

# Teaching NeuroImages: Parkinsonism Presenting With Watershed Pattern Lesions

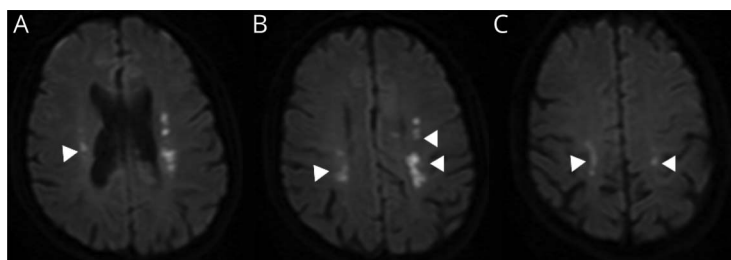
Yi Dong, MD, PhD, Xin Cheng, MD, PhD, and Qiang Dong, MD, PhD

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**Correspondence**

Dr. Q. Dong  
dong\_qiang@fudan.edu.cn

**Figure 1** Brain MRI Demonstrating Watershed Diffusion-Weighted Imaging (DWI)–Hyperintense Signal



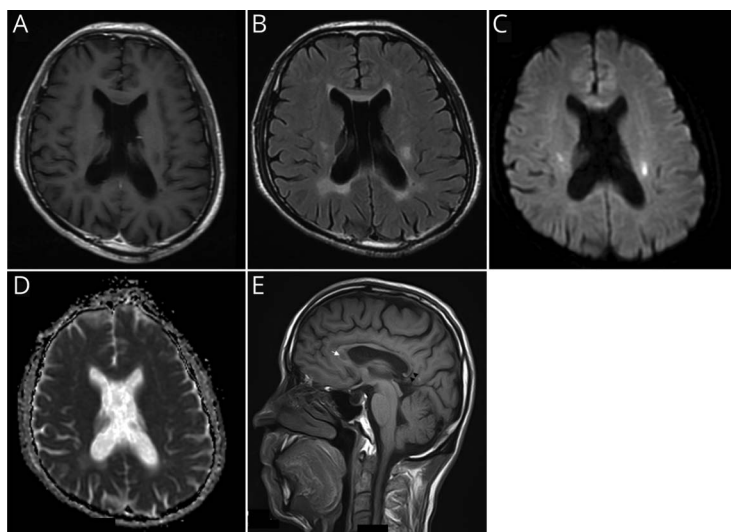
(A–C) Brain MRI demonstrates DWI-hyperintense signal (arrowheads) involving bilateral corona radiate, which fit the watershed infarction pattern.

A 47-year-old man presented to clinic with progressive right-hand bradykinesia and shuffling gait for 8 months. He was diagnosed with parkinsonism. Brain MRI demonstrated diffusion-weighted imaging (DWI)–hyperintense signal involving bilateral corona radiate (figure 1) and

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**Figure 2** Extensive White Matter Hyperintensity Lesion on Contrast Brain MRI



(A and B) Several lacunae with extensive white matter hyperintensity lesions involving bilateral lateral periventricular regions without enhancement. (C and D) Diffusion-weighted imaging–positive lesions without hypointensity appearance on apparent diffusion coefficient. (E) Hypointensity lesions on rostrum of corpus callosum (white arrow) and predominant splenial atrophy (black arrowheads).

From the Department of Neurology, Huashan Hospital, Fudan University, Shanghai, China.

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T2-weighted MRI showed white matter changes (figure 2). Colony-stimulating factor 1 receptor (*CSF1R*) gene sequencing revealed the pathogenic variant c.2381T>C(p.Ile794Thr), confirming the diagnosis of hereditary diffuse leukoencephalopathy with spheroids.<sup>1</sup> The patient was treated with levodopa and selegiline with minimal response.<sup>2</sup>

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### Disclosure

The authors report no disclosures relevant to the manuscript. Go to [Neurology.org/N](http://Neurology.org/N) for full disclosures.

### Appendix Authors

Name	Location	Contribution
<b>Yi Dong, MD, PhD</b>	Huashan Hospital, Fudan University, Shanghai, China	Collection and interpretation of the data, manuscript drafting
<b>Xin Cheng, MD, PhD</b>	Huashan Hospital, Fudan University, Shanghai, China	Manuscript revision
<b>Qiang Dong, MD, PhD</b>	Huashan Hospital, Fudan University, Shanghai, China	Supervision, manuscript revision

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Yi Dong, Xin Cheng and Qiang Dong

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