

QUIZ SECTION

ANSWER TO QUIZ NO 2 (PMR VOL 5 NO 2 JUNE 2010)

Q: What is the positive finding?

Q: What is your conclusion?

Ans:

MRI images provided in the Quiz show abnormal hyperintense signal in splenium of corpus callosum in T2 weighted image as well as FLAIR image. The corresponding DWI shows bright signal in the same region, suggestive of diffusion restriction. This finding suggests infarction or tissue edema in corpus callosum secondary to hypoglycemic brain injury.

Hypoglycemic brain injury is usually seen in neonates. This particular case is an adult is quite unusual. Here the cause was accidental intake of oral hypoglycemics. The cause of brain injury is due to imbalance between supply and utilization of glucose in brain. The tissue becomes hypoxic and there are

increased levels of excitatory amino acids like glutamate and aspartate. This leads to laminar necrosis and myelin degradation; and consequent edema in affected area with infarction. Commonly, corpus callosum and parieto-occipital region is involved bilaterally.

Differential diagnosis on imaging is:

1. Venous thrombosis
2. Metabolic stroke
3. Posterior reversible encephalopathy syndrome (PRES).

Reference

1. Diagnostic Imaging: Anne Osborn, Amirsys Elsevier publication, 2004 edition, 1st edition, pg. No. 1:10:4-5

