

QUIZ SECTION

ANSWER TO QUIZ NO 1 (PMR VOL 5 NO 1 MARCH 2010)

1. *What is your diagnosis?*

Ans: Subacute sclerosing panencephalitis (SSPE)

MRI images in the quiz show abnormal hyperintense signal in brain matter involving white matter in both cerebral hemispheres with asymmetric involvement, more prominent on T2WI, FLAIR and DWI images. The corresponding DWI shows bright signal in the same region, suggestive of diffusion restriction. This finding suggests tissue edema in brain matter.

Subacute sclerosing panencephalitis (SSPE) is a progressive, slow virus infection of the brain, caused by the measles virus, attacking children and young adults. In the early period, lesions are in the grey matter and subcortical white matter. They are asymmetrical and have predilection for the posterior parts of the hemispheres. Later, high-signal changes in deep white

matter and severe cerebral atrophy were observed. Parenchymal lesions significantly correlated with the duration of disease. A significant relationship between MRI findings and clinical stage was observed in the 1st year of the disease.

Differential diagnosis on imaging is: 1) Encephalitis 2) Posterior reversible encephalopathy syndrome {PRES} 3) Rasmussen's encephalitis. 4) ADEM.

Reference:

- 1) Diagnostic Imaging: Anne Osborn, Amirsys Elsevier publication, 2004 edition, 1st edition.
- 2) Tuncay R et al, MRI in subacute sclerosing panencephalitis, *Neuroradiology* 1996 Oct; 38 (7): 636-40

