



Image interpretations (Brain Teaser)

Image 01	Acute Subdural haematoma (SDH) in the left hemispheric convexity with mass effect. There is extension of bleed into the interhemispheric space too (posterior and anterior). SDH is typically falx or sickle shaped, crosses sutures but does not cross the midline. Acute subdural haematoma is a marker for severe head injury (mortality approaches 80%).
Image 02	Senile atrophy. Note the prominent sulcal and cisternal spaces bilaterally.
Image 03	Acute hypertensive bleed in the right basal ganglia. Note the layering of different densities, which suggests repeated bouts of bleed over a period of time. There is some mass effect also.
Image 04	Hydrocephalus – communicating type or EVOH (extra ventricular obstructive hydrocephalus) – sequelae of meningitis in this patient. Note the symmetrical dilatation of the entire ventricular system with obliteration of sulcal and cisternal spaces. In EVOH the level of obstruction is beyond the ventricular system (eg 4th ventricular outlet). The “non-communicating” type or IVOH (intraventricular obstructive hydrocephalus) has obstruction within the ventricular system causing dilatation only proximal to the site of obstruction.
Image 05	Extensive acute infarct of the left hemisphere sparing the thalamus and basal ganglia (sequelae of meningitis in this patient). Cerebral infarction is a common complication of meningitis especially in children and it is predictive of a poor outcome.
Image 06	Large brain abscess in the left fronto-parietal region compressing the left lateral ventricle. The medial wall is markedly thinned out (2mm) and bulges into the atrium of the left lateral ventricle. This is a sign of impending rupture.
Image 07	Neurocysticercosis. Multiple cysticercus lesions in the vesicular stage (with scolices) are seen in both hemispheres including the thalami and basal ganglia. Vesicular stage is characterized by a small, rounded, low-density area in the brain parenchyma, without edema. Sometimes the scolex can be seen as a hyperdense dot inside the hypodensity. The vesicular form is a viable parasite. Demonstration of a scolex on CT (or MRI) is an absolute criterion for the diagnosis of Neurocysticercosis.
Image 08	Metastatic lesions. Intracerebral abscesses also would have a similar appearance. This lady was treated earlier for carcinoma lung. Correlation to the history and clinical presentation is important.
Image 09	Acute epidural haematoma (EDH). It is a classically lens shaped acute haematoma in the left parietal convexity. An EDH does not cross the sutures. Low mortality if treated prior to unconsciousness (< 20%).
Image 10	A simple linear fracture of the frontal bone on the right side.
Image 11	Meningioma. It is characterized by a sharply demarcated well-circumscribed extra axial mass with cortical buckling of underlying brain. There may be extensive calcifications (as seen here). Meningiomas are the most common extra-axial tumour.
Image 12	Neurocysticercosis (colloidal stage) in the right parietal lobe. Colloidal stage is characterized by a hypodense or isodense lesion with edema and a ring-enhancing pattern after administration of IV contrast. This is the “acute encephalitic form,” manifested as a reaction by the host. The scolex may or may not be seen.