The Resolution of Central Variant of Posterior Reversible Encephalopathy Syndrome

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Keywords

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Figure 1. Initial brain computed tomography (CT) showing hypodensity in the pons, cerebellum, and thalamus (A and B), axial brain magnetic resonance imaging (MRI) showing hyperintensity in the pons, midbrain, middle cerebellar peduncles, and thalamus on fluid-attenuated inversion recovery (FLAIR; A-F) and coronal T2-weighted (G), normal intensity on DWI-weighted and ADC map (H and I), and absence of contrast enhancement and isointensity on T1-coronal T1-weighted (J).

A 44-year-old female, with a history of severe hypertension, presented with subacute onset of headache and visual deterioration. The general and neurological examination was unremarkable. The ophthalmologic examination showed signs of chronic hypertensive retinopathy. Blood pressure was 230/130 mm Hg. Initial brain computed tomography (CT) scan revealed the presence of hypodensity in the pons, cerebellum, and thalamus (Figure 1 A and B). On brain magnetic

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Figure 2. Follow-up brain magnetic resonance imaging (MRI) showing complete resolution of the cerebral edema on fluid-attenuated inversion recovery (FLAIR; A-D) and coronal T2-weighted (E) and normal sign on DWI-weighted (F), ADC map (G), and T1-coronal T1-weighted (H).

resonance imaging (MRI), the lesions were consistent with vasogenic edema involving the brain stem, cerebellum, thalamus, and basal ganglia (Figure 1C-J). The remaining investigation (hemogram, biochemical, echocardiogram, renal and suprarenal echography, and lumbar puncture) was unremarkable. The blood pressure was lowered to 150 to 140 mm Hg and the diastolic blood pressure to 110 to 100 mm Hg with amlodipine, Ramipril, and furosemide. After 2 weeks, she was completely asymptomatic. The repeated MRI of the brain revealed complete resolution of the previous lesions (Figure 2). Isolated involvement of the brain stem and cerebellum is an extremely rare central variant of posterior reversible encephalopathy syndrome (PRES).¹ The combination of severe hypertension, clinical–radiological dissociation, and brain MRI with findings compatible with vasogenic edema is typical of the central variant of PRES.^{1,2} This triad should promptly guide the treatment toward blood pressure normalization and avoid unnecessary investigations.

Declaration of Conflicting Interests

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References

1. McKinney AM, Jagadeesan BD, Truwit CL. Central-variant posterior reversible encephalopathy syndrome: brainstem or basal ganglia involvement lacking cortical or subcortical cerebral edema. *Am J Roentgenol*. 2013;201(3):631-638.
2. Chen DY, Tseng YC, Hsu HL, Huang YL, Chen CJ. Teaching NeuroImages: central variant of posterior reversible encephalopathy syndrome. *Neurology*. 2014;82(19):e164.