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Figure. (A) T2-weighted imaging. (B) T1-weighted and gadolinium-enhanced T1-weighted imaging. (C) Arterial phase of the right external carotid arteriogram. (D) Venous phase of the arteriogram.

Dural arteriovenous fistula mimicking leukoencephalopathy

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A 49-year-old man had headache and fever for 1 month. Neurologic examination showed cognitive dysfunction: recent memory loss, dyscalculia, and disorientation. Muscle stretch reflexes were increased with Babinski signs. Sensory and cerebellar function were normal without meningeal signs. T2-weighted MRI revealed hyperintense signal areas in the internal capsules, globus pallidus, and subcortical white matter regions (A). Normal flow void appearance was not seen in the superior sagittal sinus (A, arrow). Diffusion-weighted imaging also disclosed diffuse hyperintensity in the subcortical white matter. In addition, T1-

weighted MRI showed abnormal flow void sign in the cerebellum with gadolinium enhancement (B). Brain MR angiography suggested arteriovenous shunts. Arterial phase of the right external carotid arteriogram indicated dural arteriovenous fistula in the straight and transverse sinus (C). The venous phase of arteriogram demonstrated prominent venous collaterals and congestion in the great vein of Galen, inferior sagittal, and straight sinus (D). The internal carotid angiogram did not define the superior sagittal, transverse, and sigmoid sinus obviously. These images strongly support that perturbation of the venous outflow and sinus thrombosis could induce diffuse brain edema or infarction. Dural arteriovenous fistula occasionally causes a unique distribution of MRI lesions mimicking acute leukoencephalopathy.

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