Unusual MRI findings in a case of Marchiafava Bignami disease

Figure MRI performed 9 days after the onset of neurologic symptoms before supplemental treatment was initiated

(A) Fluid-attenuated inversion recovery-weighted axial MRI shows hyperintense signal in medial cerebellar peduncles, right cerebral peduncle, and right splenium of corpus callosum. (B) T2-weighted coronal MRI shows increased signal intensity in the same structures.

Twenty-four hours after surgery for acute aortic dissection, a 51-year-old man with alcoholism developed agitation, decreased consciousness, mutism, and upbeat nystagmus on upward gaze. He also showed left-sided weakness with pyramidal signs and spastic limb ataxia. After 4 weeks treatment with thiamine supplementation, his neurologic and general condition improved. MRI findings are shown in the figure.

Marchiafava Bignami disease is associated with chronic alcoholism and nutritional deficiency.^{1,2} Although etiopathogenesis is unknown, alcohol toxicity and osmotic disorders are in relation with typical corpus callosum demyelination. Other CNS structures such as white matter tracts and middle cerebellar peduncles may be involved, but far less frequently.

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