: CSF rhinorrhea c: CSF otorrhea d: battle sign e: haemotympanum f: bump</p>			

**Wish you best luck!**

For any mistakes, please contact me - Monerah Alsalouli