
To the Editor:
In the last few years, evidence from experimental and clinical studies have supported the hypothesis that angiotensin II might exert detrimental effects beyond the mechanical damage of high blood pressure (BP) and be a risk factor for ischemic stroke independent of its effect on BP. Thus, data from the HOPE and LIFE studies suggested that ACE inhibitors and angiotensin receptors blockers (ARB) may have protective effects for stroke that are independent of BP reduction. However, in view of recent published trials, data on the particular benefits of these specific antihypertensive agents for secondary stroke prevention are largely lacking. First, the Perindopril Protection against Recurrent Stroke Study (PROGRESS) trial provided no evidence of perindopril alone for preventing recurrent stroke. In fact, only the subgroup receiving both perindopril in combination with indapamide had reduced stroke recurrence. Furthermore, there is no evidence to date that using perindopril in combination with indapamide is more beneficial than using indapamide alone.

Thus, the BP reduction with indapamide alone in the Poststroke Antihypertensive Treatment Study (PATS) trial was only 5/2 mm Hg, similar to the reduction seen with perindopril alone in the PROGRESS, and, on the contrary, significantly associated with stroke reduction. In addition, a systematic review on BP reduction in secondary prevention of stroke showed that calcium channel blockers were found to be better than ACE inhibitors in stroke prevention.

Recently, the Prevention Regimen for Effectively Avoiding Second Strokes (PROFESS) trial, a multicenter trial involving more than 20,000 patients, has shown that temsiladen initiated soon after ischemic stroke and continued for 2.5 years did not significantly lower the rate of recurrent stroke or major cardiovascular events against placebo. This trial has important lessons for clinical practice and also illustrates that the extrapolation of the benefits of these drugs to the prevention of vascular recurrences after stroke may be inappropriate.

Therefore, currently the question of whether agents that block the rennin–angiotensin system offer additional benefits independent of their effects on BP in patients with stroke seems to be a matter of faith.

Disclosures
None.

Luis Castilla-Guerra, MD, PhD
Department of Internal Medicine
Hospital de Osuna
Seville, Spain

María del Carmen Fernández-Moreno, MD
Department of Neurology
Hospital de Valme
Seville, Spain

Maria Dolores Jiménez-Hernández, MD
Department of Neurology
Hospital Virgen del Rocio
Seville, Spain

Luis Castilla-Guerra, María del Carmen Fernández-Moreno and Maria Dolores Jiménez-Hernandez

*Stroke*. 2009;40:e75; originally published online January 29, 2009; doi: 10.1161/STROKEAHA.108.537639

*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/40/3/e75

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/