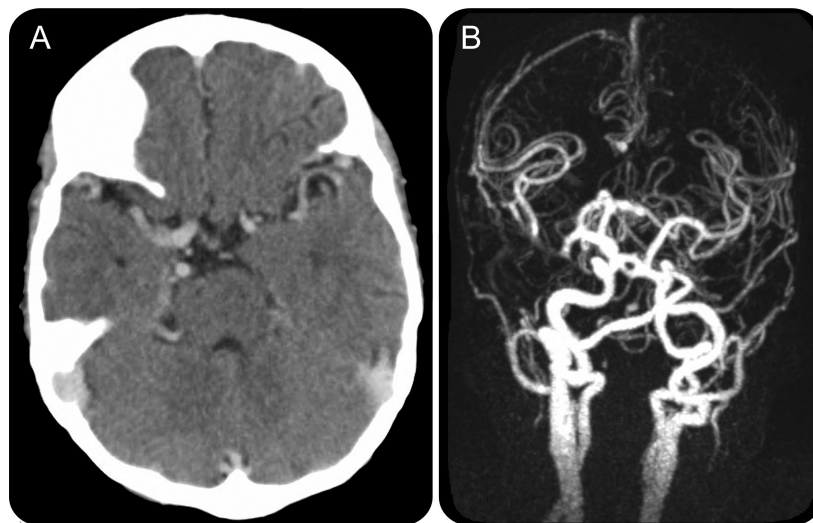


Cerebrovascular findings in an adult with cyanotic congenital heart disease

Figure Noncontrast head CT and magnetic resonance angiogram



(A) Noncontrast head CT showed markedly opacified intracranial vasculature secondary to hyperhemoglobinemia. (B) Magnetic resonance angiography demonstrated prominent hypervascularity with dilatation and ectasia of the cervical and cranial vasculature.

A 26-year-old man developed recurrent episodes of hemiparesis and dysarthria. He had cyanotic congenital heart disease (CCHD) with single-ventricle physiology. Chronic hypoxemia (baseline arterial oxygen saturation 70%) had caused secondary erythropoiesis; at this presentation, the hematocrit was 80% and the hemoglobin concentration exceeded 25 g/dL. Neuroimaging demonstrated marked hemoconcentration (figure, A) and hypervascularity (figure, B). Similar morphologic changes are observed in coronary arteries of adults with CCHD, with associated medial wall abnormalities including loss of smooth muscle, increased collagen, and duplication of internal elastic laminae.¹ This patient's symptoms were likely due to blood hyperviscosity, as he improved with hemodilution.

R. Brian Sommerville, MD, St. Louis, MO

Disclosure: The author reports no disclosures.

Address correspondence and reprint requests to Dr. R. Brian Sommerville, Department of Neurology, Washington University, 660 S. Euclid Ave., Campus Box 8111, St. Louis, MO 63110; sommervilleb@neuro.wustl.edu

1. Perloff JK. The coronary circulation in cyanotic congenital heart disease. *Int J Cardiol* 2004;97:79–86.

Neurology[®]

Cerebrovascular findings in an adult with cyanotic congenital heart disease

R. Brian Sommerville

Neurology 2010;75;1570

DOI 10.1212/WNL.0b013e3181f96146

This information is current as of October 25, 2010

| | |
|---|--|
| Updated Information & Services | including high resolution figures, can be found at: http://n.neurology.org/content/75/17/1570.full |
| References | This article cites 1 articles, 0 of which you can access for free at: http://n.neurology.org/content/75/17/1570.full#ref-list-1 |
| Subspecialty Collections | This article, along with others on similar topics, appears in the following collection(s): All Cerebrovascular disease/Stroke http://n.neurology.org/cgi/collection/all_cerebrovascular_disease_stroke Cardiac; see Cerebrovascular Disease/Cardiac http://n.neurology.org/cgi/collection/cardiac_see_cerebrovascular_disease-cardiac Stroke in young adults http://n.neurology.org/cgi/collection/stroke_in_young_adults |
| 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 © 2010 by AAN Enterprises, Inc.. All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.

