

Correcting hypotension: be careful!

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DESCRIPTION

A 42-year-old woman presented with a 2-day history of vomiting. She was drowsy, dehydrated, tachycardic and hypotensive with a blood pressure (BP) of 52/37. The immediate management included infusion of 4 L of normal saline and inotropic support. Investigations showed elevated creatinine at 190 mmol/L, neutrophil leucocytosis and hypomagnesaemia at 0.55 mmol/L.

The patient was started on piperacillin/tazobactam for treatment of urinary tract infection. Her BP increased to 155/105 after 8 h.

On day 10 of admission, our patient reported headache, became confused and developed generalised tonic clonic seizure. Urgent CT of the brain showed bilateral posterior hypodensity (*figure 1*).

A diagnosis of posterior reversible encephalopathy syndrome (PRES) was suspected based on clinical grounds and was further supported by the radiological appearance on CT.

Findings on MRI of the brain were typical of PRES, with bilateral hyperintensities involving posterior parietal and occipital lobes (*figure 2*). These changes were in a similar distribution to the abnormalities seen on the CT. There was no evidence of restricted diffusion on diffusion-weighted imaging.

The patient improved and repeat MRI 3 months later showed resolution of the previously described changes.

PRES is a reversible neurological syndrome initially described by Hinchey *et al.*¹ It is characterised by the presence of white matter oedema affecting mainly the parieto-occipital region, although involvement of other areas of the brain has been reported. Hypertensive encephalopathy is the most

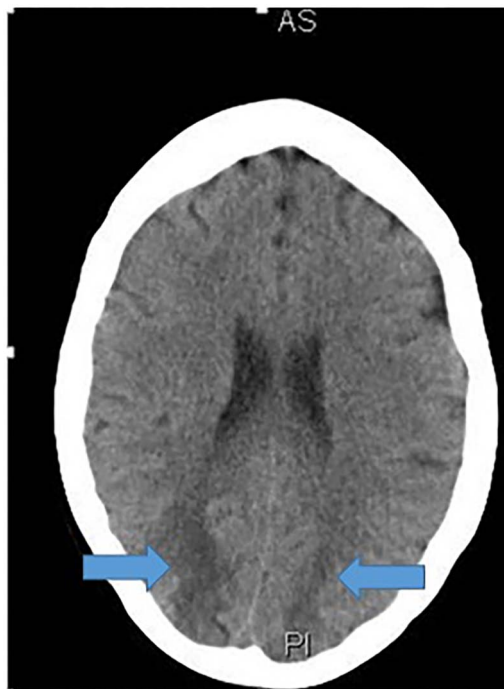


Figure 1 Axial non-contrast CT of the brain showing bilateral posterior hypodensity (see arrows).

Learning points

- ▶ PRES is a clinicroadiological syndrome characterised by headache, seizures and visual changes, along with typical imaging features, primarily in the posterior regions of the brain.
- ▶ The rate of increase in blood pressure (BP) is a more important factor in the development of PRES than the absolute BP level.
- ▶ Hypomagnesaemia is considered a risk factor for PRES due to fact that it increases the permeability of the blood–brain barrier.

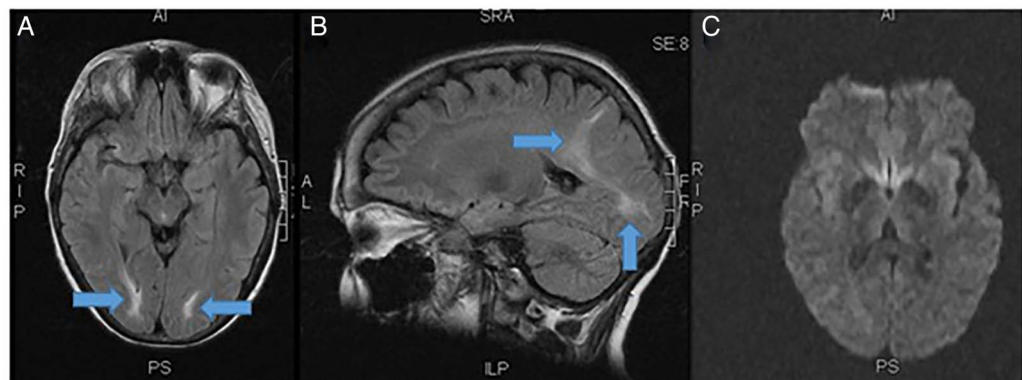


Figure 2 (A) Axial fluid-attenuated inversion recovery (FLAIR) MRI. (B) Sagittal FLAIR MRI showing hyperintensities affecting the posterior parietal and occipital lobes (see arrows). (C) Diffusion-weighted image showing no evidence of infarction.



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common cause and the rate of BP rise is more important than the absolute BP level.^{2 3}

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Patient consent Obtained.

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