NEUROLOGY

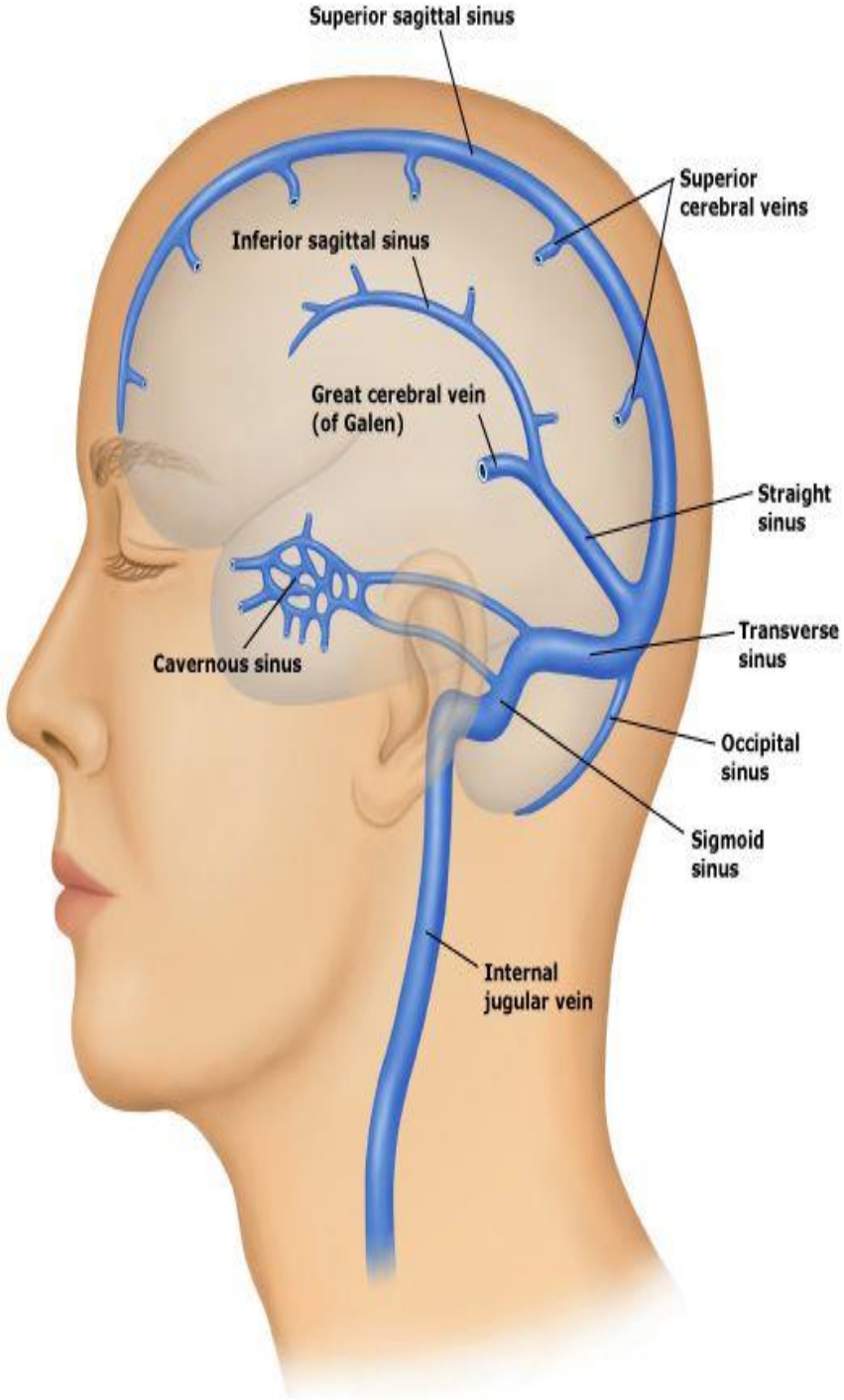
CEREBRAL VENOUS SINUS THROMBOSIS

Dural venous sinuses are venous sinuses between layers of dura

Receive blood from superficial and deep veins of the brain and CSF from subarachnoid space

Empty into internal jugular vein

Symptoms are a result of thrombosis causing venous congestion and raised ICP



Risk Factors for CVST

- Thrombophilia
- Nephrotic syndrome
- Pregnancy and puerperium
- Recent head trauma
- Chronic inflammatory diseases
- Meningitis and ENT infections
- Oestrogen containing contraceptives
- Dehydration
- RBC disorders e.g. Polycythaemia & Sickle cell anaemia

Symptoms

- Headache, severe and worsening or 'Thunderclap' (90%)
- Neurological deficit- can be bilateral e.g.
    - Hemiparesis of limbs or face- can be limited to one limb
    - Ataxia
    - Vestibulocochlear: Dizziness, Pulsatile tinnitus or unilateral hearing loss
    - Visual disturbance: Hemianopia, double vision
- Seizure (40%)- may be partial or partial complex
- Altered Mental Status including coma

Examination findings

Depend on which sinus is involved

- Proptosis and periorbital oedema (ipsilateral)- Cavernous sinus
- Papilledema
- Hemianopia
- Extraocular movement palsies
- Ptosis
- Facial weakness
- Cranial nerve IX- XII palsies- Internal Jugular Vein involved
- Unilateral progressing to bilateral paralysis/ paresis, can be limited to legs (Superior sagittal (Longitudinal sinus))
- Sensory or Motor limb deficit

Diagnosis

- Plain CT
    - Rules out other causes e.g. SAH
    - May show signs of raised ICP or a pattern of infarct not matching arterial distribution
- CT Venogram or CT Angiogram
- MRI
- Blood tests for risk factors e.g. HCG, U&E, FBC, Coagulation screen
- D- Dimer found to have negative predictive value of 99.6%

Treatment

- Discuss with Medicine/ Stroke/ Neurosurgery/ ICU as appropriate
- Anticoagulation or Thrombolysis
- Keep hydrated
- Elevate head of bed to 30- 45^{o}