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Case 279

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Conflicts of interest are listed at the end of this article.

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History A 25-year-old woman with recently diagnosed systemic lupus erythematosus and class IV lupus nephritis confirmed with biopsy and treated with mycophenolate mofetil presented with a 2-day history of progressively worsening edema of her face and lower extremities. She had no antecedent infection or vaccination. She was admitted to the hospital and treated with methylprednisolone, furosemide, and C1 esterase inhibitor. On hospital day 2, she experienced a witnessed generalized tonic-clonic seizure. At that time, she became hypoxic and was intubated for airway protection. Her laboratory study results preceding the seizure were remarkable for hyponatremia, with a blood sodium level of 122 mEq/L (122 mmol/L) (normal range, 135–145 mEq/L [134–145 mmol/L]), which was corrected to 137 mEq/L (137 mmol/L) over 48 hours. Same-day cerebrospinal fluid analysis was unremarkable, and unenhanced head CT findings (not shown) were normal, with no evidence of intracranial hemorrhage or edema.

Her subsequent hospital course was complicated by renal failure requiring continuous renal replacement therapy, hypertension (systolic blood pressure ranging from 140 mm Hg to 190 mm Hg), anemia requiring blood transfusions, thrombocytopenia, and pneumonia. She remained intubated with a limited neurologic examination due to sedative medications until hospital day 10. After extubation, she was noted to have a right gaze preference. She was able to speak in short phrases and follow simple commands. Neurologic examination was notable for drowsiness, right gaze deviation, direction-changing torsional nystagmus, horizontal ophthalmoplegia, and generalized symmetric weakness without upper motor neuron signs. The following day (hospital day 11), unenhanced MRI of the brain was performed (Fig 1) along with MR angiography of the brain (Fig 2). Biopsy of the temporal artery was normal, without evidence of inflammation.

2020 Diagnosis Please Learning Objectives

In submitting a diagnosis for this case, participants demonstrate the ability to

- Recognize normal and abnormal findings as presented in the diagnostic images
- Identify pathologic conditions indicated in the diagnostic images
- Use clinical reasoning skills to generate a list of differential diagnoses

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Submit the most likely diagnosis to <http://rsna.org/dx-please> (use only for submission of diagnosis). Select the case from the Active Case List for which you are submitting a diagnosis. Only one case, one name, and one diagnosis per e-mail submission. Multiple diagnoses and multiple submissions will not be considered. **Deadline:** Midnight U.S. Central Time, May 10, 2020. Answer will appear in the July 2020 issue. Authors wishing to submit cases for Diagnosis Please should first write to the Editor to obtain approval for the case and further information.

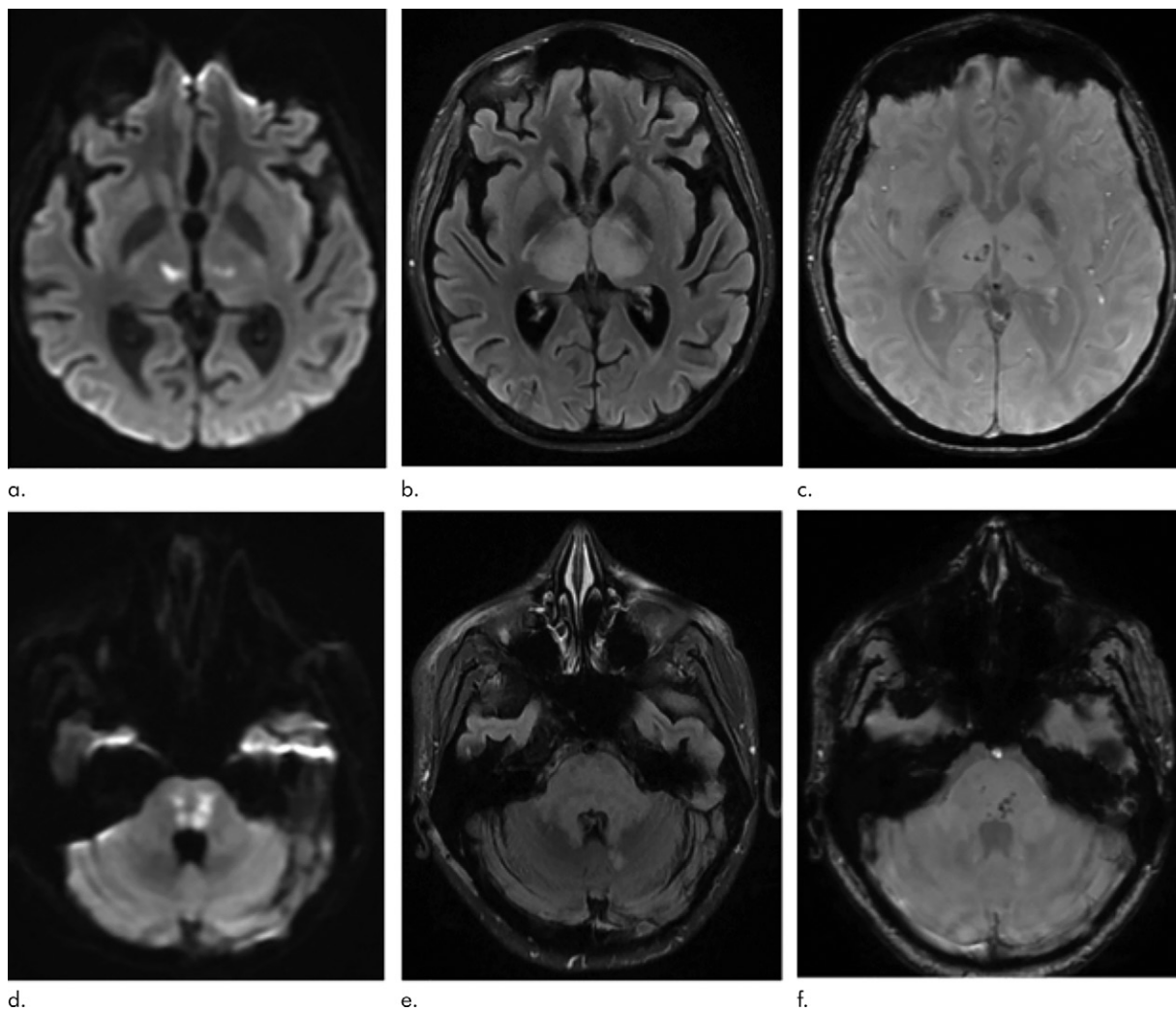


Figure 1: (a, d) Axial diffusion-weighted MRI (repetition time msec/echo time msec, 6887/76; b value = 1000 msec). (b, e) Axial T2-weighted fluid-attenuated inversion recovery MRI (repetition time msec/echo time msec/inversion time msec, 11 000/99/2650). (c, f) Axial susceptibility-weighted MRI (51/24). All images were obtained at the level of the thalami (a, b, c) and pons (d, e, f).

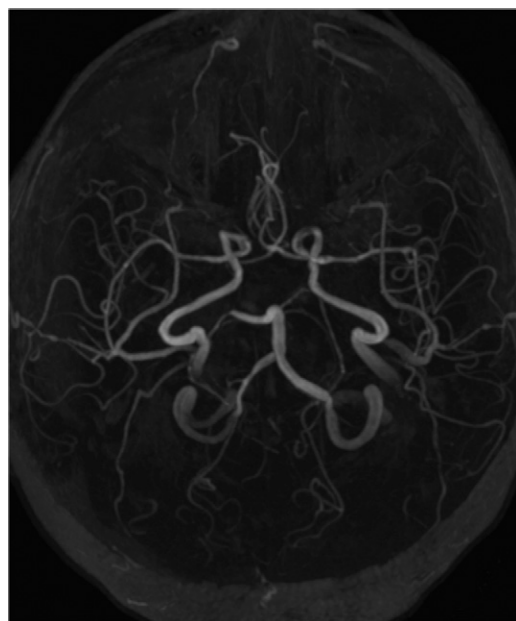


Figure 2: Three-dimensional time-of-flight maximum intensity projection MR angiogram of the circle of Willis.

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