

Posturing

Model posturing

With increasing ICP, the patient manifests changes in motor ability. Noxious stimuli may elicit decorticate or decerebrate posturing. Decorticate (flexor) posture is flexion of arms, wrists, and fingers with adduction in upper extremities, and extension, internal rotation, and plantar flexion in lower extremities. In decerebrate (extensor) posture, the arms are stiffly extended, adducted and hyperpronated, with plantar flexion of feet. A good way to remember the difference is to think of decorticate (to the cord - pulling arms and hands to the spinal cord) and decerebrate (has lots of "e"s in the word for extensor).

Location of Injury

Basilar Skull Fracture

Bass-sailor

The location of injury often determines the signs and symptoms manifested. For example, a basilar skull fracture is a linear fracture involving the base of the skull and may present with raccoon eyes (periorbital ecchymosis) or Battle's sign (postauricular ecchymosis). Rhinorrhea (CSF leakage from the nose) or otorrhea (CSF leakage from the ear) often confirms that the dura has been damaged.

Halo or Ring Sign

Ring Sign

To determine if fluid leaking from the nose or ear is CSF, one can look for the halo or ring sign. This is done by allowing the leaking fluid to drain onto a white gauze pad or towel and observe for the results. If CSF is present, the blood will pool into the center of the pad and a yellowish ring will encircle the blood, forming a "halo" or "ring".

Considerations

Intracranial Bleeding

Skull Goblet filled with Blood

With any traumatic brain injury there is the potential for intracranial bleeding. An epidural hematoma results from bleeding between the dura and inner surface of the skull, while a subdural hematoma is bleeding between the dura mater and the arachnoid layer of the meninges. An intracerebral hematoma occurs from bleeding within the brain tissue, potentially from rupture of intracerebral vessels.