

# Teaching Video NeuroImages: Choreoathetosis Due to Radiation-Induced Brachial Plexopathy

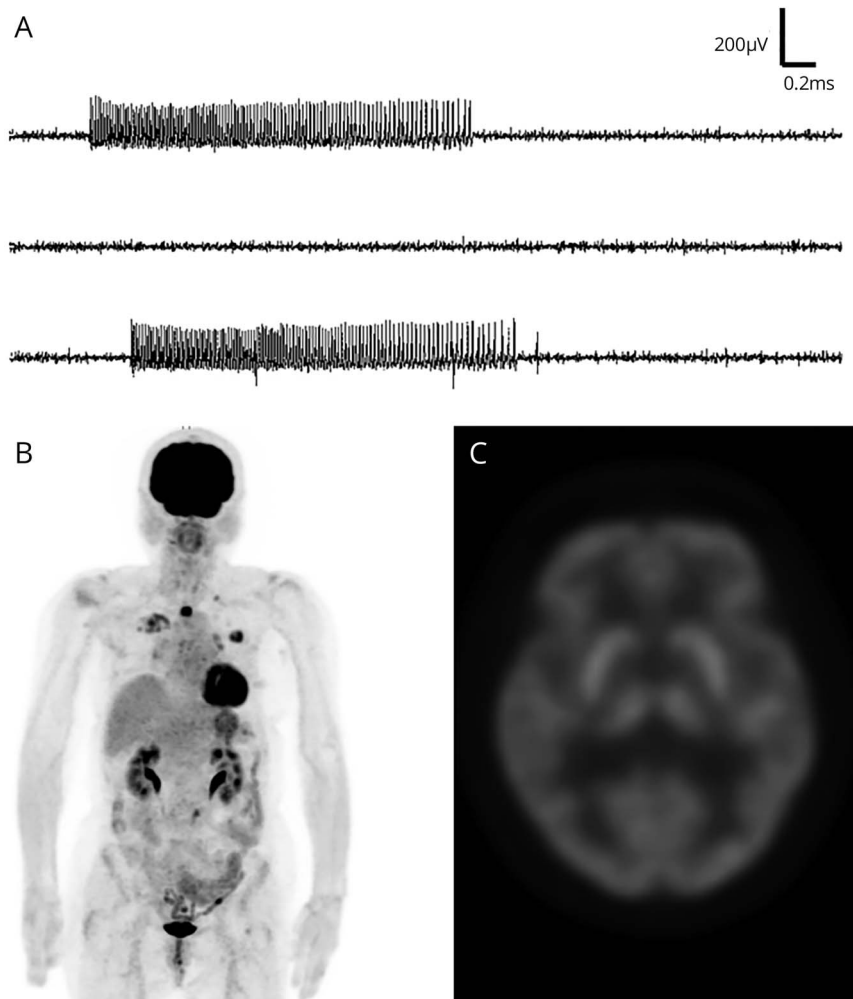
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## Figure Needle EMG and FDG-PET



(A) Needle EMG recorded on the right flexor carpi radialis at rest showed repetitive myokymic discharges. (B) FDG-PET revealed increased uptake, suggestive of metastases, in the lungs and a vertebral body, distant from the right brachial plexus. (C) Uptakes of bilateral basal ganglia were symmetric.

A 69-year-old woman, whose right breast cancer had been treated by surgery and radiation at age 50, had right hand sensory loss and pain. The hand began to show choreoathetosis (video). Blood examination revealed that anti-Hu, anti-Yo, and anti-Ri antibodies were negative but anti-SS-A antibody was positive without sicca syndrome. Neurogenic changes, including myokymic discharges, were present diffusely in the right arm on EMG (figure, A), suggesting radiation-

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induced brachial plexopathy. Brain and cervical MRIs were normal. PET was normal within the right arm and the brain (figure, B and C). Two years later, both the choreoathetosis and myokymic discharges had ameliorated.

Radiation-induced plexopathy can cause choreoathetosis through pronounced myokymia of a broad range of muscles, which was called “painful arm and moving fingers.”<sup>1</sup> Ectopic impulses, generated from dorsal roots, are hypothesized to be transmitted to motoneurons via spinal interneurons.<sup>2</sup> Such a pathomechanism may explain extremely asymmetric involuntary movements in our patient.

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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>Teruhiko Sekiguchi, MD, PhD</b>	Department of Neurology, Yokohama City Minato Red Cross Hospital, Japan	Major role in the acquisition, analysis, and interpretation of data; drafted the manuscript for intellectual content
<b>Toshiro Kanazawa, MD, PhD</b>	Department of Neurology, Yokohama City Minato Red Cross Hospital, Japan	Revised the manuscript for intellectual content
<b>Takuya Ohkubo, MD, PhD</b>	Department of Neurology, Yokohama City Minato Red Cross Hospital, Japan	Revised the manuscript for intellectual content

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2. Miyakawa T, Yoshimoto M, Takebayashi T, Yamashita T. Case reports: painful limbs/moving extremities: report of two cases. *Clin Orthop Relat Res* 2010;468:3419–3425.

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