Letters to the Editor

Stroke welcomes Letters to the Editor and will publish them, if suitable, as space permits. They should not exceed 750 words (including references) and may be subject to editing or abridgment. Please submit letters in duplicate, typed double-spaced. Include a fax number for the corresponding author and a completed copyright transfer agreement form (available online at http://stroke.ahajournals.org and http://submit-stroke.ahajournals.org).

Response to Letter by Keller and Muroi

Response:

We thank Drs Keller and Muroi for their interest in our article and their comments.1 We share the same disappointment with the negative result of intravenous magnesium sulfate for aneurysmal subarachnoid hemorrhage and the excitement in improvement of clinical outcome brought by specialized neurocritical care in recent years.2,3

The design of intravenous magnesium sulfate for aneurysmal subarachnoid hemorrhage involved adding prophylactic hypermagnesemic treatment to standard care and to assess its efficacy. The aim of randomization was to balance the difference over time. Although more clinical data on neurocritical care of aneurysmal subarachnoid hemorrhage have become available in recent years, uncertainties exist in the optimal parameters to pursue. Take hyperglycemia as an example: although meta-analysis has shown that hyperglycemia is associated with poor outcome,4 a randomized trial and another cohort study fail to show that aggressive hyperglycemia management per se improves clinical outcome.5,6 In fact, tight control in blood glucose may be associated with brain energy metabolic crisis and lactate-to-pyruvate ratio elevation and unfavorable outcome in subarachnoid hemorrhage patients.7,8 There is certainly a need for more clinical studies to define the optimal parameters to pursue in the future.

Hypocalcemia, especially when mild to moderate, was not associated with delayed cerebral ischemia or poor outcome in multivariable analysis.9,10 Although we predefined adverse hypertensive episodes as systolic blood pressure <90 mm Hg requiring inotropic support, neurosurgical centers followed the guideline of cerebral perfusion pressure >70 mm Hg in aneurysmal subarachnoid hemorrhage patients with intracranial pressure monitors available. Inotropic support is frequently required in sedated aneurysmal subarachnoid hemorrhage patients with increased intracranial pressure, and hypotension certainly should not be left untreated. The hypothesis that the mild hypertensive effect of intravenous magnesium sulfate infusion negates the beneficial effects of intravenous magnesium sulfate infusion remains speculative. Last, our post hoc analysis of plasma magnesium concentrations did not support the hypothesis that further increasing targeted plasma magnesium concentration, hence increasing cerebrospinal and cerebral magnesium concentrations, might improve clinical outcome.11

Disclosures

None.

Matthew T.V. Chan, FANZCA
Tony Ging, MD
Department of Anesthesia and Intensive Care
Prince of Wales Hospital
The Chinese University of Hong Kong
Hong Kong, China

Ronald Boet, FCSSA
Surgical Services
St. George’s Hospital
Christchurch, New Zealand

Benny C.Y. Zee, PhD
School of Public Health
Prince of Wales Hospital
The Chinese University of Hong Kong
Hong Kong, China


(Stroke. 2010;41:e577.)
© 2010 American Heart Association, Inc.

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

DOI: 10.1161/STROKEAHA.110.591198

e577
Respon to Letter by Keller and Muroi
George K.C. Wong, Stephanie C.P. Ng, Wai S. Poon, Matthew T.V. Chan, Tony Ging, Ronald Boet and Benny C.Y. Zee

*Stroke.* 2010;41:e577; originally published online August 19, 2010;
doi: 10.1161/STROKEAHA.110.591198

*Stroke* is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2010 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/41/10/e577

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/