

## Development of Marchiafava-Bignami disease in a patient with Takayasu arteritis with alcohol abuse

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**Introduction:** Marchiafava-Bignami disease (MBD), a rare and toxic neurological disorder mostly observed in people with chronic alcoholism, is characterized by demyelination and necrosis of the central layer of the corpus callosum. Here we present the case of a patient with MBD that can be mistaken for neurological manifestations of Takayasu arteritis (TA).

**Case Report:** A 41-year-old man with chronic alcoholism was admitted to our hospital with general weakness and dizziness. He was diagnosed with TA 19 years prior and had since been taking methotrexate. He had no history of infection in the 3 months prior to admission. Physical and neurological tests were unremarkable except for general weakness. Results of laboratory tests including WBC, ESR, CRP, Cr, ammonia, AST, and ALT were within the normal range. On the third day of admission, he developed dysarthria and disturbed consciousness. Because he had chronic alcoholism, we diagnosed alcohol withdrawal delirium and prescribed thiamine and benzodiazepine. On the fifth day of admission, he had confused mentation, dysarthria, and spasticity in both lower legs. Blood, sputum, and urine cultures for the detection of viral and bacterial pathogens were all negative. The cerebrospinal fluid test showed no evidence of meningitis (leukocytes: 0 cells/mm<sup>3</sup>). Electroencephalography showed intermittent bursts of polymorphic delta slow waves, and a test of nerve conduction velocity revealed sensorimotor polyneuropathy. To confirm the neurologic involvement of TA, brain magnetic resonance imaging was performed. There was no evidence of vasculitis or Wernicke-Korsakoff syndrome other than diffuse diffusion-restricted lesions in the splenium of the corpus callosum, suggesting MBD (Figure 1). We diagnosed MBD and increased doses of thiamine and prescribed vitamin B complex and high-dose methylprednisolone. After 9 days of treatment, the patient's orientation and dysarthria improved, as did his leg spasticity.

**Discussion:** MBD must be identified when a TA patient with alcohol abuse develops acute ongoing neurologic signs and symptoms such as dysarthria, disturbance of consciousness, and spasticity.

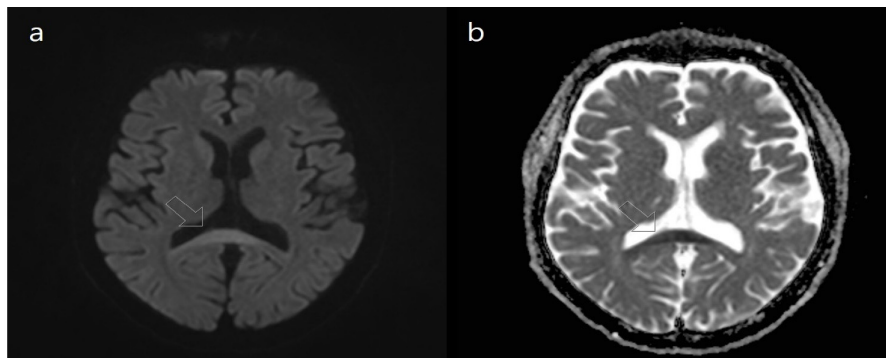


Figure 1. High signal on diffusion-weighted images(a) with a decreased apparent diffusion coefficient(b) showed diffuse diffusion restriction lesions at the splenium of the corpus callosum (arrowhead).