Teaching NeuroImage:

Hippocampal involvement in a patient with hypoglycemic coma

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Figure Magnetic resonance image of the patient

Diffusion-weighted MRI shows hyperintense lesions in the bilateral hippocampi (A), which are hypointense on apparent diffusion coefficient map (B). Coronal view depicts that the abnormal signals are located in the hippocampal areas from CA1 to CA3 (C).

A 55-year-old diabetic man presented with coma for 2 days. Neurologic examination did not reveal any lateralizing signs and moderate hypoglycemia (43 mg/dL) was noted. Under the assumption of hypoglycemic coma, 50% dextrose solution of 50 mL was given IV, which normalized his mental status. Brain MRI showed high signal intensity lesions in the bilateral hippocampi from CA1 to CA3 areas (figure), which were vulnerable areas on

experimental hypoglycemia.¹ Neuropsychological examination showed marked anterograde amnesia, which persisted over 2 months.

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Supported by grants of the Korea Health 21 R&D Project, Ministry of Health and Welfare, Korea (A060171).

Disclosure: The authors report no disclosures.

Neurology[®]

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Neurology 2008;71:e63

DOI 10.1212/01.wnl.0000334760.99194.33

This information is current as of November 10, 2008

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