17 y/o woman presenting with headache and visual disturbance

Martin Ollenschleger, MD
Idiopathic Intracranial Hypertension (IIH) (Pseudotumor Cerebri)
Flattening of the posterior globe and prominence of the optic nerve sheath bilaterally

Protrusion of the optic nerve heads bilaterally
Restricted diffusion of the optic nerve head
Partially empty sella

Tonsillar herniation
Transverse sinus stenosis
Idiopathic Intracranial Hypertension

- Idiopathic intracranial hypertension (IIH, also known as pseudotumor cerebri) is an idiopathic condition resulting in elevated intracranial pressure without an underlying structural lesion or other cause identified.
- Typical patient presentation is an obese woman of childbearing age presenting with headaches and visual loss.
- Symptoms include:
  - Headache
  - Visual obscuration or diplopia
  - Dizziness
  - Pulsatile tinnitus
  - Neck or back pain
Patients suspected of IIH should be imaged with MRI and MRV of the brain without and with contrast to exclude underlying structural lesion or other causes of elevated ICP.

Several findings on MRI have been associated with IIH with varying sensitivities and specificities. The most common findings are:

- Empty sella
- Flattening of the posterior aspect of the globes
- Protrusion of the optic nerve head
- Enhancement and diffusion restriction of the optic nerve head
- Distention of the optic nerve sheath, often with tortuosity
- Tonsillar herniation
- Transverse sinus stenosis (often bilateral or unilateral stenosis of the dominant sinus and a hypoplastic contralateral sinus)
Modified Dandy Criteria

- Used for diagnosis of IIH
- “Definite” if patient meets all 5 criteria:
  - Papilledema
  - Normal Neurological examination except for CN findings
  - Normal brain imaging without evidence of hydrocephalus, mass, structural lesion, meningeal enhancement, or sinus thrombosis
  - Normal CSF composition
  - Opening pressure >250 mm water in adults (280 mm water in children)
- “Probable” if patient meets first 4 criteria, but has lower opening pressure

In the absence of papilledema or 6th nerve palsy, the diagnosis can be suggested with at least 3 of the following imaging findings:

- Empty Sella
- Flattening of the posterior aspect of the globe
- Distention of the perioptic subarachnoid space with or without a tortuous optic nerve
- Transverse sinus stenosis
References


• Ollenschleger M. Idiopathic Intracranial Hypertension. Radiology Online (2021)