CASE REPORT

Antepartum Eclampsia with Posterior Reversible Encephalopathy Syndrome

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Received: 3 December 2010 / Accepted: 23 June 2012 / Published online: 5 February 2013
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Introduction

Eclampsia is an occurrence of convulsion and or coma with hypertension, proteinuria, and/or edema during pregnancy between 20 weeks of gestation and 48 h postpartum without any preexisting neurologic disorders. The complications of the central nervous system due to eclampsia are known. Some of these are serious and some are even fatal. But, posterior reversible encephalopathy syndrome (PRES) causing coma and quadriplegia is rare, but reversible with prompt diagnosis and treatment without any residual neurologic disorder. We present one case of Antepartum Eclampsia with PRES with complete recovery.

Case Report

A 19-year-old primi was admitted with antepartum eclampsia in a state of coma. Her history was given by her relatives—severe headache since the early morning followed by convulsions. She had more than 15 convulsions before admission. On examination, the patient's general condition was poor, and she was unconscious responding to painful stimuli. Her vitals were pulse 110/min, B.P 150/100 mmHg, R.R 16/min, and

temperature raised. Her other details were as follows: reflexes exacerbated, plantar reflex normal, pupils B/L equal and reactive to light; P/A Ut F.T—vertex floating FHS present and per vaginum OS was closed.

Investigations

Hb: 12.7 g%; Blood group “A+ve”; HIV: NR; platelet count: 208,000 cmm; BT 2'00"; CT 3'30"; creatinine 2.1 mg%; Uric acid 8.5; Total proteins 6.3; Albumin 3.1; A:G ratio 0.9; Alkaline phosphatase 295; Urine Albumin present; Microscopy 1–2 pus cells; serum electrolytes Na 144, K 3.1, Cl 116; RBS 119 mg%.

The decision for cesarean section was taken. LSCS was done under general anesthesia and a live male 3.2-kg baby was delivered. The patient was treated with MgSO₄ (Pritchard's regimen), Tab. Depin 5 mg with postoperative pulse 96/min and B.P 174/118 mm of Hg. The uterus was well contracted and retracted. The urine output was 600 ml. The patient was responding to painful stimuli. Postoperatively, the patient was on Inj Cefazidime 1 g BD i.v., Inj Genta 80 mg BD i.v., Inj Mezol 100 ml 8th hourly IV. During the next day—on the 1st postoperative day—the patient was conscious but disoriented and was unable to move all four limbs. On examination, Quadriplegia was detected.

MRI showed PRES (MRI findings sequence spin Echo T1, tube spin Echo T2, and FLAIR). There was evidence of T2 and FLAIR, showing hyperintensities in the cerebellar lobes on both sides, deep whitematter in the parietal and

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frontal parafalcine regions on the left side—features suggestive of PRES (Figs. 1, 2). The patient was immediately treated with Inj Eptoin 600 mg IV in 200 ml NS over 1.5 h, followed by 100 mg TID IV, Inj Mannitol 100 ml TID, Inj Dexona 4 mg TID IV with antihypertensive drugs.

The patient responded to the treatment and recovered completely within 7 days without any neurologic deficit. The patient was discharged from the hospital on the 8th day with advice to continue the antihypertensive drugs.

Discussion

PRES is a clinico-radiologic syndrome. It was described in 1996. It has clinical findings of headache, altered sensorium, and visual defects, which may present with cortical blindness and seizures in association with posterior cerebral whitematter edema [1]. This syndrome is associated with hypertensive encephalopathy and eclampsia and may be associated with other conditions like renal failure and the administration of immunosuppressive drugs. It is mainly because of acute increase in arterial blood pressure and is clinically difficult to distinguish from hypertensive encephalopathy; only imaging modalities can demonstrate this posterior cerebral whitematter edema and it can be differentiated from other conditions like thrombotic phenomenon, embolic stroke, and hemolytic stroke. In PRES, the lesions are hyperintense and located at the gray whitematter junction. These lesions mainly involve the parieto-occipital region bilaterally, but less frequently may involve the frontal, temporal, and cerebellar lesions. PRES is usually reversible with early diagnosis and appropriate treatment. Reversibility of PRES is due to its underlying pathophysiology. The pathophysiology may be a failure of

Fig. 2 MRI findings: sequence in FLAIR image

cerebral autoregulation and endothelial dysfunction. The posterior brain is less able to adjust to blood pressure fluctuations [2] as it is less extensively innervated. If there is an increased blood pressure above the patient's baseline, the posterior brain is at a higher risk from autoregulation breakdown. If there is a failure of autoregulation, vasogenic edema occurs [2]. It may occur with mild elevation of blood pressure. If this pathology is not treated early, PRES has shown to progress from reversible vasogenic edema to irreversible ischemic change, leading to damage. This damage may cause irreversible neurologic sequelae or may be fatal [3]. Once blood pressure is controlled, patients should be on long-acting antihypertensives. Sibai [4] recommends treating systolic blood pressure between 140 and 160 mmHg and diastolic blood pressure between 90 and 110 mmHg. If blood pressure and seizures are not properly controlled, permanent neurologic deficit and even death can occur [1].

Fig. 1 MRI findings: sequence spin Echo T1 image

References

1. Hinchey J, Chaves C, Appignani B, et al. A reversible posterior leukoencephalopathy syndrome. *N Engl J Med*. 1996;334:494–500.
2. Finocchi V, Bozzao A, Bonamini M, et al. Magnetic resonance imaging in posterior reversible encephalopathy syndrome; report of three cases and review of literature. *Arch Gynecol Obstet*. 2005; 271(1):79–85.
3. Servillo G, Striano P, Striano S, et al. PRES in critically ill obstetric patients. *Intensive Care Med*. 2003;29:2323–6.
4. Sibai BM. Diagnosis, prevention and management of eclampsia. *Obstet Gynecol*. 2005;105:402–10.