Peripartum Posterior Reversible Encephalopathy Syndrome: A Case Series

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Jessica L. Meyers, M.D.; Terrance K. Allen, M.B., B.S., FRCA; Maria J. Small, M.D., M.P.H.; Ashraf S. Habib, M.B.B.Ch., M.Sc., FRCA
Duke University Medical Center

Introduction: Posterior Reversible Encephalopathy Syndrome (PRES) is a neuroradiologic diagnosis defined by acute or subacute onset of a transient alteration in mental status, seizures, headache (HA), and visual disturbances. Radiographically, reversible parieto-occipital white matter edema is associated with PRES. Acute hypertensive episodes during pregnancy or puerperium have been associated with the development of PRES. We report the peripartum management of 4 patients with PRES.

Case Series: Case 1: A 28 year-old (yo) G5P1 at 28/5 weeks gestation with HIV and chronic hypertension presented to the Emergency Department (ED) with a tonic-clonic seizure. Her initial blood pressures (BP) ranged from 200-250/110-120. She was intubated and received IV labetalol, hydralazine and MgSO4. On arrival to labor and delivery, she had an urgent cesarean section under general anesthesia for non-reassuring fetal heart rate tracing (NRFHT). Her BP in the OR ranged from 130-150/80-90. On post-operative day (POD) 1 she complained of scotomata, which progressed to complete visual loss. Her MRI showed a subcortical FLAIR signal with bilateral occipital lobes consistent with PRES. Her vision improved and her BP was controlled by POD 5 with oral labetalol and nifedipine. Case 2: A 34 yo G1P1 at 28 weeks with suspected severe preeclampsia presented with HA associated with complete visual loss. In the ED, she was disoriented and combative and had to be intubated and sedated for an MRI. Her MRI findings were consistent with PRES and she subsequently had a cesarean delivery under general anesthesia following administration of MgSO4. She was extubated in the MICU with her BP tightly controlled with intravenous nicardipine. POD 2 her vision improved and she was discharged on POD 4. Case 3: A 30 yo G1P0 at 35/1 weeks with twin gestation was admitted with elevated BP. On hospital day 3 a cesarean section was performed under spinal anesthesia for severe preeclampsia and NRFHT. On POD 2 she complained of dizziness, and loss of vision. Her speech was intangible and she became combative. An emergency CT scan was consistent with PRES. She was admitted to the neurosurgical ICU, sedated and started on levetiracetam. She was discharged on POD 7 after resolution of her symptoms. Case 4: A 22 yo G1 at 25/5 weeks gestation presented complaining of HA, blurred vision and 2 witnessed seizures. Her elevated BP on presentation was treated with IV MgSO4 and hydralazine. A cesarean delivery was performed under spinal anesthesia for severe eclampsia. A post-cesarean CT brain reported findings consistent with PRES. Her vision improved on POD 0 and she was discharged on POD 4.

Discussion: The diagnosis and management of PRES syndrome in the peripartum period requires a multidisciplinary approach, early diagnosis, and strict blood pressure control to reverse the vasogenic edema and associated clinical symptomatology.