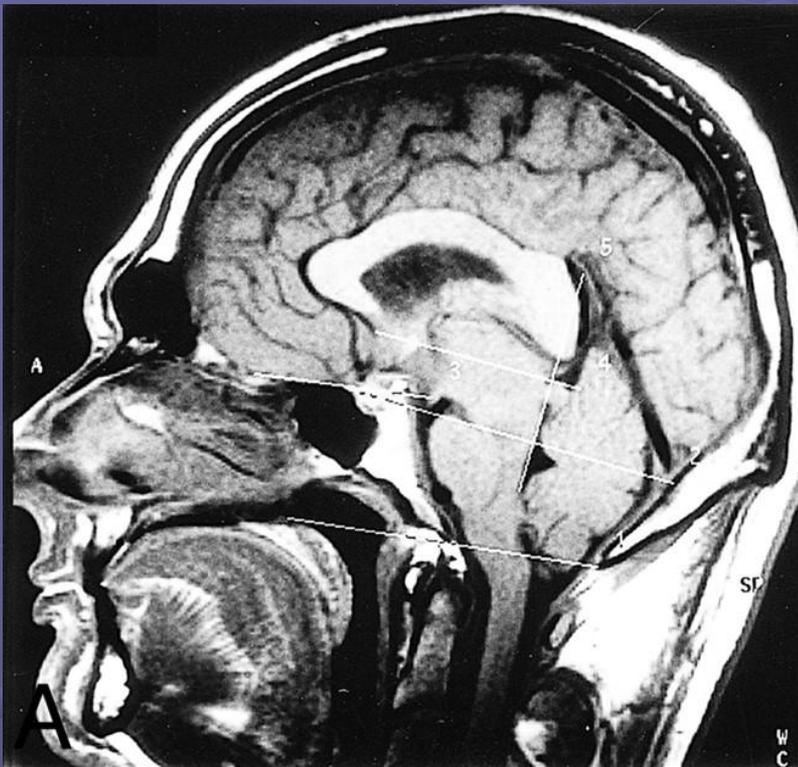
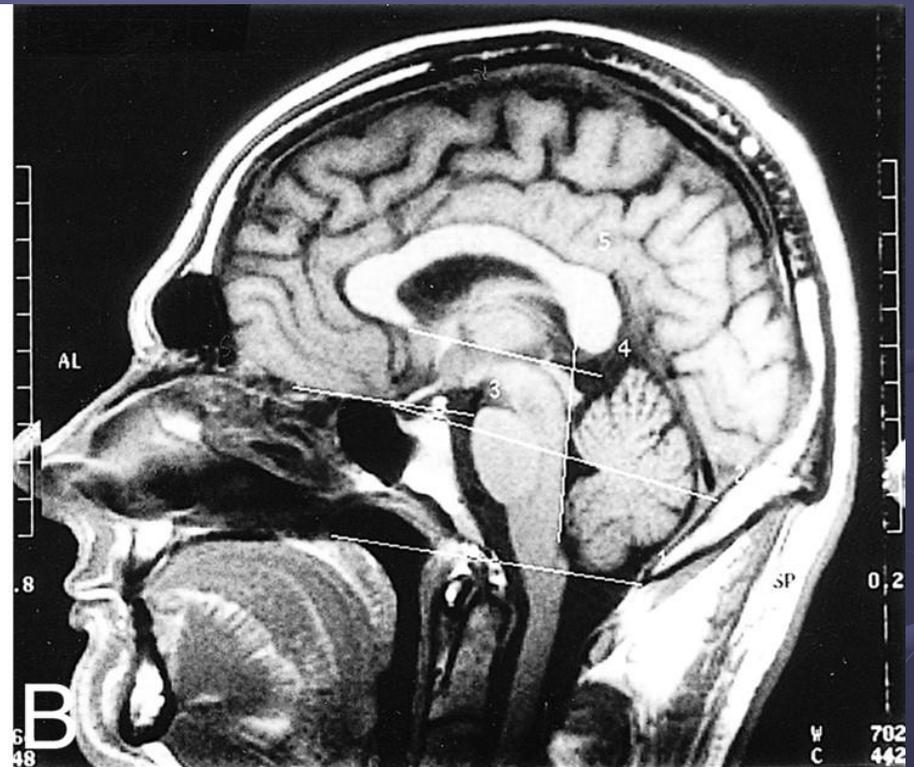


Intracranial Hypotension



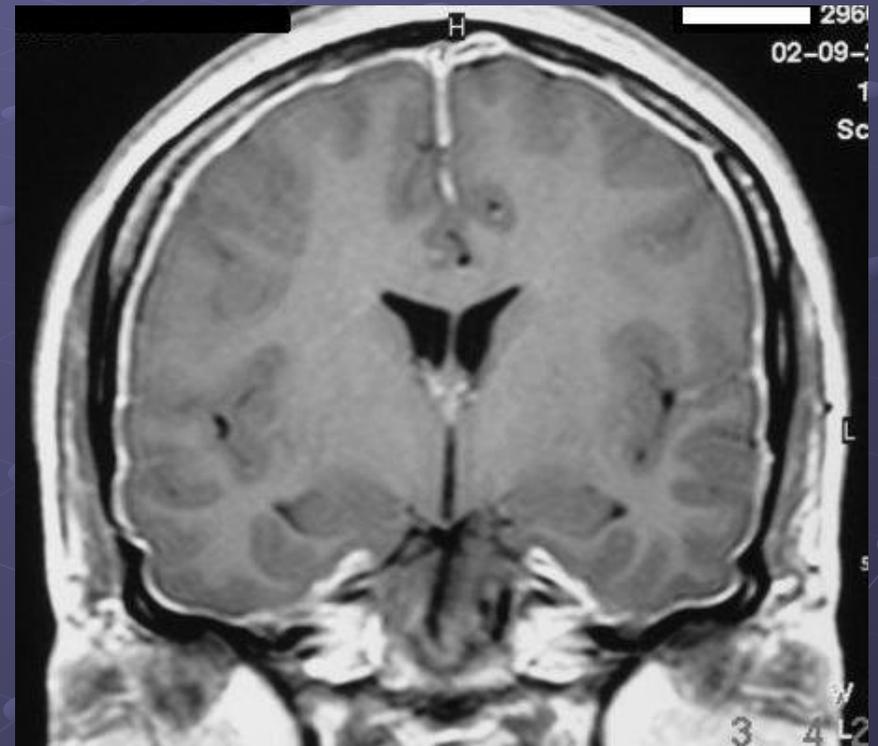
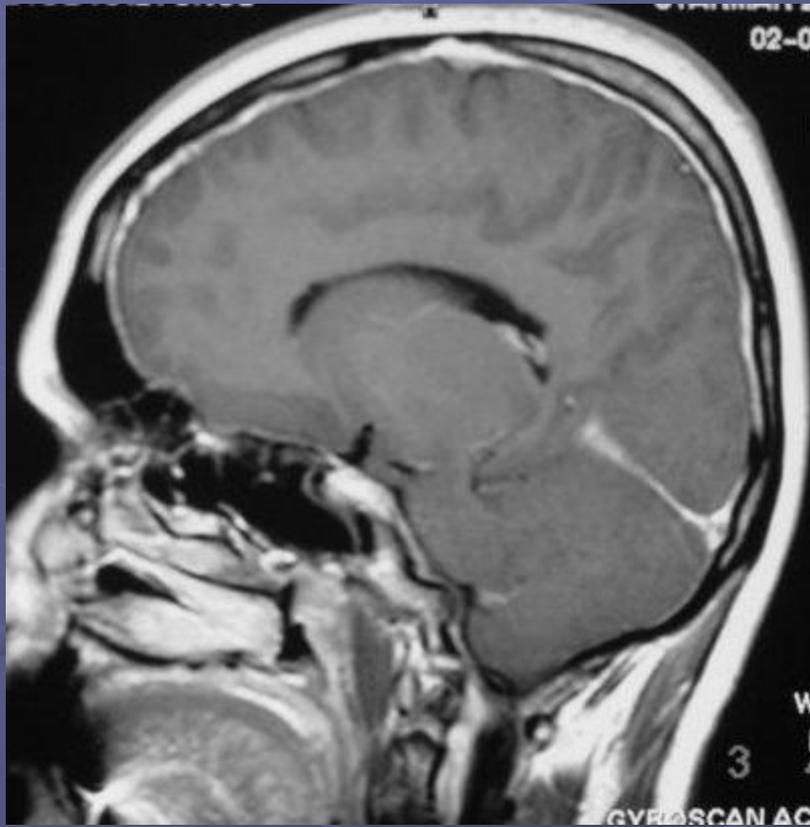
Before TX



After TX

Uniform thickening of the dura is a characteristic feature, slumping mid brain, subdural hygromas

Intracranial Hypotention



Intracranial Hypotension

S&S

- usually orthostatic headache, however, pts with chronic h/a or even no h/a have been described
- h/a often exacerbated by laughing, coughing, jugular venous compression or Valsalva maneuver and resistant to treatment with analgesics

Intracranial Hypotension

Etiology

- most cases result from persistent CSF leak; most commonly following LP, myelogram or spinal anesthesia
- can also be seen following craniotomy, spinal surgery, craniospinal trauma or placement of a VP shunt

Intracranial Hypotension

Etiology (cont' ed)

- may occur in absence of an identifiable precipitant (aka Spontaneous Intra-cranial Hypotension)
- medical causes include dehydration, diabetic coma, hyperpnea, uremia and severe systemic illness

Intracranial Hypotension

MR imaging

- diffuse thickening and enhancement of the pachymeninges
- engorgement of the venous sinuses
- subdural fluid collections
- enlargement of the pituitary gland
- downward displacement of the brain

Intracranial Hypotension

Monro-Kellie hypothesis:

- the sum of the volumes of intracranial blood, CSF and brain tissue must remain constant in an intact cranium

Therefore, \uparrow intracranial blood volume compensates for acute loss of CSF.

CSF leak

- 1st do high resolution Skull base which is sinuses to include T-bone in field of view
- If that does not answer the question - then cisternogram.
- First do land mark, non contrast
- Then do LP, inject 5-7 cc' s of omnipaque 300. When see contrast in skull, turn upside down for 90 seconds
- Scan patient in direct Coronal plane, belly down.
- A leak is 1.5 increase in HU units.

CSF leak

- Look at Ethmoid roof, Cribriform plate, sphenoid sinus, particularly lateral to foramen rotundum. This is where spontaneous leaks occur.
- In middle ear look at Tegmen tympani and mastoid roofs.
- Hydrocephalus can decompress through tegmen and frontal sinus
- Inner ear malformations can result in leak out oval window; (Endolymphatic duct anomaly.)