Reversal of White Matter Edema in Hypertensive Encephalopathy

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We report a case of hypertensive encephalopathy in which MR imaging contributed to the early diagnosis in a patient with unusual clinical symptoms and CT findings. Serial MR provided pathophysiologic information regarding this condition.

Case Report

A 42-year-old man was admitted to the hospital because of increasing difficulty with gait and recent loss of vision. Examination revealed a blood pressure of 250/150 mm Hg, normal mental status, and severe hypertensive retinopathy bilaterally. There was no papilledema, and the fundi were pale. Cranial nerve, motor, and sensory examinations were normal. Plantar reflexes were extensor bilaterally. Gait was wide-based and unstable. There was no dysmetria on finger-to-nose testing. Electrolytes were remarkable for a potassium of 2.6, a blood urea nitrogen of 75, and a creatinine of 3.8.

Follow-up CT failed to clarify the nature of the mass effect in the posterior fossa, and the mass effect was clearly elucidated by MR.


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References


Fig. 1.—A and B, T1-weighted (600/20) sagittal MR scans through the midline of the brain. A. Before treatment, enlargement of pons, effacement of the fourth ventricle, and slight tonsillar herniation are present. B. 11 days later, pons is normal in size, and fourth ventricle is slightly enlarged. Tonsillar herniation has resolved and there is now prominence to the cerebellar sulci. C and D, T2-weighted coronal (3000/80) images. C. Before treatment, diffuse, high-signal abnormality is present in cerebellar white matter, and patchy high signal is seen in periaxial region. D. 11 days later, there is reversal of high signal within cerebellar white matter and considerable improvement in periventricular high signal.