

Epidural Hematoma

An epidural hematoma is a life-threatening condition that is due to head trauma resulting in accumulation of blood in the potential space between the dura and periosteum, stemming from middle meningeal artery rupture. Complications include death and neurological impairment from transtentorial herniation.



PLAY PICMONIC

Mechanism

Middle Meningeal Artery Rupture

Middle Men-in-jewels with Archery-artery Ruptured

This is a dural artery that is susceptible to injury.

Temporal Bone Fracture

Temple of Bone Fractured

The dural artery is particularly susceptible to injury in cases of temporal bone fracture. This is because the fracture lines cross the dural artery during its course.

Hematoma Between Skull And Dura Mater

Blood-tomato between Skull and Durex-latex

Typically the dura is tight to the skull; however, under arterial pressure a hematoma can develop.

Transtentorial Herniation

Train-tent with Herniation of brain

Epidural hematoma can lead to transtentorial herniation which can result in compression of Cranial Nerve III. This manifests as a fixed dilated pupil and inability to accommodate the lens.

Lucid Interval

Lucy Interval

Slow accumulation of blood can lead to delayed onset of neurological signs. Patients may feel fine initially after injury, and have a "lucid interval" before serious complications.

Imaging

Lens-shaped on CT

Lens Shape

Epidural hematoma appears lens-shaped on CT versus subdural hematoma, which is crescentic in shape.



Does Not Cross Suture Lines

Unable to cross Suture

The bleed does not cross suture lines due to superior attachment of the dura to the periosteum at the sutures.

Treatment

Craniotomy

Crane-removing-skull

Early surgical intervention via craniotomy or burr hole to relieve pressure has been demonstrated to improve mortality.