Teaching *NeuroImages*: Magnetic resonance susceptibility effect for acute isolated cortical vein thrombosis

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Figure 1 Baseline noncontrast CT scan

Axial CT scan shows subtle hemorrhagic infarction in left parietal region (white arrow; A) with associated hyperdense cortical vein (black arrow; B).

Figure 2 MRI susceptibility-weighted imaging 15 hours after onset

Axial MRI with susceptibility-weighted imaging shows magnetic susceptibility effect in left parietal area (A) and ipsilateral cortical vein (arrow; B). MRI time-of-flight venography was negative (not shown).

A 38-year-old woman using hormonal contraception presented with right-sided abdominal and arm clonic seizures, right hemiparesis, hypesthesia, and nausea. She denied headache. D-dimers were 350 ng/mL (laboratory reference ≤ 500 ng/mL). CT showed a small left parietal hemorrhagic infarct with adjacent hyperdense cortical vein (figure 1). MRI 15 hours

after onset showed magnetic susceptibility effect on susceptibility-weighted imaging (SWI, figure 2). Isolated cortical vein thrombosis is present in 5% of patients with cerebral venous thrombosis (CVT).¹ Negative D-dimer and absence of headache does not exclude CVT¹ and SWI is useful for confirmation of the diagnosis.²

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AUTHOR CONTRIBUTIONS

Slaven Pikija: drafting/revising the manuscript, study concept or design, analysis or interpretation of data, accepts responsibility for conduct of research and final approval, contribution of vital reagents/tools/patients, acquisition of data, study supervision. Peter Unterkreuter: drafting/revising the manuscript, accepts responsibility for conduct of research and final approval, contribution of vital reagents/tools/patients, acquisition of data. Michael Knoflach: drafting/revising the manuscript, study concept or design, analysis or interpretation of data, accepts responsibility for conduct of research and final approval, study supervision.

STUDY FUNDING

No targeted funding reported.

DISCLOSURE

The authors report no disclosures relevant to the manuscript. Go to Neurology.org for full disclosures.

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Neurology 2014;83:e178-e179

DOI 10.1212/WNL.0000000000000988

This information is current as of November 10, 2014

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