A 14-year-old boy with leukemia reported 20 minutes of numbness and weakness of the left face and hand. He had received an intrathecal methotrexate infusion 1 month earlier. Examination showed left-sided ataxia, which resolved within minutes.

Brain MRI (figure) performed 90 minutes after symptom onset showed restricted diffusion at the splenium of the corpus callosum and right frontal white matter. Magnetic resonance angiography and perfusion imaging results were normal.

The diagnosis was delayed reversible methotrexate leukoencephalopathy, a syndrome of transient neurologic dysfunction following intrathecal or IV chemotherapy. It probably represents a metabolic insult to the white matter. The restricted diffusion typically resolves in 1–4 weeks.

REFERENCE

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Disclosure: Dr. Manousakis reports no disclosures. Dr. Hsu has a patent pending re: Computational ideas for developing interventions for the treatment of epilepsy and receives research support from the NIH (2R01 NS044351-06 [collaborator]) and NCRR (1KL2RR025012-01 [scholar]). Dr. Diamond reports no disclosures. Dr. Rowley serves as a consultant for Ely Lilly and Company, W.L. Gore & Associates, Inc., and Lundbeck Inc.; serves on a speakers’ bureau for Bracco; and receives research support from the NIH.
Teaching NeuroImages: Methotrexate leukoencephalopathy mimicking a transient ischemic attack
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