



Prolonged enhancement of the subarachnoid space on FLAIR imaging in hypertensive encephalopathy

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A 84-year-old woman developed a subacute disturbance of consciousness. Brain MRI with gadolinium injection showed non-enhancing hyperintensity in the brainstem. On the following day, FLAIR imaging without injection of contrast medium showed a high intensity signal in the subarachnoid space (SAS) predominantly over the

parieto-occipital cortex (Fig. 1). Lumbar puncture allowed to exclude subarachnoid hemorrhage. Arterial blood gases were normal (PO₂ 85.7 mmHg). Blood pressure was around 200-220/80-90 mmHg and laboratory data showed mild renal insufficiency. She was diagnosed as having hypertensive encephalopathy. Increased vascular permeability of the blood-CSF barrier due to the hypertensive encephalopathy might have caused the delayed leakage of gadolinium into the SAS (Hamilton *et al.*, 2008).

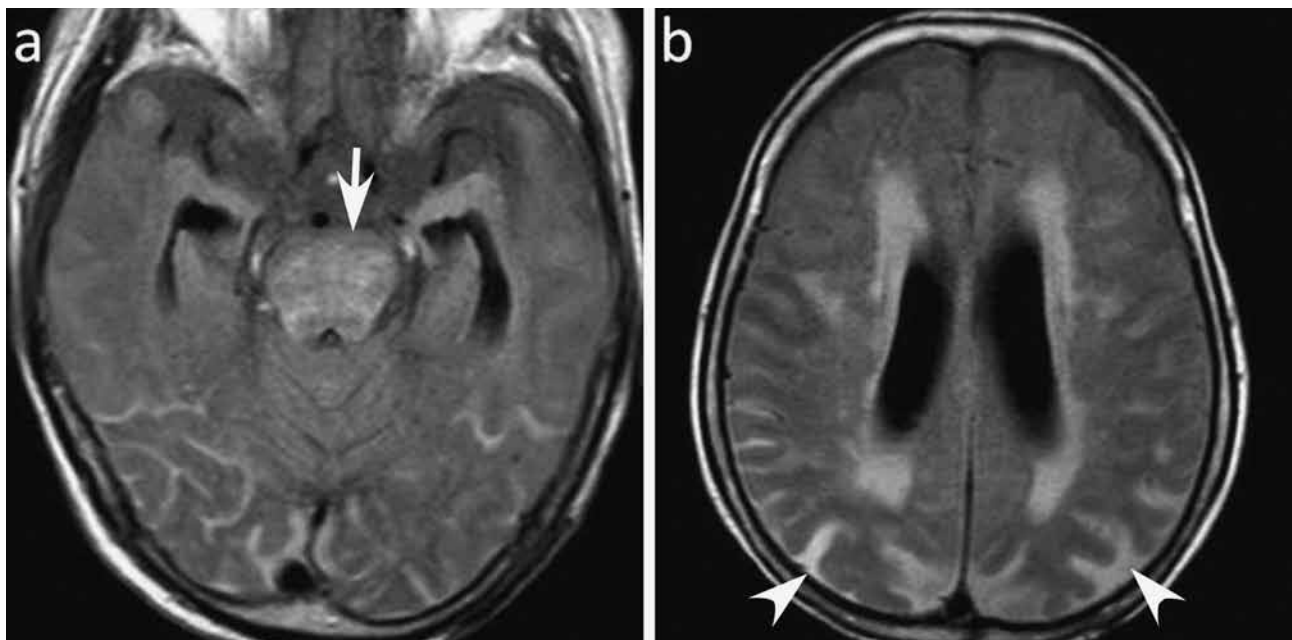


FIG. 1. — FLAIR image showing evident high signal intensity in the subarachnoid space, especially in the parietooccipital region (arrowheads) (repetition time/echo time = 10,000/120 ms, inversion recovery delay 2700 ms, multi-shot turbo spin-echo). Hyperintense signals can be seen in the pons (arrow) and periventricular areas due to hypertensive encephalopathy.

REFERENCE

Hamilton BE, Nesbit GM. Delayed CSF enhancement in posterior reversible encephalopathy syndrome. *AJNR Am J Neuroradiol.* 2008;29:456-457.

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