Haemorrhage in Posterior Reversible Encephalopathy Syndrome (PRES)

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A 22 years old female, primigravida with 28 weeks of amenorrhea, presented with sudden onset of headache, seizures and visual loss without history of fever, altered sensorium. Examination revealed, patient was conscious, oriented, pupil were normal bilaterally. Fundus examination was normal. Her BP was 160/100mm Hg. No weakness of limbs was noted. All deep tendon reflexes were normal with plantars flexor. Sensory and cerebellar examination was normal. Blood investigations including coagulation profile and platelet count were normal. Urine examination showed proteinuria. MRI Brain (T2W and GRE Sequence) showed bilateral parietal white matter edema with haemorrhage [FIG-1A and 1B]. MRI Brain [T1W] was also showed right parietal hematoma with sulcal haemorrhage [FIG-2]. There was no thrombosis in the cerebral venous sinuses in MR venography. Diagnosis of hemorrhage in PRES following eclampsia was made. Patient was treated with magnesium sulphate, antihypertensives and anticonvulsants. Patient improved with complete recovery of vision.

Posterior reversible encephalopathy syndrome [PRES] is characterized by variety of symptoms ranging from headache, altered sensorium, visual loss, seizures and loss of consciousness with a typical CT or MRI imaging pattern.¹,² It was found in patients with eclampsia, after transplantation or in the setting of severe hypertension.

Haemorrhage is known to occur in PRES. Three distinct types of hemorrhage [minute hemorrhage <5mm, sulcal subarachnoid haemorrhage, paranchymal haematoma] were noted³. Studies showed haemorrhage is more frequently seen in patients on immunosuppression and least frequent in patients with eclampsia. Haemorrhage is more frequent with severe hypertensives and less with mild hypertensives and normotensives.³ The mechanism of hemorrhage in PRES is unclear. The proposed hypothesis are 1. Non aneurysmal sulcal hemorrhage due to rupture of pial vessels in severe hypertension and impaired cerebral autoregulation. 2. Post-ischemic reperfusion injury leading to multifocal brain haemorrhages.

This case highlights rare and treatable complication of PRES following eclampsia.

References


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