AT1 Receptor Blockers for Cognition Decline After Cardiac Surgery?

To the Editor:

We read with interest the review article on stroke and encephalopathy after cardiac surgery1 and the related editorial.2 We agree that assessing these complications provides a unique clinical opportunity for evaluating preventive strategies because patients at higher risk can be identified before surgery. We would like to add to the list of potential cerebroprotective agents proposed (gangliosides, glutamate receptor antagonists, antioxidants) the angiotensin AT1 receptor blockers (AT1RB).

Both angiotensin receptor blockers and angiotensin-converting enzyme inhibitors are widely used in cardiac patients before surgery and are usually resumed after transient discontinuation. Although their cardiac protective effects have been proven globally comparable (VALIANT3) their cerebroprotective effect (regarding both stroke and cognitive dysfunction) may be quite different. Indeed, the relative risk of stroke with angiotensin-converting enzyme inhibitors therapy compared with dihydropyridines may stimulate renin secretion only by activating the sympathetic nervous system with variable intensity.8,9

Dropyridines may stimulate renin secretion only by activating the sympathetic nervous system with variable intensity.8,9 Hence, their cerebroprotective effect (regarding both stroke and cognitive dysfunction) may be quite different. Indeed, the relative risk of stroke with angiotensin-converting enzyme inhibitors therapy compared with dihydropyridines may stimulate renin secretion only by activating the sympathetic nervous system with variable intensity.8,9

This superiority of the AT1RB over the dihydropyridine calcium antagonists in stroke prevention may be explained by the fact that AT1RBs, by blocking the angiotensin II–mediated suppression of renin secretion, are more powerful stimulators of renin secretion and therefore of angiotensin II formation than are calcium-antagonists. This has been confirmed in a crossover study in hypertensive patients.7 Long-acting dihydropyridines and short-acting nondihydropyridines may stimulate renin secretion only by activating the sympathetic nervous system with variable intensity.8,9

Furthermore, valsartan and losartan have been shown to improve cognitive function when compared with enalapril10 and β-blockers.11 This may be explained by AT1RB-induced suppression of infarction.12,13 Because in rats intoxicated by scopolamine 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 (published in every issue).

Disclosures

None.

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Letters to the Editor

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