Teaching *NeuroImages*: Malignant cerebral venous thrombosis and pulmonary emboli

Amandeep K. Dhillon,
MD
Alejandro A. Rabinstein,
MD
Eelco F.M. Wijdicks,
MD, PhD

Address correspondence and reprint
requests to Dr. Eelco F.M.
Wijdicks, Division of Critical Care
Neurology, Mayo Clinic, 200 First
Street SW, Rochester, MN 55905
Wijdicks@mayo.edu

A 23-year-old woman on oral contraception developed headache and seizures. Hemorrhagic infarcts with early swelling resulted in coma with no response to osmotic diuretics (figure, A). On arrival, she had lost most brain-stem reflexes and met the criteria of brain death within 3 days of onset. Factor V Leiden and prothrombin gene mutation were absent, and activated protein C resistance ratio was negative. Oxygen desaturations were noted from pulmonary emboli from clot extending into the internal jugular vein (figure, B). Rapid onset of hemorrhagic infarcts with swelling in cerebral venous thrombosis can be fatal and too late for endovascular

intervention and has been observed in 5 of 20 cases referred for endovascular thrombolysis.¹ Cerebral venous thrombosis has been associated with pulmonary emboli in 11% of 1 series and may be an unrecognized complication or early manifestation.²

REFERENCES

1. Stam J, Majoie CB, Van Delden OM, et al. Endovascular thrombectomy and thrombolysis for severe cerebral sinus thrombosis. *Stroke* 2008;39:1487–1490.
2. Diaz JM, Schiffman JS, Urban ES, Maccario M. Superior sagittal sinus thrombosis and pulmonary embolism: a syndrome rediscovered. *Acta Neurol Scand* 1992;86:390–396.

Figure Imaging results

(A.a) Initial CT scan shows multiple hemorrhages in both hemispheres. (A.b) T2 MRI shows large territorial infarcts with early swelling. (A.c) T1 MRI. Clot is present in sagittal sinus and confirmed at autopsy. (B.a) T1 MRI shows clot in the internal jugular vein. (B.b and B.c) Two-dimensional echocardiography shows thrombus right ventricle and main pulmonary artery.¹

From the Division of Critical Care Neurology, Department of Neurology, Mayo Clinic, Rochester, MN.

Disclosure: Dr. Dhillon reports no disclosures. Dr. Rabinstein serves as a Section Editor for *Current Treatment Options in Neurology* and *Neurocritical Care* and receives research support from CardioNet, Inc. Dr. Wijdicks serves as Editor-in-Chief of *Neurocritical Care* and receives royalties from *The Comatose Patient* (2008), *Neurological Complications of Critical Illness* (2009), and *The Practice of Emergency and Critical Care Neurology* (2010), all published by Oxford University Press.

Neurology[®]

Teaching NeuroImages: Malignant cerebral venous thrombosis and pulmonary emboli

Amandeep K. Dhillon, Alejandro A. Rabinstein and Eelco F.M. Wijdicks

Neurology 2010;75:e49

DOI 10.1212/WNL.0b013e3181f25ef4

This information is current as of September 13, 2010

Updated Information & Services

including high resolution figures, can be found at:
<http://n.neurology.org/content/75/11/e49.full>

References

This article cites 2 articles, 1 of which you can access for free at:
<http://n.neurology.org/content/75/11/e49.full#ref-list-1>

Subspecialty Collections

This article, along with others on similar topics, appears in the following collection(s):

All Epilepsy/Seizures

http://n.neurology.org/cgi/collection/all_epilepsy_seizures

All Headache

http://n.neurology.org/cgi/collection/all_headache

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.