

Teaching Video NeuroImages: Stroke presenting with isolated toe-spreading palsy

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Figure 1 Motions of the patient's toes



The patient's feet at rest (A) and after commands to dorsiflex (B), plantarflex (C), and spread (D) his toes.

A 75-year-old man suddenly could not keep his slipper on the right foot and consulted our hospital. He could dorsiflex and plantarflex his toes (figure 1, A–C, videos 1 and 2) and ankles, but could not spread his right toes (figure 1D, video 3). MRI revealed acute infarction in the left precentral gyrus (figure 2).

Contralateral pure motor monoparesis after cortical infarction in the precentral gyrus results in paresis of multiple motions in a single extremity.¹ However, our patient's palsy was limited to toe-spreading, elucidating the specific topography of toe movements in primary motor cortex, though if such somatotopy exists, it is controversial.²

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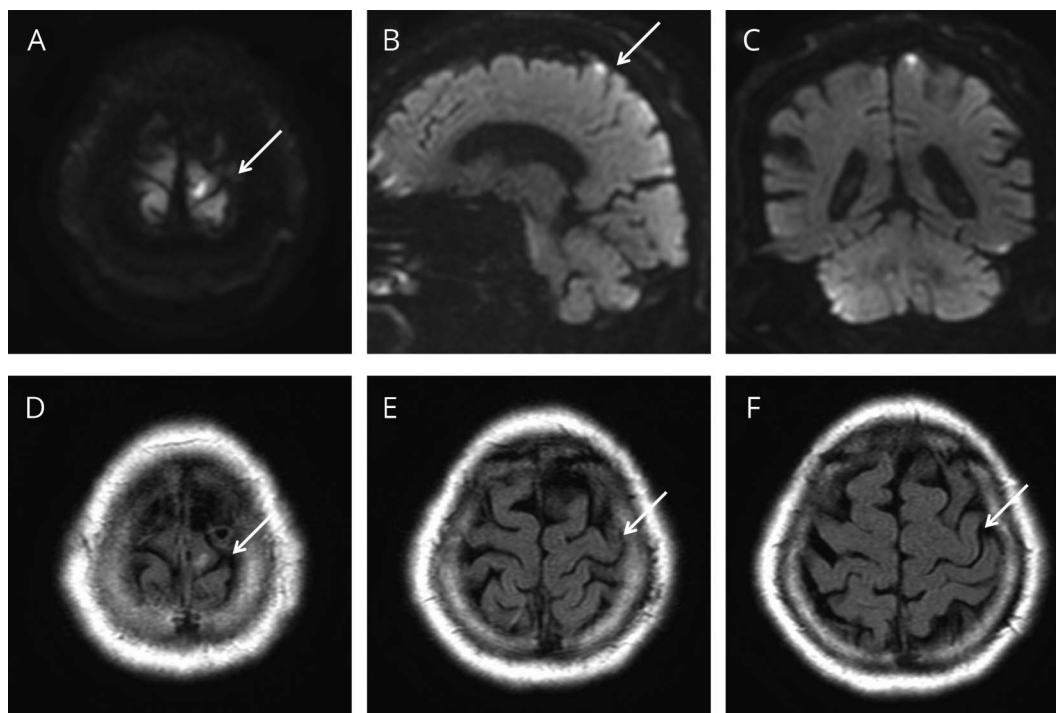
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Figure 2 The patient's brain MRI



Axial (A), sagittal (B), and coronal (C) sections of diffusion-weighted images and axial sections (D-F) of fluid-attenuated inversion recovery. Arrows: central sulcus.

Disclosure

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

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2. Schieber MH. Constraints on somatotopic organization in the primary motor cortex. *J Neurophysiol* 2001;86:2125–2143.

Appendix Authors

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Toshiro Kanazawa, MD, PhD	Yokohama City Minato Red Cross Hospital, Japan	Author	Revised the manuscript for intellectual content
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