A 42-year-old woman presented with acute-onset facial numbness. Physical examination revealed graded loss of pain and temperature over the left half of her face with central sparing (figure 1A)—an onion-skin distribution. Corneal reflex was sluggish on the left, but results for the rest of the clinical examination, CSF studies, and visual evoked potential were normal. MRI was suggestive of acute demyelination (figure 1B)—an onion-skin lesion in the brainstem and spinal cord extending from the lower medulla to C2 level. Axial T2 MRI at the level of the upper cervical cord shows a hyperintense lesion in the left posterior-lateral cervical cord. This segmental pattern of trigeminal sensory loss, in contrast to the divisional pattern (figure 2, A and B), reflects the rostral-caudal somatotopic arrangement in the spinal tract nucleus of the trigeminal nerve with the perioral area represented rostrally and the lateral face caudally (figure 2C)\(^1\)\(^2\) and helps in anatomic localization.

**REFERENCES**

Figure 2  Divisional pattern of sensory loss (A), segmental pattern of sensory loss (B), and schematic diagram of the trigeminal system in the brainstem (C).

CN = cranial nerve. (A, B) Reprinted from Blumenfeld,1 with permission. (C) Reprinted from Brazis et al.,2 with permission.
Teaching NeuroImages: Onion-skin pattern facial sensory loss
Abhijit Das, Pranav D. Shinde, Chandrasekharan Kesavadas, et al.
Neurology 2011;77:e45-e46
DOI 10.1212/WNL.0b013e31822affc6

This information is current as of August 22, 2011

Updated Information & Services
including high resolution figures, can be found at:
http://n.neurology.org/content/77/8/e45.full

Subspecialty Collections
This article, along with others on similar topics, appears in the following collection(s):
All Clinical Neurology
http://n.neurology.org/cgi/collection/all_clinical_neurology
All Demyelinating disease (CNS)
http://n.neurology.org/cgi/collection/all_demyelinating_disease_cns
MRI
http://n.neurology.org/cgi/collection/mri
Transverse myelitis
http://n.neurology.org/cgi/collection/transverse_myelitis

Permissions & Licensing
Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
http://www.neurology.org/about/about_the_journal#permissions

Reprints
Information about ordering reprints can be found online:
http://n.neurology.org/subscribers/advertise

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 © 2011 by AAN Enterprises, Inc. All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.