Stent Placement in Acute Cerebral Artery Occlusion

To the Editor:

We read with great interest the article by Brekenfeld et al.1 The authors treated 12 patients with self-expandable intracranial stents (Wingspan) as a rescue procedure for acute cerebral artery occlusion. They showed that stent placement was feasible in all procedures and resulted in partial or complete recanalization (TIMI 2/3) in 92%. No vessel perforations, subarachnoid, or symptomatic intracerebral hemorrhages were reported. At 3 months follow-up, 3 patients (25%) had a good outcome, 3 (25%) had a moderate outcome, and 6 (50%) had a poor outcome. Mortality was 33.3%. The study’s results are consistent with another study by Zaidat et al2 in the journal. Among the options of multimodal reperfusion therapy being evaluated, stent placement seems to have the highest recanalization rate. However, there was a mismatch between high recanalization rate and poor clinical outcome in both studies. This fact implied that an open vessel could not always be a good thing. As the authors pointed out, poor clinical outcome might be explained by the long time from symptom onset to recanalization. The goal of acute recanalization should not be just to open occluded vessels, but to open them quickly.3 The possibility of stenting as first line endovascular therapy rather than a rescue procedure might be explored for shortening the time to recanalization.4

Similar to the development of percutaneous cardiovascular intervention, neuroendovascular physicians began with intracranial thrombolysis, experimented with mechanical clot disruption and thrombectomy, and are now interested in intracranial angioplasty and stenting for acute cerebral artery occlusion. However, there is significant difference of underlying pathophysiology responsible for vessel occlusions between cerebral and coronary vasculature; it should be prudent for neuroendovascular physicians to follow up what interventional cardiologists have done. We consider that the authors of this article1 need to be more specific with regard to the etiology of intracranial occlusion. Stroke attributable to cardioembolism may have higher risk of early hemorrhagic transformation. Furthermore, antithrombotic therapy after stent placement will complicate the setting in which anticoagulation is necessary such as mechanical heart valve replacement. Such patients may be unsuitable for permanent stent placement. Stroke attributable to intracranial atherosclerosis is prevalent in Asian countries. In Chinese populations, intracranial atherosclerosis is estimated to account for 33% to 50% of stroke and >50% of transient ischemic attacks, in Thailand 47% of stroke, in Korea about 28% to 60% of stroke, and in Singapore about 48% of stroke.5 It is difficult to recanalize an occluded vessel with a thrombolytic agent alone in patients with atherothrombotic intracranial large-vessel occlusion. Another disadvantage of thrombolytic therapy is the risk of recollection in such patients. We think that stenting is indicated in certain patients with stroke attributable to intracranial atherosclerosis.

It is remarkable that Brekenfeld et al1 observed no hemorrhagic complications in their cases. One possible explanation is that their perioperative antithrombotic therapy protocol was significantly different for others, although publication bias might have occurred.

We agree with the conclusion of Brekenfeld et al1 that controlled randomized trials to prove its safety and efficacy in a larger number of patients are needed.

Disclosures

None.

Chengbo Dai, MD, PhD
Shuo Wang, MD
Xiong Zhang, MD, PhD
Guixian Ma, MD
Department of Neurology
Guangdong General Hospital
and Guangdong Academy of Medical Sciences
Guangdong, China

Shuguang Lin, MD, PhD
Department of Cardiology
Guangdong Cardiovascular Institute
Guangdong General Hospital
and Guangdong Academy of Medical Sciences
Guangdong, China

Lijuan Wang, MD, PhD
Department of Neurology
Guangdong General Hospital
and Guangdong Academy of Medical Sciences
Guangdong, China


(Stroke. 2009;40:e503.)
© 2009 American Heart Association, Inc.

Stroke is available at http://stroke.ahajournals.org

DOI: 10.1161/STROKEAHA.109.552810

e503
Stent Placement in Acute Cerebral Artery Occlusion
Chengbo Dai, Shuo Wang, Xiong Zhang, Guixian Ma, Shuguang Lin and Lijuan Wang

Stroke. 2009;40:e503; originally published online May 14, 2009;
doi: 10.1161/STROKEAHA.109.552810
Stroke is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2009 American Heart Association, Inc. All rights reserved.
Print ISSN: 0039-2499. Online ISSN: 1524-4628

The online version of this article, along with updated information and services, is located on the
World Wide Web at:
http://stroke.ahajournals.org/content/40/7/e503

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in Stroke can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to Stroke is online at:
http://stroke.ahajournals.org//subscriptions/