

shearing force occurs at the interface between the structures of different density so that the gray matter (cell body) rapidly accelerates, while the white matter (axons) tends to lag behind. Although shearing forces are maximum at the cerebral surface and extend toward the center of rotation within the brain, the most serious effects are often in the area of the brainstem. Damage can also occur when severe compression of the skull causes the brain to be forced through the tentorial opening. This can produce irreparable damage to the brainstem (Fig. 27-6).

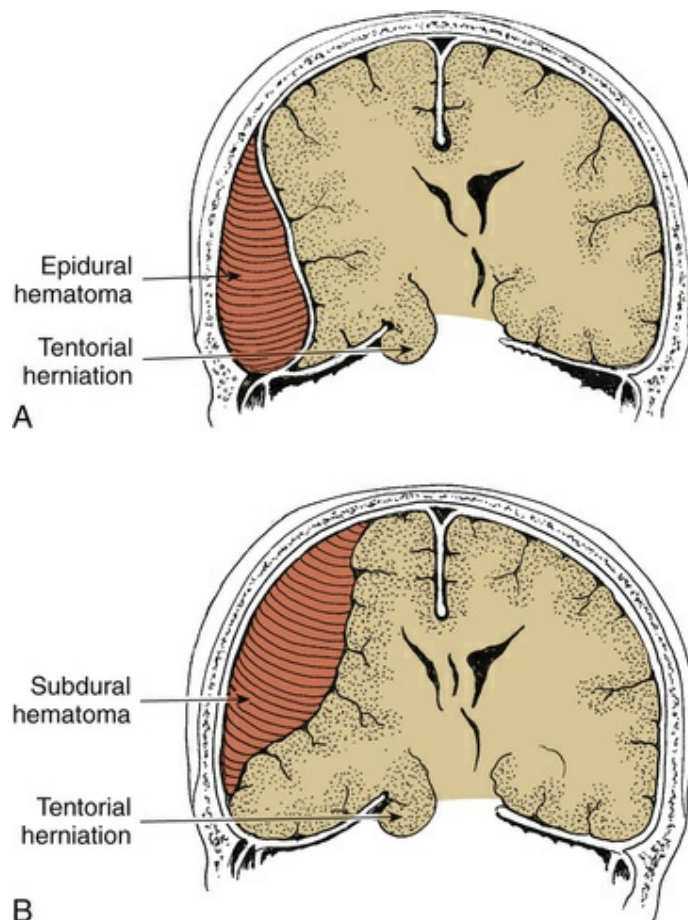


FIG 27-6 **A**, Epidural (extradural) hematoma and compression of temporal lobe through tentorial hiatus. **B**, Subdural hematoma.

Concussion

The most common head injury is **concussion**, a transient disturbance of brain function often traumatically induced that