

□ Postoperative Epidural Hematoma (EDH)

□ Definition

A **postoperative epidural hematoma** is a **collection of blood between the inner surface of the skull and the dura mater** that develops after a craniotomy. It may occur adjacent to or remote from the surgical site and can be life-threatening due to mass effect.

△ Etiology and Mechanisms

- Intraoperative injury to dural vessels (e.g., middle meningeal artery)
- Inadequate hemostasis or dural detachment
- Loss of tamponade effect due to craniectomy or drain over-suction
- Coagulopathy or use of anticoagulants/NSAIDs
- Sudden postoperative hypertension
- Remote EDH: occurs distant from surgical site due to pressure shifts

□ Incidence

- Rare but serious: ~0.5% to 2.5% after supratentorial craniotomy
- Often occurs within the first 6-24 hours postoperatively

□ Clinical Presentation

- Decreased level of consciousness (somnolence → coma)
- New-onset anisocoria or pupillary changes
- Headache, nausea, vomiting
- Seizures
- Delayed awakening from anesthesia
- Neurological deterioration after initial recovery

□ Imaging Findings

- **CT scan:** biconvex (lens-shaped), hyperdense extraaxial collection
- Mass effect, midline shift
- May appear **ipsilateral or contralateral** to craniotomy site

□ Differential Diagnosis

- Subdural hematoma
- Intracerebral hemorrhage
- Tension pneumocephalus
- Stroke or infarction

□ Management

- **Emergency re-craniotomy and evacuation** if symptomatic or with mass effect
- ICU monitoring and neurosurgical follow-up
- Correction of coagulopathy (platelets, FFP, reversal agents)
- BP control to avoid further bleeding

□ Prognosis

- Favorable if detected and treated early
- Delayed diagnosis may lead to irreversible brain damage or death

□ Prevention

- Careful intraoperative hemostasis
- Judicious use of suction drains
- Postoperative blood pressure control
- Early CT scan (especially if neurological change)
- Cautious NSAID use in high-risk patients

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