

Acute subdural hematoma (SDH)

Incidence : 5-22% of patients with severe head injury.

Male:female : 3:1.

Age : average age is greater than other types of head injury, it's common in the extremes of life.

Pathogenesis:

1) high – speed impact that accelerate the brain relative to the fixed dural structures tearing bridging veins.

2) injury to the brain surface with bleeding from cortical vessels into the subdural space.

Clinical features : depends on :

- 1) size & rapidity of growth of the SDH.*
- 2) severity of the diffuse injury to the brain.*

Clinical features include :

- 1) disturbed level of consciousness.*
- 2) papillary irregularities (anisocoria).*
- 3) motor deficit e.g. hemiparesis.*
- 4) cranial nerve palsy e.g. third or sixth nerves palsies.*

Diagnosis: by brain CT scan which reveal hyperdense crescentic-shaped lesion

Treatment :

- 1) measures to reduce I.C.P.*
- 2) surgical treatment (craniotomy centered over max. thickness of hematoma) is indicated in acute SDH > 5 mm thickness causing significant mass effect and or midline shift.*

Complications:

- 1) diffused cerebral edema with severely raised I.C.P.*
- 2) recurrent or residual hematoma.*
- 3) delayed intracerebral hematoma.*
- 4) post-traumatic seizure occurs in up to one third of cases with severe head injury.*

Prognosis:

Usually MR > 50% & not less than 35%.

Pure acute SDH without evidence of parenchymal injury is associated with mortality rate of 22% but with the presence of parenchymal injury mortality rate is 35-65%

Post-operative refractory raised I.C.P. indicates poor prognosis

Acute extradural hematoma (EDH)

It's defined as collection of blood between inner table of skull & dura.

Epidemiology:

Incidence : < 2% of head injury.

Average age is usually less than other types of head injury (usually young & middle aged).

It's rare over age of 60 years & children in the first 2 years of age.

Pathogenesis:

- 1) fracture edges (fracture hematoma).*
- 2) arterial (middle meningeal artery) in 50% of cases.*
- 3) venous middle meningeal vein in one third of cases, diploic veins or dural venous sinuses.*

The site is usually temporal but extension to the frontal , parietal or occipital arease is common.

Clinical features : there are 5 clinical courses.

1) conscious throughout.

2) unconscious throughout.

3) initially conscious & subsequently unconscious.

4) initially unconscious & subsequently conscious

5) initially unconscious, then conscious (lucid interval) & then unconscious again.

Diagnosis : by brain CT scan which reveal hyperdense biconvex lesion

Treatment :

- 1) measures to decrease I.C.P.*
- 2) surgical treatment (craniotomy centered over max. thickness) is indicated in lesion > 5 mm thickness causing significant mass effect and or midline shift.*

Outcome :

With proper early management mortality rate is zero but if :

- 1) patient is initially neurologically unwell e.g. initially comatose.*
- 2) delayed presentation.*
- 3) associated brain injury e..g. ICH, SDH., contusion.*

Then the mortality rate will increase.





