Teaching NeuroImages:

Acute bilateral hand weakness from anterior spinal artery territory cord ischemia

Michelle Balaratnam,
MBBS
Patrick Pullicino, MD

Address correspondence and
reprint requests to Dr. Michelle
Balaratnam, Neurology
Department, Clinic A, Kent and
Canterbury Hospital, Ethelbert
Road, Canterbury, Kent CT1
3NG, UK
michelle_balaratnam@yahoo.co.uk

Figure Lower cervical MRI showing bilateral anterior spinal cord hyperintensities

A 58-year-old man with a history of diabetes, hypertension, and smoking developed sudden bilateral hand weakness. Examination revealed power

0/5 in intrinsic hand muscles, 2/5 hand grip, and bilateral pinprick sensory loss in C8-T1 distribution. Upper limbs were areflexic and leg reflexes were brisk. He developed urinary retention and neck pain. Cervical MRI showed ischemia in the anterior horn cell region (figure). Magnetic resonance angiography, Doppler, and echocardiography were normal. Glucose and cholesterol were elevated.

Acute bilateral hand weakness represents a poorly recognized consequence of partial anterior spinal artery territory infarction. The anterior horn cell region is in the most distally perfused part of the anterior spinal artery territory and is vulnerable to hypoperfusion.¹ Disabling hand wasting and weakness may result.²

REFERENCES

1. Stapf C, Mohr JP, Straschill M, Mast H, Marx P. Acute bilateral arm paresis. *Cerebrovasc Dis* 2000;10:239–243.
2. Pullicino P. Bilateral distal upper arm limb amyotrophy and watershed infarcts from vertebral dissection. *Stroke* 1994;25:1870–1872.

Neurology®

Teaching *NeuroImages*: Acute bilateral hand weakness from anterior spinal artery territory cord ischemia

Michelle Balaratnam and Patrick Pullicino

Neurology 2009;73:e13

DOI 10.1212/WNL.0b013e3181ae7acd

This information is current as of July 20, 2009

Updated Information & Services

including high resolution figures, can be found at:
<http://n.neurology.org/content/73/3/e13.full>

References

This article cites 2 articles, 1 of which you can access for free at:
<http://n.neurology.org/content/73/3/e13.full#ref-list-1>

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 . All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.