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RESEARCH ARTICLE

POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME (PRES) IN A PATIENT WITH LATE POSTPARTUM ECLAMPSIA: CASE REPORT

Fatoumata Coulibaly[1], Soukaina El-Aziz[1], Abderrahim Aboulfalah[1,2] and Abderraouf Soummani[1,2]

1. Department of Obstetrics Gynecology of the CHU Mohammed VI of Marrakesh.
2. Faculty of Medecine and Pharmacy of Marrakesh, Caddi Ayad University, Morrocco.

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Abstract

Posterior reversible encephalopathy syndrome (PRES) is a reversible neurological entity specified by seizure, headaches, visual disturbances, a disorder of consciousness and other focal neurological findings. It is caused by different causes ultimately leading to a vasogenic cerebral oedema of occipital and parietal lobes of the brain. We present here a young woman with headache, generalised tonic–clonic seizures in a late postpartum stage. Reversibility of the symptoms and characteristic imaging findings led us to a diagnosis of PRES.

Introduction:-

Posterior reversible encephalopathy syndrome (PRES) was first described by Hinchey et al.1 l in 1996. It's an acute neurological emergencies in pregnant and postpartum women presenting as headache, visual symptoms, seizures, and elevated blood pressure are usually attributed to preeclampsia and eclampsia. Is a rare neuroradiological syndrome characterized by vasogenic oedema of subcortical white matter which seems to be the crucial pathogenic mechanism .2,3 , commonly involving posterior cerebral hemispheres , with most cases occurring in young-aged to middle-aged adults. A marked female preponderance is observed However, late postpartum eclampsia concurrent to PRES is rare. Here, we report a rare case of PRES secondary to late postpartum eclampsia.

Case presentation

A 25-year-old, full term postpartum female, gravida 1 para 1, Her antenatal period was uneventful ; without no history of diabetes or hypertension during pregnancy , presented to the emergency department to us with history of generalized tonic-clonic seizures lasting for 5 min duration and loss of consciousness on day 4 postpartum preceded by headache and visual disturbance lasting for 40 minutes . Family history was unremarkable. She never smoked and consumed alcohol. General examination revealed that she was fully alert and oriented. She had a temperature of 38 °C, elevated blood pressure 200/145 mm Hg, pulse rate 89/min and respiratory rate 24/min, saturating at 99 % on room air , capillary blood glucose was correct . An ocular examination revealed a diminution of vision of bilateral eyes to perception of hand movement, p upils were normally reactive to light. The rest of the cranial nerve examination was unremarkable. Power was 5/5 across all major joints and sensory function was intact all over the body. Cerebellar signs were intact and there was no evidence of meningeal signs such as nuchal rigidity or Kernig's/Brudzinski's sign.

Corresponding Author:- Fatoumata Coulibaly
Address**:-** Department of Obstetrics Gynecology of the CHU Mohammed VI of Marrakesh.

Plantars were downgoing bilaterally.

Antiepileptics and magnesium sulphate were started, patient's blood pressure was under control.

Laboratory findings revealed normal white cell count of 121 50, haemoglobin 13, low platelets 90 000. Urinalysis was remarkable for 3+protein and liver profiles were within normal limits. Images of brain MRI showed bilateral posterior parietooccipital hyper densities in the cortex and subcortical white matter (figure 1 ,2). Patient was diagnosed to have late postpartum eclampsia with suspected PRES. Ophtalmology consultation was obtained and there was no hypertentive retinopathy or papilledema, cardiology and nephrology consultations were normals.

Iconography

Figure 1:- Brain MRI T2 Bilateral occipital hyper densities.

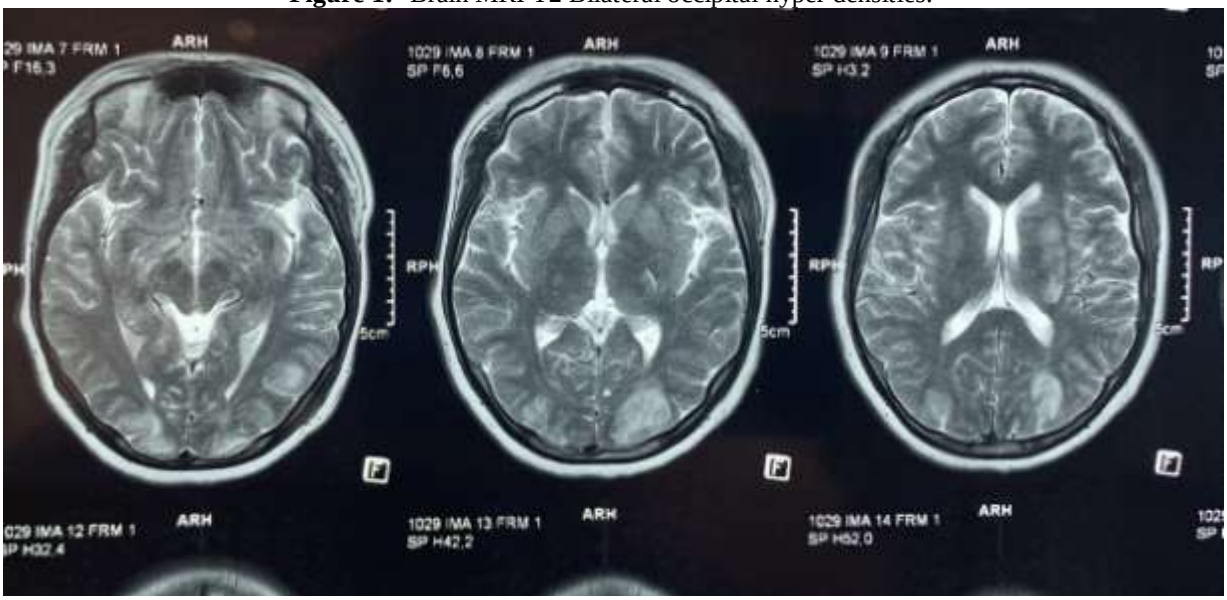
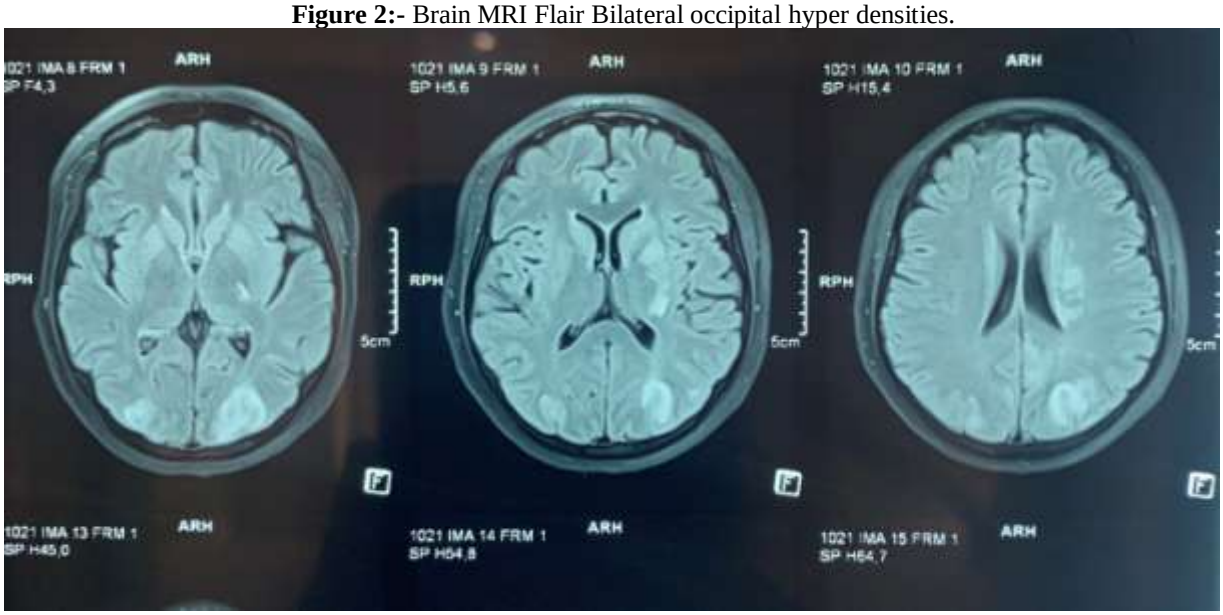


Figure 2:- Brain MRI Flair Bilateral occipital hyper densities.



Discussion:-

PRES is a reversible neurological entity characterised by the presence of white matter oedema affecting the occipital and parietal lobes. The exact incidence of PRES is unknown.4 Patients with renal transplantation undergoing calcineurin inhibitor therapy develop PRES syndrome in about 4–8% of the cases.7 It can occur at any age and most commonly affects females. This probably reflects the fact that one of the common causes of PRES is pre-

eclampsia/eclampsia developing during pregnancy.5 Pre-eclampsia and eclampsia are common medical disorders affecting pregnancy with significant maternal and fetal morbidity and mortality.6 Hypertension and proteinuria are hallmarks for the diagnosis of pre-eclampsia, whereas seizures are typical of eclampsia.6 Pre-eclampsia/eclampsia usually occurs between 20 weeks of pregnancy to 48 h postpartum.7 The term late postpartum eclampsia (LPE) is used when eclamptic events occur between 48 h and 4 weeks after pregnancy.8 A large observational study suggested that late PPE involves about 14% of cases of eclampsia.8A variety of clinical conditions are associated with the development of PRES. Among the reported causes, common ones include hypertensive emergency, renal disease, pre-eclampsia/ eclampsia and immunosuppressive agents.9 Other reported causes include sepsis, autoimmune diseases such as systemic lupus erythematosus, systemic sclerosis, tumour lysis syndrome, Guillain-Barres syndrome, AIDS, thrombotic thrombocytopenic purpura and acute intermittent porphyria. 10 11 PRES in association with late postpartum eclampsia has been reported before.10 12–13 Although the exact prevalence of PRES in LPE is unknown, a recent study suggested it could be more common than expected.14 Clinically, PRES presents with headache, seizures, encephalopathy, visual disturbances and focal neurological symptoms.15 As the name suggests, reversibility of these symptoms is one of the hallmarks of the disease. However, some patients with severe manifestations of PRES, such as coma and/or status epilepticus, may require admission to the intensive care unit

(ICU).16 17 Moreover, permanent neurological impairment or death occurs in a minority of patients.18–19 Differential diagnosis of PRES includes stroke, meningoencephalitis, demyelinating lesions of the brain and cerebral venous thrombosis. Early imaging is crucial to make this distinction. MRI is the imaging modality of choice.20 PRES appears as high signal intensity predominantly in the posterior regions of the brain. Diffusion-weighted MRI helps to distinguish the vasogenic oedema from cytotoxic oedema, which is characteristic of this disease.9 Our patient presented with headache, generalized tonic–clonic seizure and cortical blindness in a late postpartum stage posing a diagnostic dilemma. But the reversibility of the condition and the imaging finding guided us to a diagnosis of PRES. The management of PRES involves early diagnosis, treatment of symptomatology and correction of the causative factor.16 17 As indicated by its name, appropriate treatment is expected to ensure a full recovery. However, permanent complications and fatalities have been reported. Recurrence of symptoms has been observed in 8% of the cases.4

Conclusion:-

Though preeclampsia and eclampsia are usually screened entities, we should also follow women in puerperium for late postpartum eclampsia which is defined as seizures beyond 48h of delivery up to 4 weeks postpartum. So it is important to follow-up postpartum women for complications like PRES because early detection and treatment can lessen the morbidity and mortality as they are completely reversible. Thus, health care professionals should be educated about the same. Apart from antenatal and intrapartum care, postpartum care should also be given equal importance.

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