

DIAGNOSTIC CHALLENGE

Brain strain

Brian Deady, MD;* Clarissa Wallace, MD;† William Siu, MD‡

Case history

While walking outside with his wife, a 30-year-old male experienced a grand mal seizure lasting 40–60 seconds. The patient was disoriented when paramedics arrived on the scene and the post-ictal confusion lasted 20–30 minutes. His capillary blood glucose was normal.

There was no past medical history of epilepsy, and other than being a former smoker, he had no cardiovascular risk factors. However, he did admit to longstanding intermittent paresthesias of the arms.

Vital signs on admission to the emergency department (ED) were blood pressure 130/73 mm Hg, heart rate 82 beats/minute, respiratory rate 16 breaths/minute, temperature 36.1°C and oxygen saturation 95% while breathing room air. The patient was alert, oriented and his speech

was normal. There was no meningismus, and cranial nerve examination was unremarkable. Power in the limbs, coordination and gait were all normal, as was the remainder of the physical examination.

A CT scan of the head was performed (Fig. 1 and Fig. 2), along with a plethora of blood tests.

Question

Based on the CT scan findings, your provisional diagnosis is:

- a) hypoparathyroidism;
- b) metastatic carcinoma;
- c) tuberous sclerosis; or
- d) subarachnoid hemorrhage.

For the Answer to this Challenge, see page 393.



Fig. 1. Non-contrast enhanced CT scan of the head through inferior temporal lobes and cerebellum, which reveals enhancing lesions in the cerebellum.

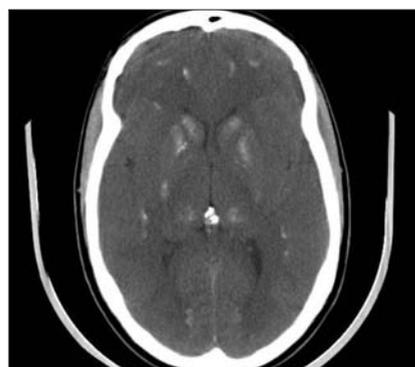


Fig. 2. Non-contrast enhanced CT scan through the mid portion of the brain, with enhancing lesions in the frontal, parietal and occipital lobes as well as the subcortical matter, thalamus and basal ganglia.

From the Departments of *Emergency Medicine, †Internal Medicine and ‡Medical Imaging, Royal Columbian Hospital, New Westminster, BC

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