Natriuretic Peptide: A Probable Culprit in Prevention of Primary Cardiovascular Diseases Using β-Blockers

To the Editor:

This letter refers to “The Value of N-Terminal Pro-B-Type Natriuretic Peptide in Determining Antihypertensive Benefit: Observations From the Anglo-Scandinavian Cardiac Outcomes Trial (ASCOT)” by Welsh et al.1

The 2014 evidence-based guideline for the management of high blood pressure in adults from the Eighth Joint National Committee (JNC 8)2 did not recommend β-blockers for the initial treatment of hypertension, because a randomized controlled trial3 failed to find a reduced incidence of cardiovascular diseases in patients who received treatment based on β-blockers than angiotensin-converting enzyme inhibitors. However, the reason why β-blockers gain fewer reduction of cardiovascular disease incidence remains unclear. Welsh et al1 found increased N-terminal pro-B-type natriuretic peptide after treatment with a β-blocker atenolol but reduced N-terminal pro-B-type natriuretic peptide after treatment with amlodipine, a calcium channel blocker. It has also been reported that N-terminal pro-B-type natriuretic peptide can be attenuated by treatment with angiotensin receptor blockers4 and angiotensin-converting enzyme inhibitors.5 Because N-terminal pro-B-type natriuretic peptide is a risk factor for cardiovascular diseases, these findings indicate that natriuretic peptide may be the main culprit inducing a poor benefit from β-blockers in preventing cardiovascular disease events.

Disclosures

None.

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