

# Contrast media mimicking subarachnoid hemorrhage after intrathecal injection in a patient with Creutzfeldt–Jakob disease

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An 81-year-old man visited our emergency department with a chief complaint of altered consciousness. His Glasgow coma scale (GCS) score was 11 and brain magnetic resonance imaging findings were suggestive of Creutzfeldt–Jakob disease (CJD) (Figure 1). Fluoroscopy-guided cerebrospinal fluid (CSF) drainage was attempted, but only 1 mL of contrast media could be injected into the CSF space, confirming the location of the needle, without acquisition of any CSF. Eight hours later, his GCS score dropped to 8 and brain computed

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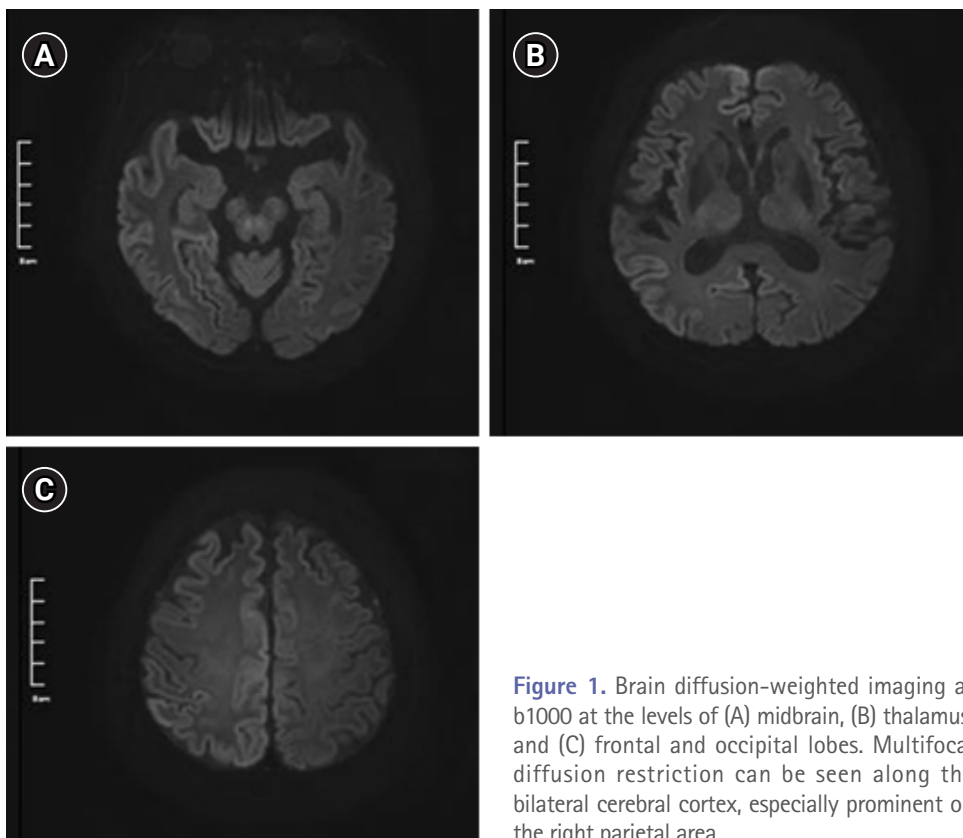
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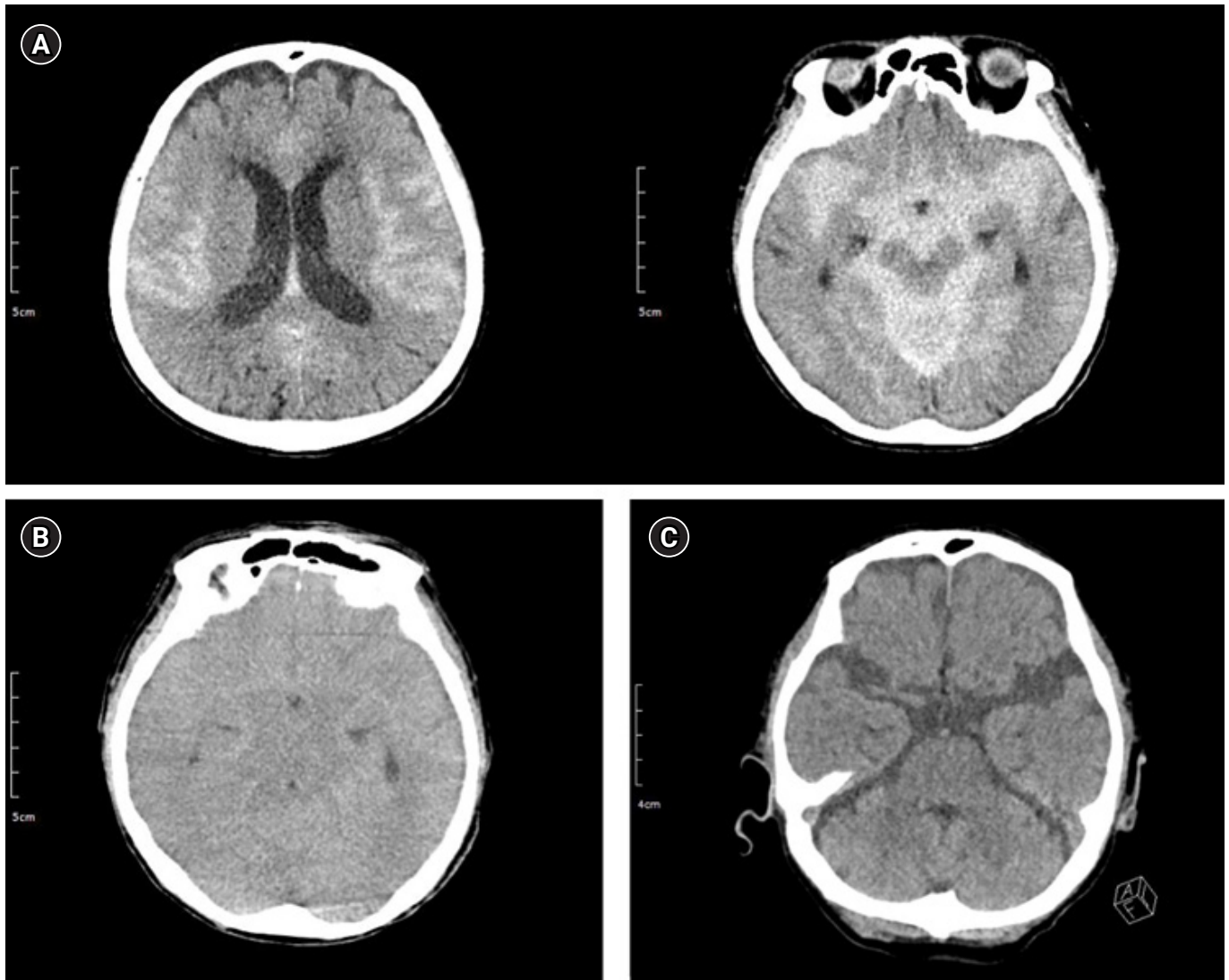
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**Figure 1.** Brain diffusion-weighted imaging at b1000 at the levels of (A) midbrain, (B) thalamus, and (C) frontal and occipital lobes. Multifocal diffusion restriction can be seen along the bilateral cerebral cortex, especially prominent on the right parietal area.

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**Figure 2.** Serial brain computed tomography images. (A) At midnight on the day of fluoroscopy-guided cerebrospinal fluid drainage, diffuse high attenuation was seen in the subarachnoid space (66 HU). (B) Twelve hours after initial observation, diffuse sulcal high attenuation was still noted (59 HU); however, it was more dispersed into the subarachnoid space. (C) After 24 hours, high attenuation had nearly disappeared (21 HU). HU: hounsfield unit.

tomography (CT) scan showed high attenuation in the subarachnoid space suggestive of subarachnoid hemorrhage (SAH) (Figure 2A). High attenuation disappeared gradually from CT at 12 and at 24 hours (Figure 2B and C); this indicated that the suspected SAH was contrast media, and his GCS score recovered to 10. Five days later, CSF was drained. CSF red blood cell count, white blood cell count, protein level, and glucose level were  $67/\text{mm}^3$ ,  $0/\text{mm}^3$ , 35 mg/dl, and 75 mg/dl, respectively. Tau protein ( $>4,000$  pg/ml), A $\beta$ 42 protein (279.6 pg/ml), 14-3-3 protein and scrapie prion protein were detected, confirming a diagnosis of sporadic CJD. Compared with previous reports [1-4], injection of only 1 mL of intra-

thecal contrast media mimicked SAH, possibly resulting in transient alteration of consciousness.

## CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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