

Components of Consciousness

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- **Arousal** → Level of Consciousness
- **Awareness** → Content of Consciousness

Consciousness

Arousal

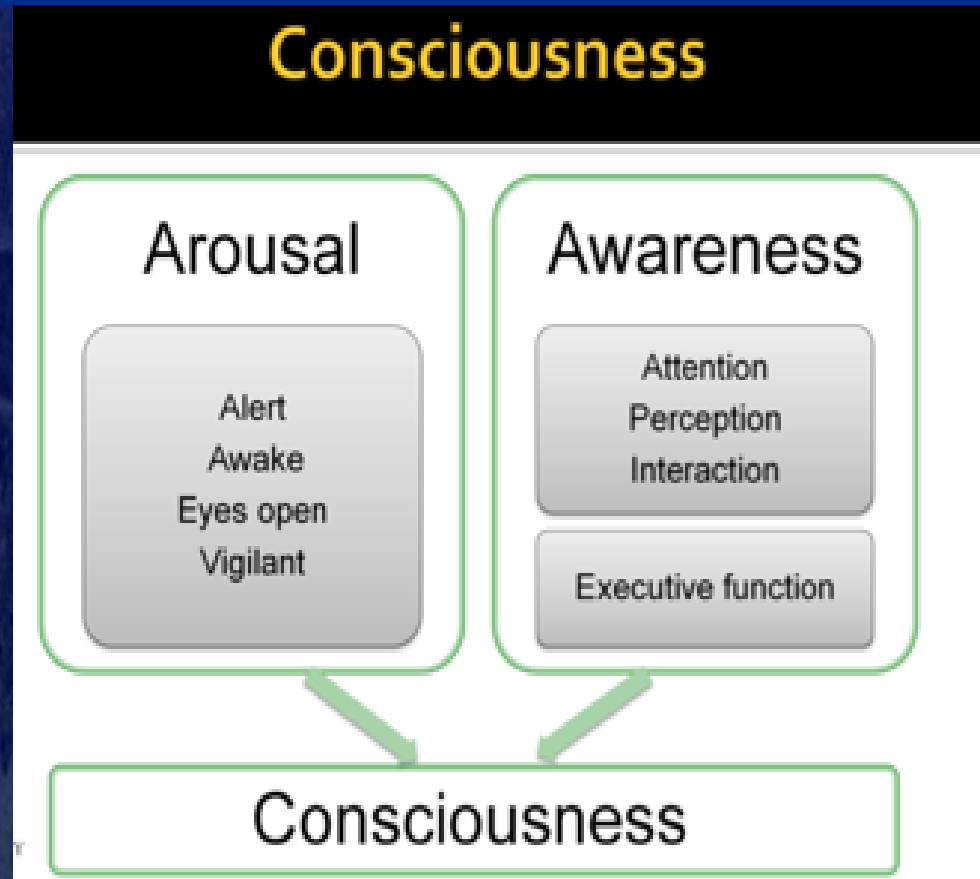
Alert
Awake
Eyes open
Vigilant

Awareness

Attention
Perception
Interaction

Executive function

Consciousness



Content of consciousness Terminology

Table 1

Terms for delirium

Acute confusional state

Acute brain failure

Agitation

Altered mental status

Confusion

Encephalopathy

ICU psychosis

Mental status changes

Sundowning

Terminal restlessness (eg, in palliative care)

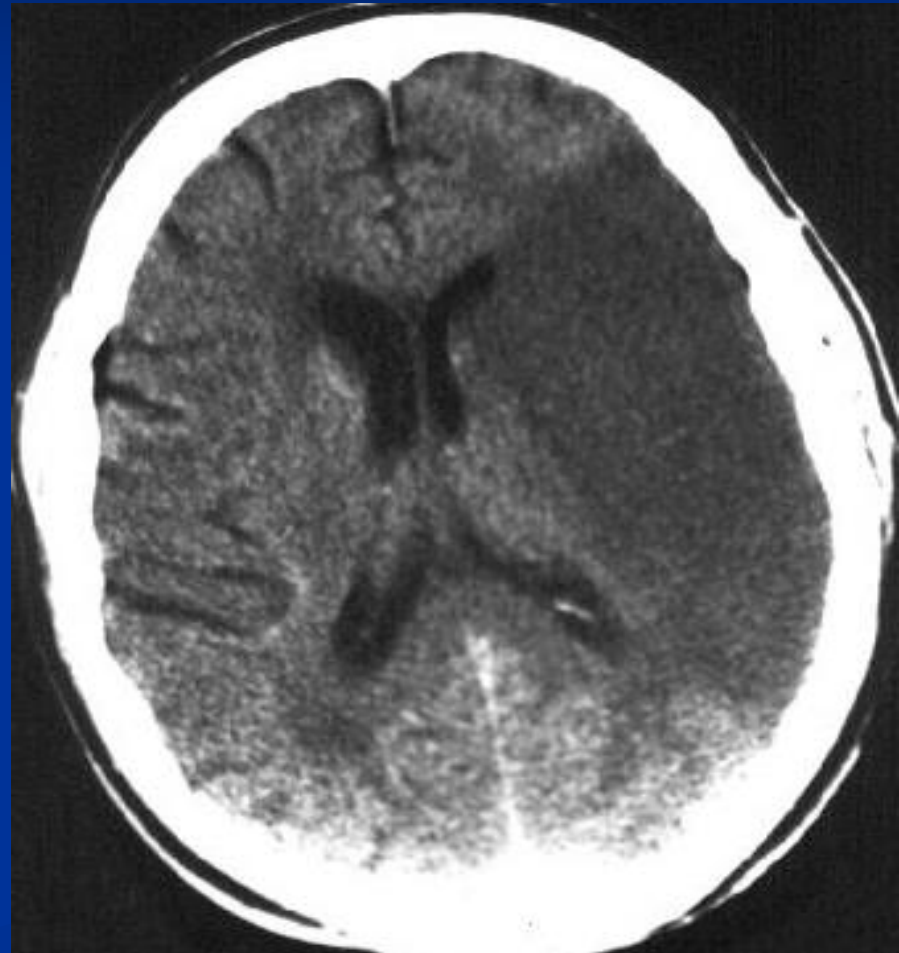
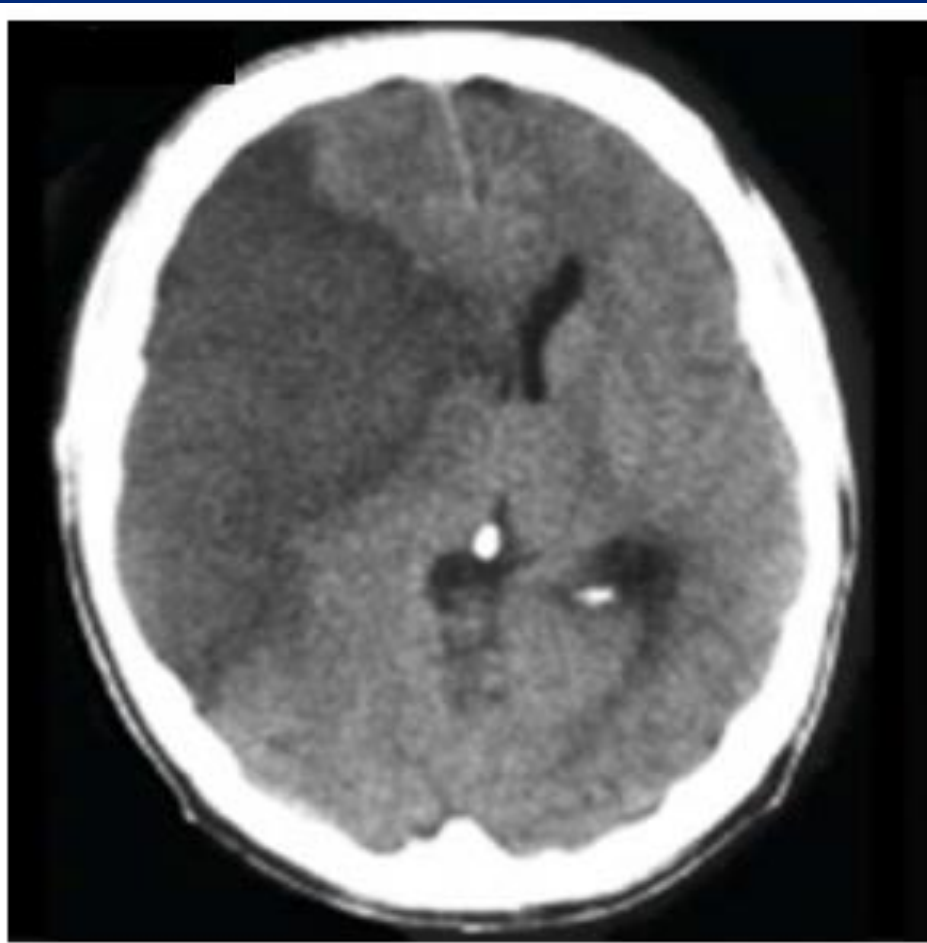


What is the cause of coma ?

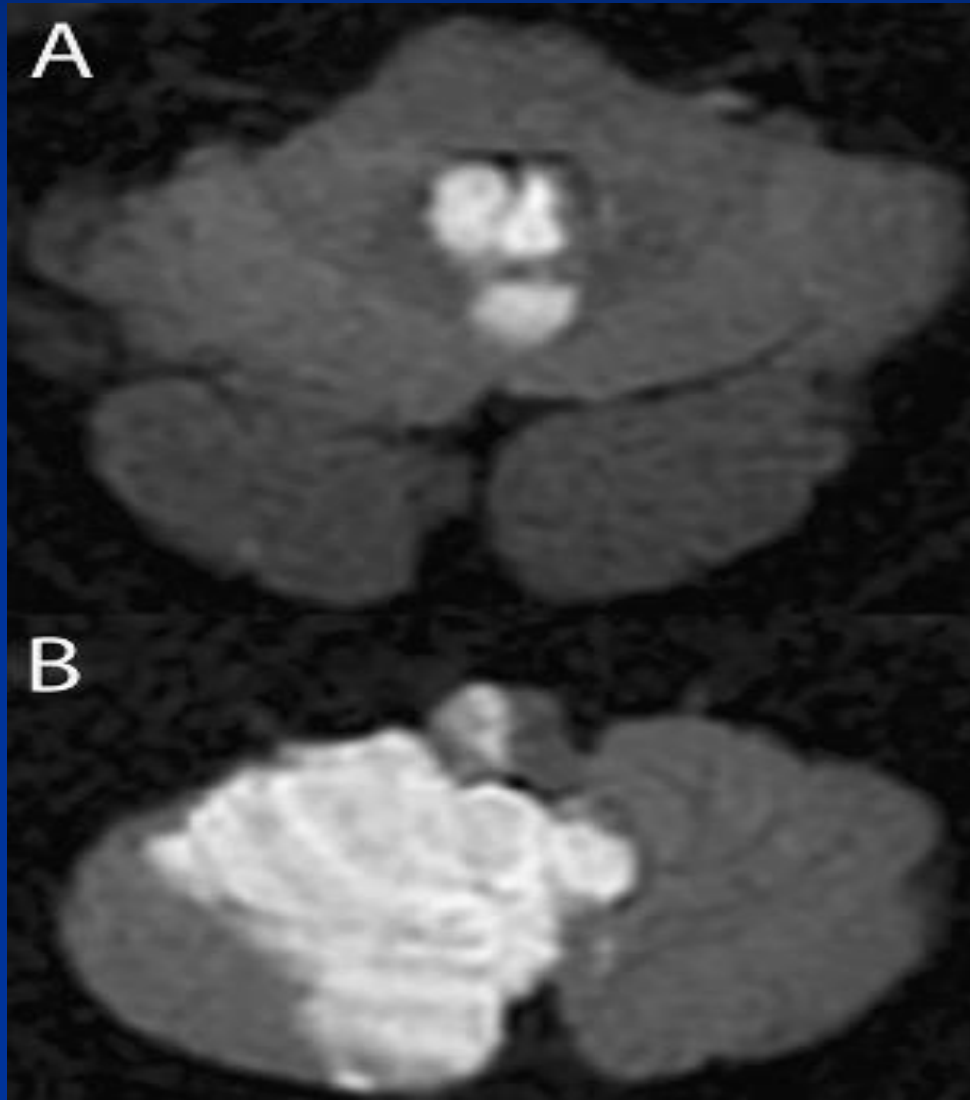
- CT and MRI of the brain are very important in the workup of a comatose patient



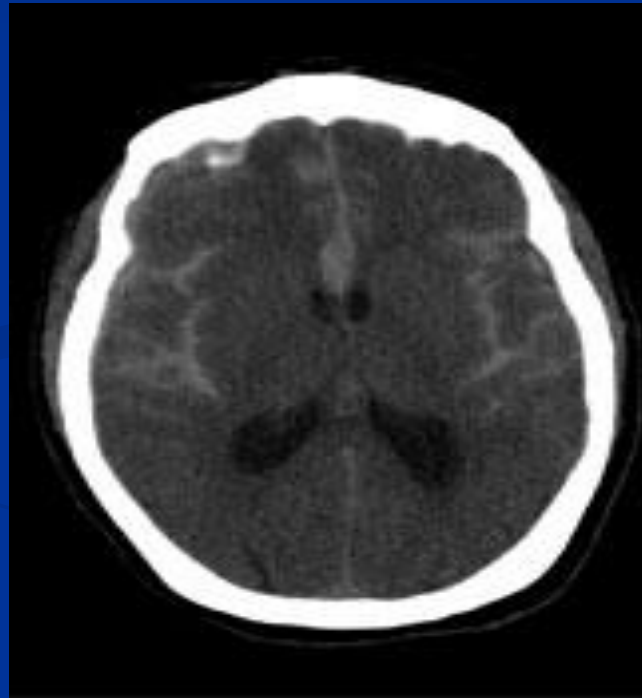
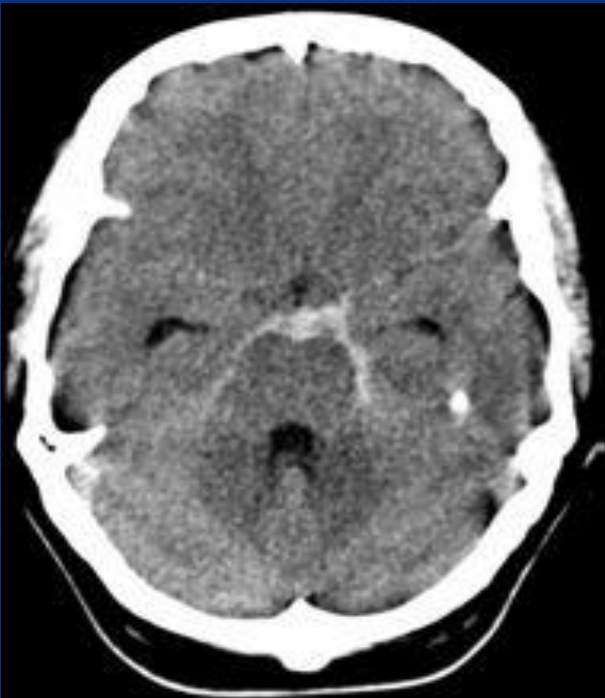
Middle Cerebral Artery Infarction

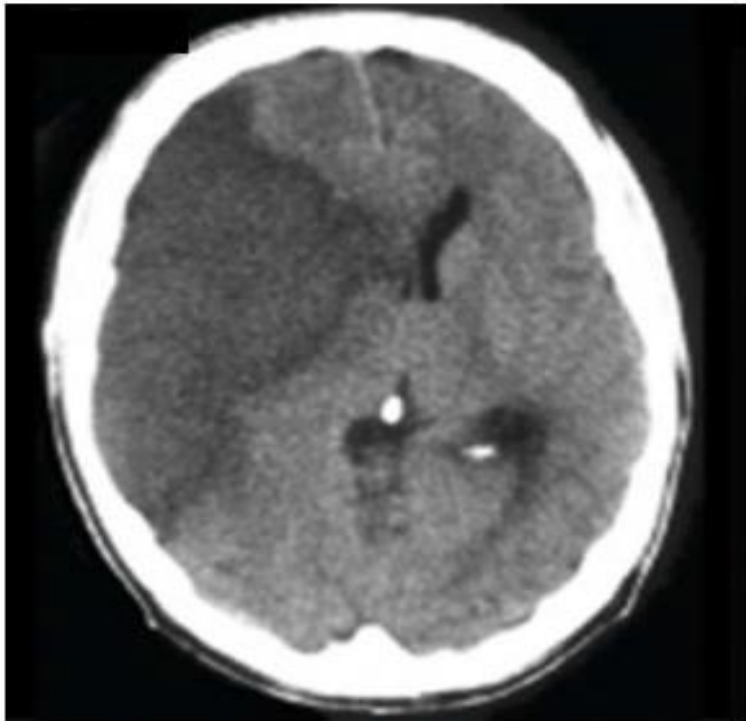


Acute infarction on MRI-DWI sequence

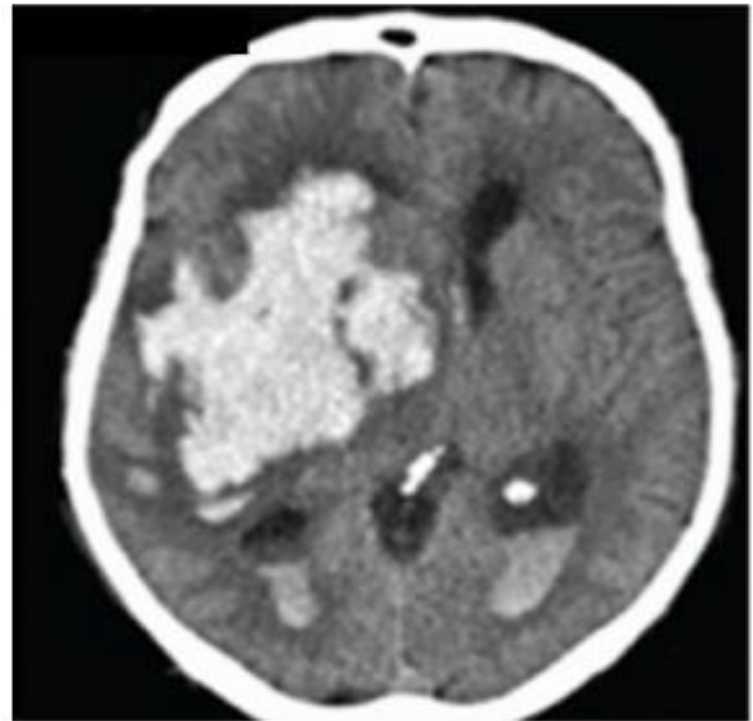


Subarachnoid hemorrhage





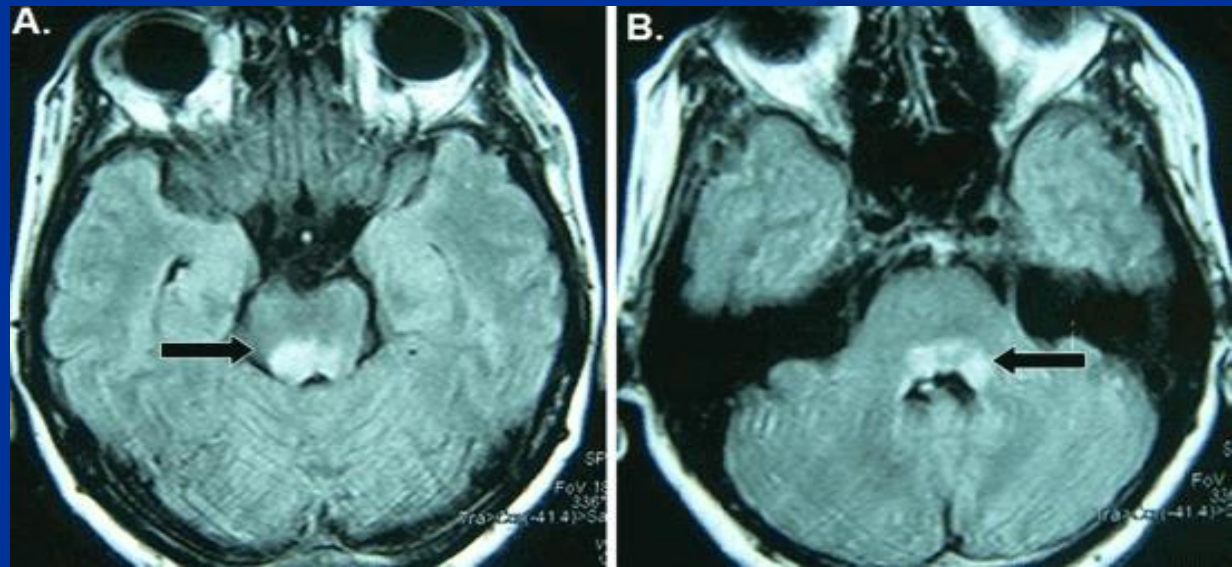
**Ischemic Stroke
(dark/hypodense)**



**Hemorrhagic Stroke
(bright/hyperdense)**

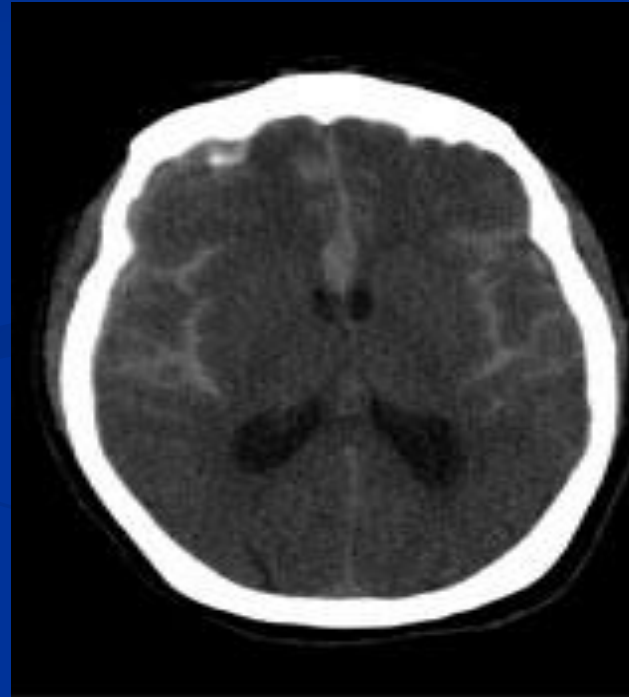
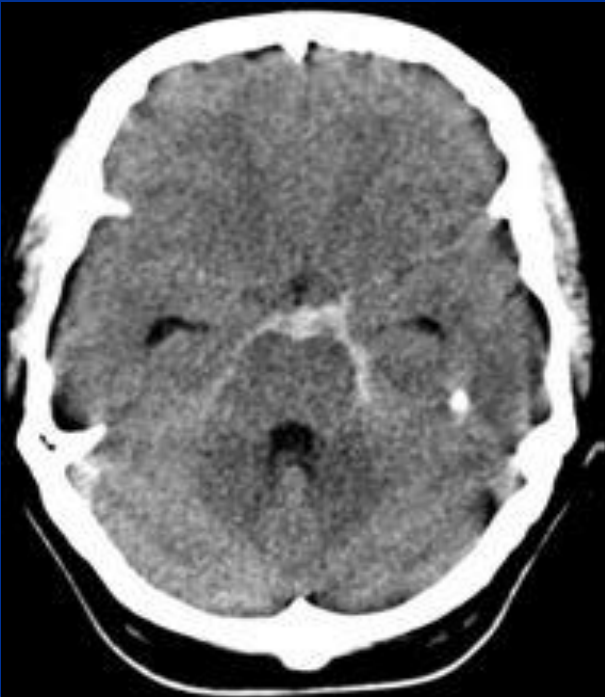
ABM : Etiology

- **Haemophilus influenzae type b** was once the leading cause of bacterial meningitis in children. But new Hib vaccines have greatly reduced the number of cases of this type of meningitis.
- **Listeria monocytogenes** - These bacteria can be found in unpasteurized cheeses, hot dogs and lunchmeats. Pregnant women, newborns, older adults and people with weakened immune systems are most susceptible. Listeria can cross the placental barrier, and infections in late pregnancy may be fatal to the baby.



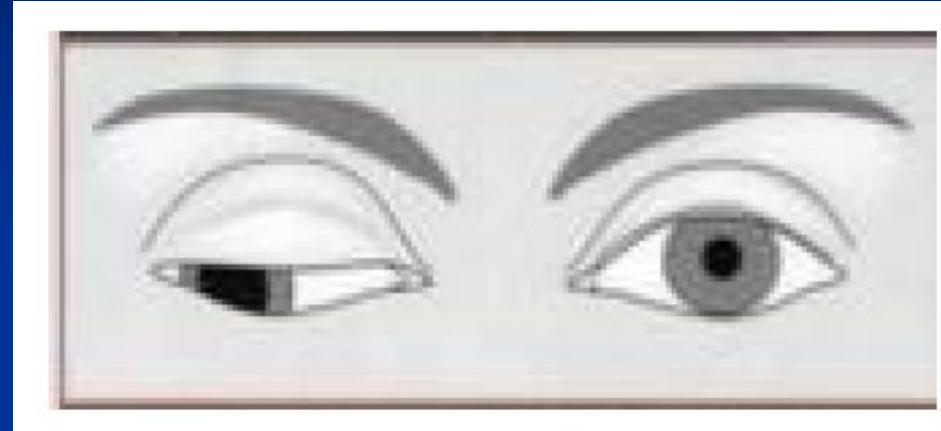
Subarachnoid hemorrhage

Most common cause- rupture of arterial
berry aneurysm



Classic Signs of Subarachnoid Hemorrhage

- Abnormal vital signs
 - Respiratory changes, hypertension, cardiac arrhythmias
- Meningism
- Focal neurologic signs may be present
 - III nerve palsy – Posterior communicating artery aneurysm
 - Paraparesis – ACA aneurysm
 - Hemiparesis, aphasia – MCA aneurysm
- Ocular hemorrhages



Status Epilepticus

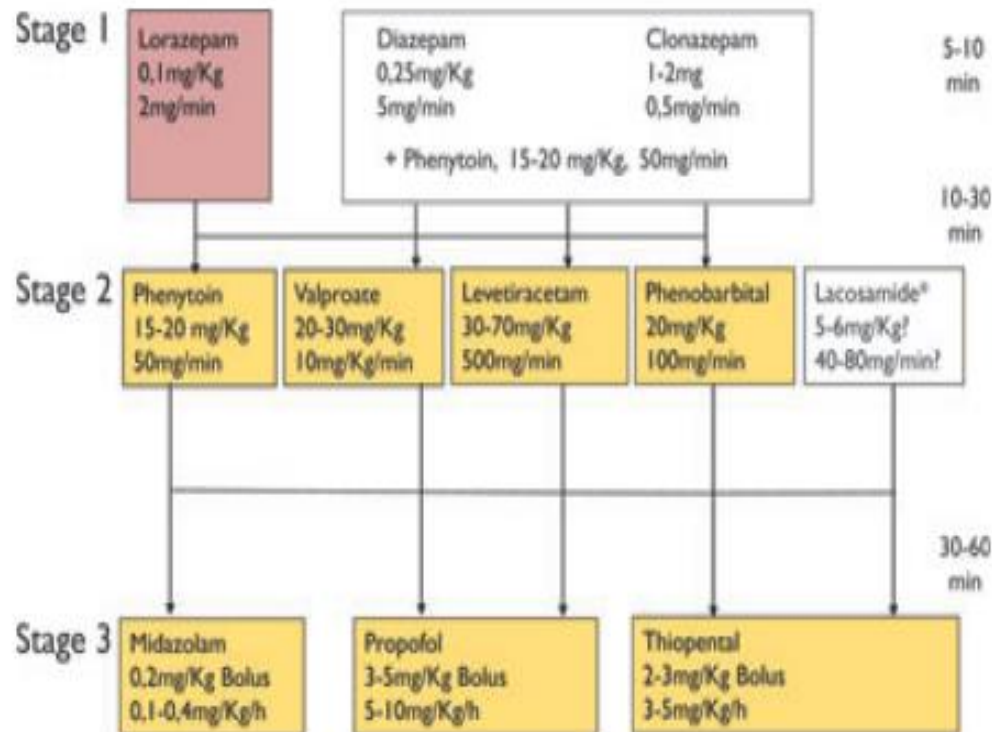


Figure 5.

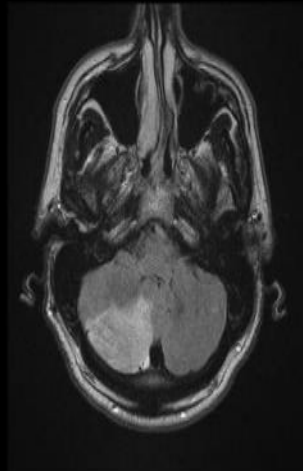
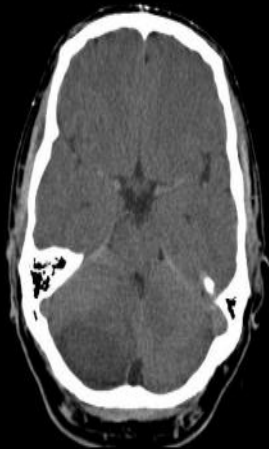
Staged approach to the treatment of convulsive status epilepticus. *There is currently limited evidence for the use of lacosamide in SE (see Höfler et al., 2011) Modified after Trinka, 2007; Shorvon et al., 2008.

Dizziness/vertigo

- Acute vertigo middle age man
- Headache – Red flag!
- Normal head thrust – Red flag!!

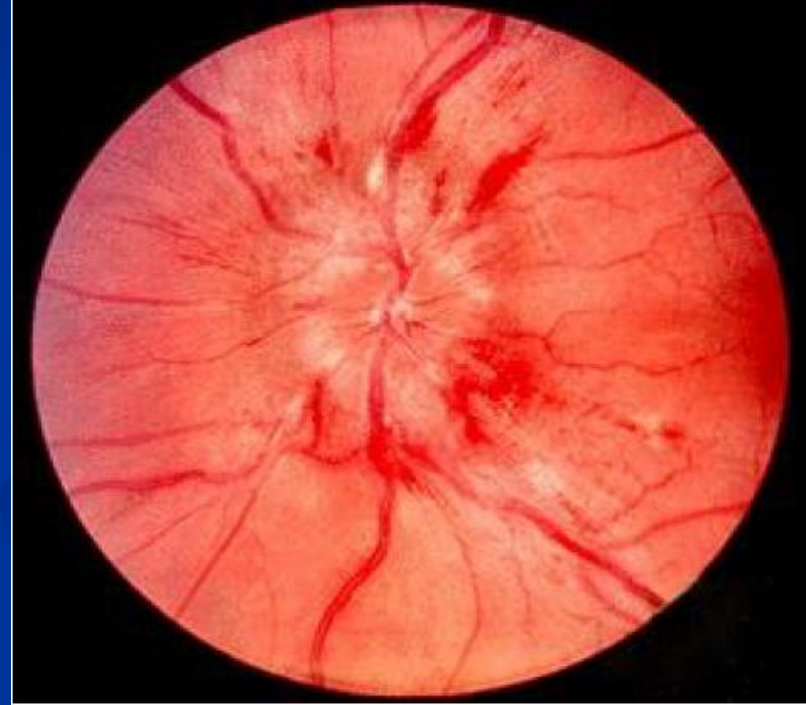
Brain scan needed in acute vertigo:

- Intact head impulse test
- New onset (occipital) headache
- Any central symptoms or signs
- Acute deafness

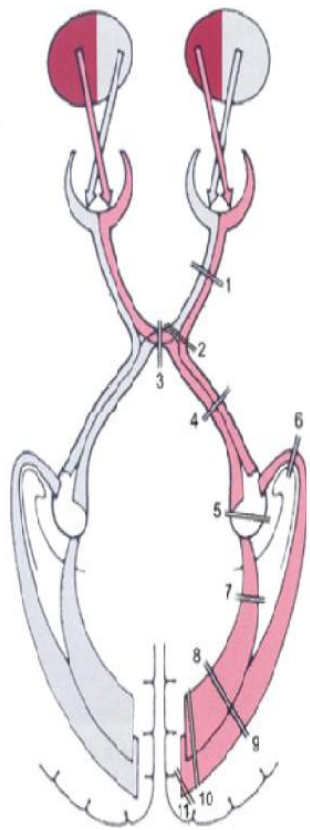


Neurological causes of sudden loss of vision

- Optic neuropathy (Demyelination, Ischemia/vasculitis)
- Papilledema/high ICP (Tumor, Idiopathic Intracranial Hypertension)
- Bilateral occipital lobe pathology (infarcts, Posterior Reversible Encephalopathy Syndrome)
- Functional/psychogenic



Anatomy of Visual Pathways



| Lesion location | Visual field defect | | |
|------------------------------------|---------------------|-----------|--|
| | Left eye | Right eye | |
| 1-Left optic: nerve | | | -Decreased vision, left eye |
| 2-Posterior left optic: nerve | | | -Junctional scotoma |
| 3-Chiasm | | | -Bitemporal hemianopia |
| 4-Left optic: tract | | | -Right homonymous hemianopia |
| 5-Left lateral geniculate nucleus | | | -Right homonymous sectoranopias |
| 9-Left temporal lobe | | | -Right homonymous superior hemianopic defect |
| 7-Left parietal lobe | | | -Right homonymous inferior hemianopic defect |
| 8-Left occipital lobe (upper bank) | | | -Right homonymous inferior quadrantanopia |
| 9-Left occipital lobe (lower bank) | | | -Right homonymous superior quadrantanopia |
| 10-Left occipital lobe | | | -Right homonymous macular-sparing hemianopia |
| 11- Tip of the left occipital lobe | | | -Right homonymous scotomas |

Visual Field Defects

