

Brain contusions

It is bruises of the brain.

Small blood vessels injury that leak into brain tissue.

20–30% of severe head injury.

Treatment is usually conservative , they tend to heal by their own without surgical intervention.

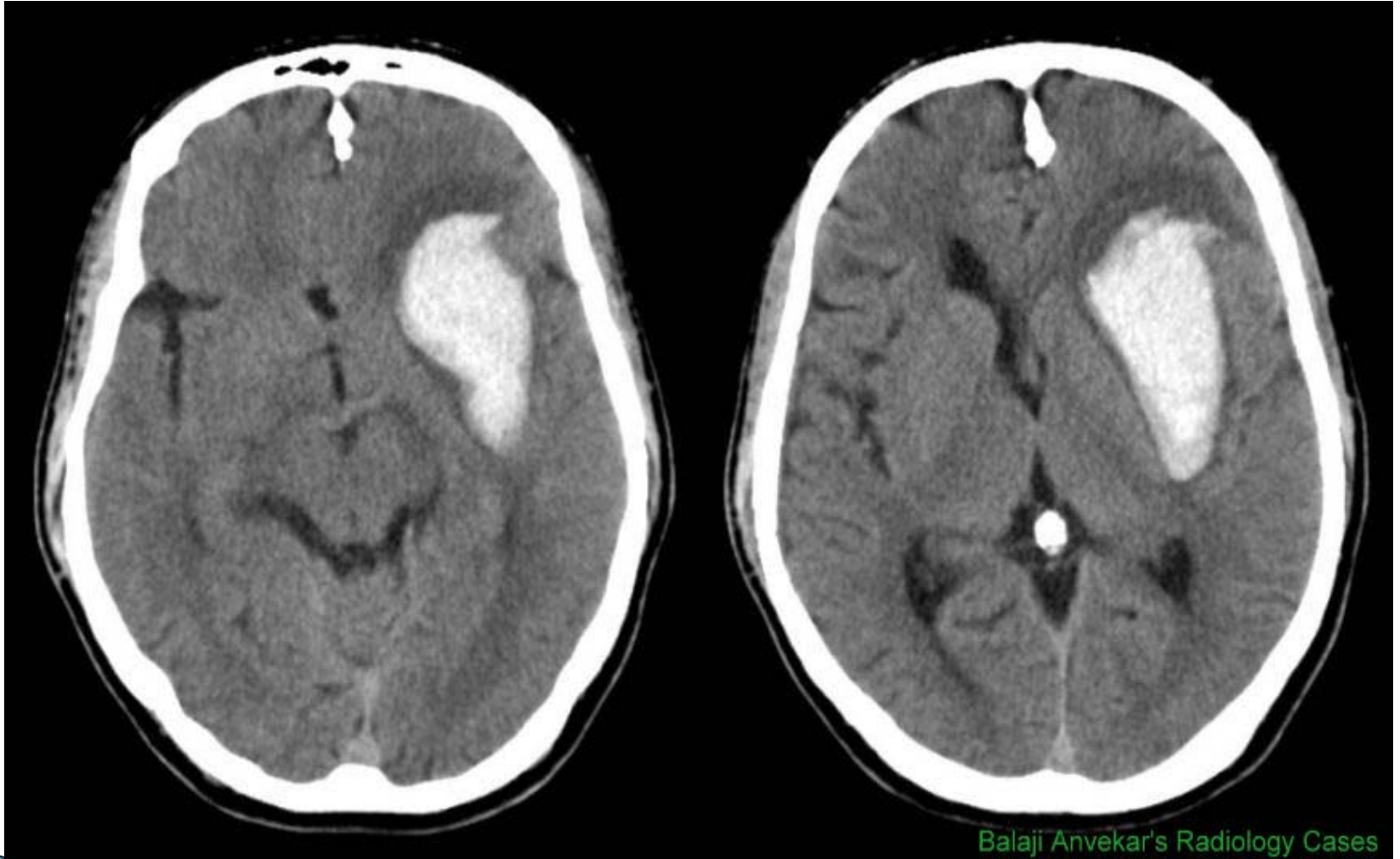
3 types (coup, intermediate & counter-coup).

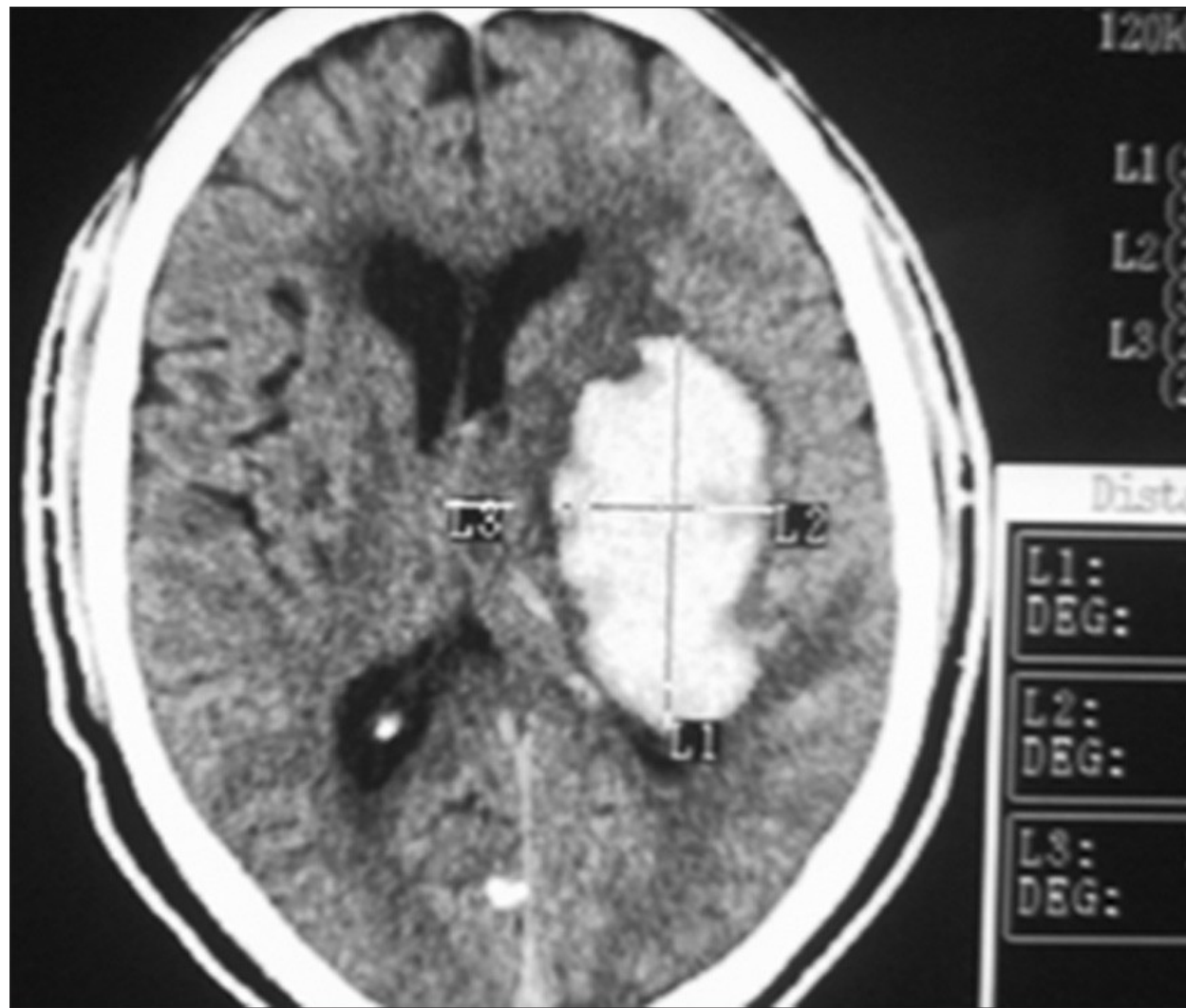


Intracerebral hemorrhage

*Heavy bleeding inside the brain (intra-axial).
Either intra-parenchymal or intra-ventricular.
Intra-parenchymal hemorrhage is either lobar (superficial) or deep-seated.*

Surgery is indicated in large superficial hematoma causing significant mass effect & or midline shift, it is also indicated in posterior fossa hemorrhage.





Complications of head injury

1) post-concussion syndrome (headache, dizziness, lack of concentration, anxiety , amnesia usually occur in young adults & may persist for 3 – 6 months.

2) post-traumatic epilepsy (immediate, early & late).

3) CSF leak & meningitis

4) hydrocephally (communicating or non-communicating).

5) cardio-pulmonary complications (▶ hypotension or hypertension , arrhythmias, neurogenic pulmonary edema etc...

6) gastro-intestinal complications (stress ulcer, ileus, constipation etc...

7) urinary complications (UTI, renal failure).

8) musculo-skeletal (muscle wasting , joint stiffness , pressure- sores).

9) coagulopathy & DIC.