Posterior Reversible Encephalopathy Syndrome (PRES) and intraventricular hemorrhage in a patient with untreated hypertension: a case report

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Abstract

Background Posterior Reversible Encephalopathy Syndrome (PRES) is a neurotoxic condition characterized by headache, altered mental status, seizures, and visual disturbances, frequently associated with vasogenic edema on neuroimaging. Although acute hypertension is a common precipitant, the occurrence of PRES with intraventricular hemorrhage is rare. This report documents this unusual combination, emphasizing its clinical significance. The limited prevalence of this presentation in published literature further underscores the importance of this case.

Case presentation A 39-year-old male with a one-year history of untreated hypertension presented with severe headache, agitation, and decreased consciousness. On admission, the patient presented with acute encephalopathy characterized by altered mental status, with a Glasgow Coma Scale (GCS) score of 13/15, and focal neurological deficits including left-sided hemiparesis. He had a known history of untreated hypertension and chronic heavy alcohol consumption, with no prior use of antihypertensive medications. There was no history of recent head trauma, fever, or illicit drug use. Initial vital signs revealed markedly elevated blood pressure consistent with a hypertensive emergency. Initial computed tomography (CT) of the brain showed extensive left lateral ventricular intraventricular hemorrhage (IVH) with hydrocephalus, necessitating emergency external ventricular drain (EVD) placement. Magnetic resonance imaging (MRI) confirmed PRES in the parieto-occipital regions. Aggressive antihypertensive therapy, supportive care, and multidisciplinary management led to significant neurological improvement.

Conclusion This case illustrates a severe presentation of PRES, with coexistence of intraventricular hemorrhage. Early recognition of hypertensive emergencies, careful management of complications, and timely, multidisciplinary interventions are essential for favorable neurological outcomes.

Keywords Posterior reversible encephalopathy syndrome, Hypertensive emergency, Intraventricular hemorrhage, Neurocritical care, Multidisciplinary management