

Emergency Assessment of the Unconscious Patient

CONSCIOUSNESS: awareness of self and external stimuli.

Regulated by the Brainstem Reticular Formation, especially the **Locus Coeruleus**

- **Obtundation:** response only to stimulus
- **Stupour:** response only to PAINFUL stimulus

Massive list of differentials;...so what has put this person into a coma?

FIRST YOU LOOK FOR THE MOST EASILY REVERSIBLE CAUSES

Eg. something that you can answer with a big needle, like a tension pneumothorax or a heroin overdose.

The ABCs:

Is your patient **HYPOXIC, HYPOVOLEMIC, HYPOTENSIVE?**
Whatever else the problem may be, these are more serious.
i.e you cant be conscious if your blood is not circulating.

Glasgow Coma scale			
	Eyes opening	Motor	verbal
6		Obeys commands	
5		Localises to pain	Orientated
4	Spontaneous	Withdraws from pain	Confused
3	To speech	Abnormal flexion	Inappropriate
2	To pain	Extends to pain	incomprehensible
1	none	none	None

HISTORY:

- Age?
- Diabetes? Heart condition? Epilepsy?
- DRUGS?? Taken anything?
- Trauma? (ask for the mechanism of trauma)
- Rate of onset of coma (sudden collapse, or steady decline?) + was there a prodrome?
 - Even when its clearly drug-induced, there may also be a brain injury.

EXAM:

PULSE

BLOOD PRESSURE

TEMPERATURE

RESPIRATORY RATE AND PATTERN:

BRADYCARDIA and HYPERTENSION?

= "Cushing response"

= increasing ICP!!

ATAXIC BREATHING has no pattern; = medulla lesion

CHEYNE-STOKES BREATHING shallow breathing, gets deeper, deeper, then shallows out again- indicates that injury is in brainstem or thalamus

PUPILS: size, reaction, symmetry.

Tiny equal pupils: opiate overdose or Pons lesion

Mid-size equal fixed unreactive pupils: **Mid**brain lesion

Unequal pupils: **!! CONING !!** lesion is on the dilated side

While on the topic of the head, look for

BASE OF SKULL FRACTURE

- Crepitus of the facial bones or **CSF RHINORRHOEA**
- Raccoon Eyes (bilateral orbital haematomae)
- "Battle Sign" – huge bruise at the mastoid process behind the jaw
- Haemotympanum

OK, now take some blood and do some SCANS:

EUC - hyponatremia of sudden onset?

FBC – so anaemic, or leucocytosis of sepsis

LFT - hepatic encephalopathy?

COAGS – unexplaiable intracranial bleed?

BSL – hypo, or HONK, or ketoacidosis

DRUG LEVELS eg. anticonvulsants

CT OF HEAD

- The usual eg. blood where blood shouldnt be
 - **Diffuse Axonal Injury: petechiae on CT**
- C-SPINE SERIES**