DOI: https://doi.org/10.4038/sljon.v12i2.222

Neurology Picture Quiz Answers

Case 1. White cerebellum sign

The CT brain shows the White cerebellum sign. This occurs due to diffuse cerebral oedema causing hypodense cerebral hemispheres while the cerebellum appears relatively hyperdense. The mechanism is severe global hypoxia leading to loss of gray-white differentiation. The cerebellum is relatively resistant to hypoxia, creating this contrast. The diagnosis is hypoxic-ischemic brain injury. It is seen in cardiac arrest or asphyxia and indicates very poor prognosis.

Case 2. Intracranial lipoma

The CT brain shows an interhemispheric hypodense lesion consistent with an intracranial lipoma. It is a congenital malformation from abnormal meningeal differentiation. The lesion appears markedly hypodense (fat density). It may be associated with corpus callosum agenesis. The lesion is usually asymptomatic and incidental. Intracranial lipomas are rare and benign, requiring no treatment.

Case 3. Choroid plexus xanthogranulomas

The CT brain shows bilateral hyperdense nodules in the atria of the lateral ventricles, characteristic of choroid plexus xanthogranulomas. These benign lesions arise from the choroid plexus and contain lipid and cholesterol. They appear well-defined, often calcified, and are typically bilateral. There is no mass effect or oedema. They are usually incidental findings. Recognition is important as they are benign and require no treatment.

Case 4. Pituitary macroadenoma

The MRI shows a large sellar-suprasellar mass consistent with a pituitary macroadenoma. It contains multiple cystic areas with fluid levels, indicating hemorrhage or degeneration, related to pituitary apoplexy. The lesion appears heterogeneous due to blood products. Suprasellar extension may compress the optic chiasm. High prolactin level would confirm a prolactinoma. Differentials include craniopharyngioma which would exhibit calcification on CT scans.

Case 5. Sinking Skin Flap Syndrome

Sinking Skin Flap Syndrome, also called Syndrome of the Trephined, is a rare but serious complication following decompressive craniectomy. It occurs when atmospheric pressure exceeds intracranial pressure, causing a sunken scalp flap. CT scans show a concave scalp flap and paradoxical brain herniation away from the defect. This pressure imbalance leads to neurological deterioration, including cognitive, motor, or consciousness changes, and can become potentially life-threatening without timely recognition and management.