

Cortical Blindness in Posterior Reversible Encephalopathy Syndrome [Pres]



Medical Science

KEYWORDS :

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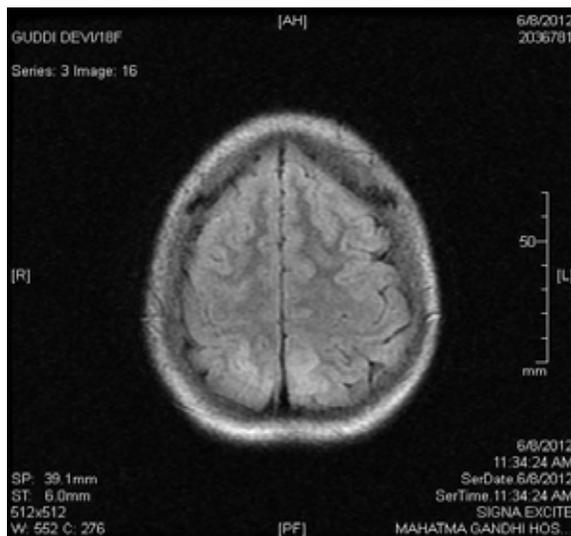
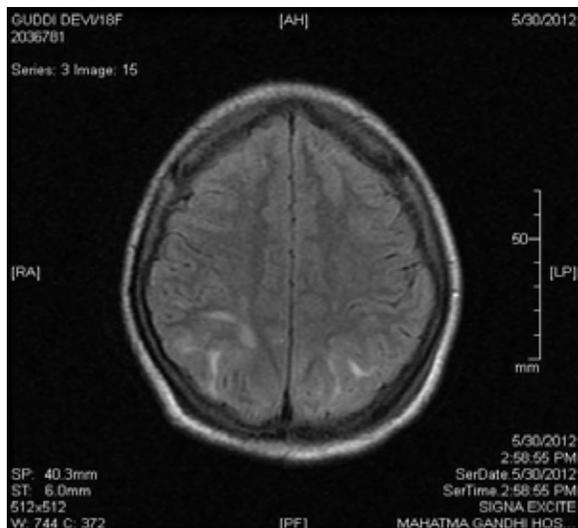
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We describe here a case of a 21 year old female with pregnancy induced hypertension who presented at term with headache, fits, confusion & blurring of vision. The patient was urgently taken for LSCS under general anaesthesia and she delivered a male child with thick meconium. Postoperatively and intraoperatively anticonvulsants and antihypertensives were given. On 2nd postoperative day, she complained of bilateral complete loss of vision with B.P-170/100mmhg.

Investigations- heamatological examination- wnl. Urine routine- mild proteinuria. On torch light examination- PL and PR were absent, pupil -normal size, sluggish reactive to light and ill sustained pupil initially thereafter . Schiottz tonometry-intraocular pressure was within normal limits. In both eyes Fundus by direct and indirect ophthalmoscopy showed attenuated arterioles like hypertensive changes seen rest retina was within normal limit in both eyes.

MRI Brain-Findings revealed-Hyperintense signals on T2 and FLAIR in bilateral occipital & parietal lobes in brain parenchyma and sulci, more on right side with restricted diffusion. Follow up on 3rd postoperative day, patient was stable, B.P controlled (130/90), and pupilliary reaction and colour perception were present .PL and PR were present .Vision-hand movement close to face improving progressively. Fundus examination was normal. Follow up of patient on 5th day revealed gradual improvement in vitals, B.P and vision -3 meters finger counting in both eyes. Repeat MRI was performed after one week. Findings revealed significantly regressed bilateral occipital & parietal lobes hyper-intense signals seen onT2 weighted and FLAIR with restricted diffusion. The patient regained her vision completely within next one week.

FLAIR1.30 MAY,28 JUNE



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Discussion & Conclusion-

PROVISIONAL DIAGNOSIS - PRES (POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME)

FINAL DIAGNOSIS - The patient suffered from PRES (posterior reversible encephalopathy syndrome) with cortical blindness characterized by headache, confusion, disorientation, seizures and complete b/l visual loss.

Causes- Malignant hypertension, Eclampsia/Preclampsia, Nephrotic syndrome, acute glomerulonephritis & some antineoplastic drugs. On MRI of brain, areas of edema(swelling) are seen.The symptoms tend to resolve after a period of time if treatment is given urgently ,although visual changes sometimes remain poor due to cortical ischemia of brain.It was first described in 1996. It is a neurotoxic state that occurs secondary to inability of posterior circulation to autoregulate in response to acute changes in blood pressure.It is a failure of blood brain barrier. Hyperperfusion with resultant disruption of blood brain barrier results in vasogenic edema.,but no infarction,most commonly in parieto-occipital regions.(95%) perhaps relating to posterior cerebral artery supply .The posterior circulation supplied by vertebro-basilar system has poor sympathetic innervations. The edema is usually symmetrical .Despite being term posterior, PRES can be found in non-posterior locations including frontal, inferior temporal, cerebellar and brainstem lesions. Both cortical and subcortical area are involved.

CT-Affected regions are hypo-attenuating.

MRI

T1--Hypointense in affected region

After Gadolinium contrast-patchy variable enhancement

T2W-Hyperintense in affected region

DIFFERENTIAL DIAGNOSIS-

Progressive multifocal leukoencephalopathy[PML],Posterior circulation stroke[PCA territory infarcts], demyelinating disorders, encephalitis, severe hypoglycemia, gliomatosis cerebri & sagittal sinus thrombosis.

The diagnosis has important implications because the reversibility of clinico-radiological abnormalities is contingent on prompt control of B.P.

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