

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

Teruhiko Sekiguchi, MD, PhD, Toshiro Kanazawa, MD, PhD, and Hiroaki Tanaka, MD, PhD

*Neurology*® 2019;92:e1268-e1269. doi:10.1212/WNL.0000000000007102

## Correspondence

Dr. Sekiguchi  
t-sekiguchi.nuro@tmd.ac.jp

**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.<sup>1</sup> 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.<sup>2</sup>

## Study funding

No targeted funding reported.

## MORE ONLINE

### ▶ Videos

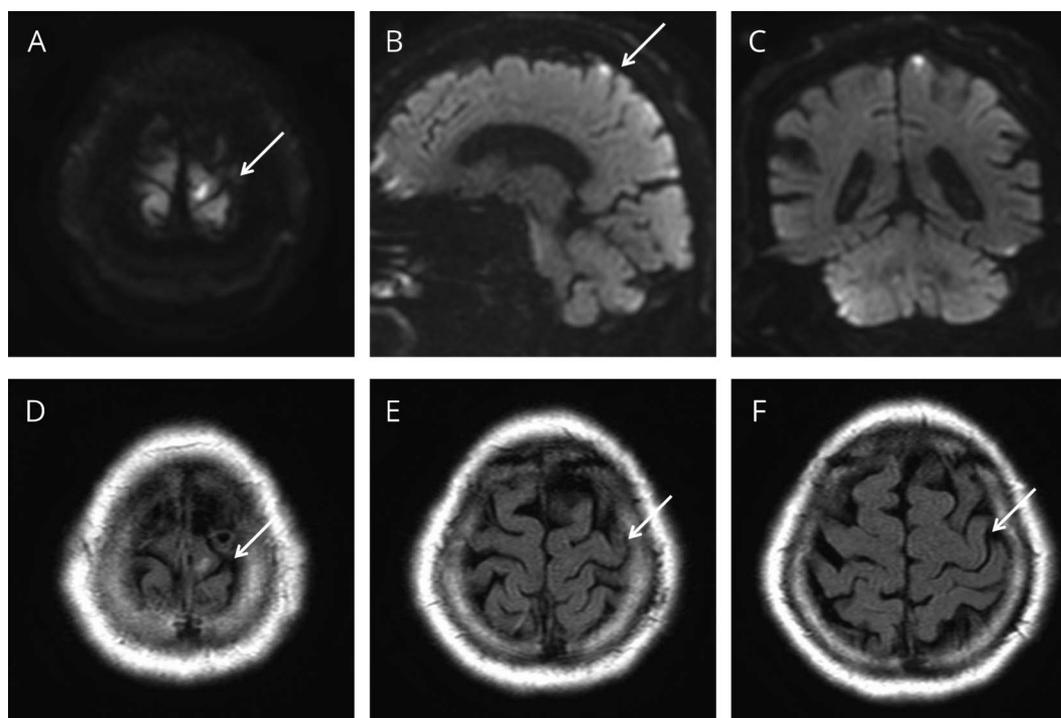
### → Teaching slides

[links.lww.com/WNL/A831](https://links.lww.com/WNL/A831)

From the Department of Neurology, Yokohama City Minato Red Cross Hospital, Japan.

Go to [Neurology.org/N](https://Neurology.org/N) for full disclosures. Funding information and disclosures deemed relevant by the authors, if any, are provided at the end of the article.

**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](http://Neurology.org/N) for full disclosures.

## References

1. Hiraga A. Pure motor monoparesis due to ischemic stroke. *Neurologist* 2011;17:301–308.
2. Schieber MH. Constraints on somatotopic organization in the primary motor cortex. *J Neurophysiol* 2001;86:2125–2143.

## Appendix Authors

Name	Location	Role	Contribution
<b>Teruhiko Sekiguchi, MD, PhD</b>	Yokohama City Minato Red Cross Hospital, Japan	Author	Major role in the acquisition, analysis, and interpretation of data; drafted the manuscript for intellectual content
<b>Toshiro Kanazawa, MD, PhD</b>	Yokohama City Minato Red Cross Hospital, Japan	Author	Revised the manuscript for intellectual content
<b>Hiroaki Tanaka, MD, PhD</b>	Yokohama City Minato Red Cross Hospital, Japan	Author	Revised the manuscript for intellectual content

# Neurology®

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

Teruhiko Sekiguchi, Toshiro Kanazawa and Hiroaki Tanaka

*Neurology* 2019;92:e1268-e1269

DOI 10.1212/WNL.00000000000007102

**This information is current as of March 11, 2019**

<b>Updated Information &amp; Services</b>	including high resolution figures, can be found at: <a href="http://n.neurology.org/content/92/11/e1268.full">http://n.neurology.org/content/92/11/e1268.full</a>
<b>References</b>	This article cites 2 articles, 0 of which you can access for free at: <a href="http://n.neurology.org/content/92/11/e1268.full#ref-list-1">http://n.neurology.org/content/92/11/e1268.full#ref-list-1</a>
<b>Subspecialty Collections</b>	This article, along with others on similar topics, appears in the following collection(s): <b>Infarction</b> <a href="http://n.neurology.org/cgi/collection/infarction">http://n.neurology.org/cgi/collection/infarction</a>
<b>Permissions &amp; Licensing</b>	Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: <a href="http://www.neurology.org/about/about_the_journal#permissions">http://www.neurology.org/about/about_the_journal#permissions</a>
<b>Reprints</b>	Information about ordering reprints can be found online: <a href="http://n.neurology.org/subscribers/advertise">http://n.neurology.org/subscribers/advertise</a>

*Neurology*® is the official journal of the American Academy of Neurology. Published continuously since 1951, it is now a weekly with 48 issues per year. Copyright © 2019 American Academy of Neurology. All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.

