
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 temsirolimus 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 renin–angiotensin system offer additional benefits independent of their effects on BP in patients with stroke seems to be a matter of faith.

Disclosures

None.

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Blockage of the Renin-Angiotensin System in the Secondary Prevention of Stroke:
Beneficial Effects Beyond Blood Pressure Reduction?
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