News and Views From the Literature

Coronary Heart Disease

β-Blocker Therapy

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β-Blocker Therapy and Cardiac Events Among Patients With Newly Diagnosed Coronary Heart Disease

Andersson C, Shilane D, Go AS, et al.
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β-Blockers have been found to reduce cardiovascular events in patients with a history of recent myocardial infarction (MI) and left ventricular (LV) systolic dysfunction based on a robust base of clinical trial data. This has led to extrapolating the use of β-blockers to less-studied patient cohorts including hypertension and stable ischemic heart disease, and for perioperative ischemia prophylaxis.

Short of the use in patients with recent MI and LV dysfunction, enthusiasm for its use in those less-studied patient cohorts has waned as more recent clinical trial data accumulate. The 2012 Guideline for the diagnosis and management of patients with stable ischemic heart disease gives a class I (level of evidence B) grade for β-blocker use in all patients with normal LV function after an MI or acute coronary syndrome for 3 years.[1] β-blockers receive a class IIb recommendation for use in chronic therapy for "all other patients with coronary or other vascular disease based only on a C level of evidence and receive a class I recommendation to be described as initial therapy for the relief of symptoms in patients with stable ischemic heart disease (SIHD) despite the acknowledgment that the three classes seem to be equally efficacious in treating angina."

Andersson and colleagues have evaluated the utility of β-blocker therapy in patients with newly diagnosed coronary heart disease. Accessing the electronic health records from Kaiser Permanente Northern California, they included all hospitalized patients who were age 30 years who had an initial diagnosis of coronary heart disease; this included 26,793 patients presenting with either ST-elevation MI, non–ST-elevation MI, unstable angina, or those who underwent a coronary revascularization. β-blocker use was associated with a hazard ratio (HR) for death of 0.90 (95% confidence limit [CL], 0.84-0.96) and 0.92 (95% CL, 0.87-0.97) for death or MI. When evaluating patients with no prior MI, research found that the HR for death was 1.02 (95% CL, 0.91-1.15) and death or MI was 1.03 (95% CL, 0.93-1.13) (Figure 1).

The observational study from patients in the Reduction of Atherothrombosis for Continued Health (REACH) registry of 44,708 patients with coronary artery disease

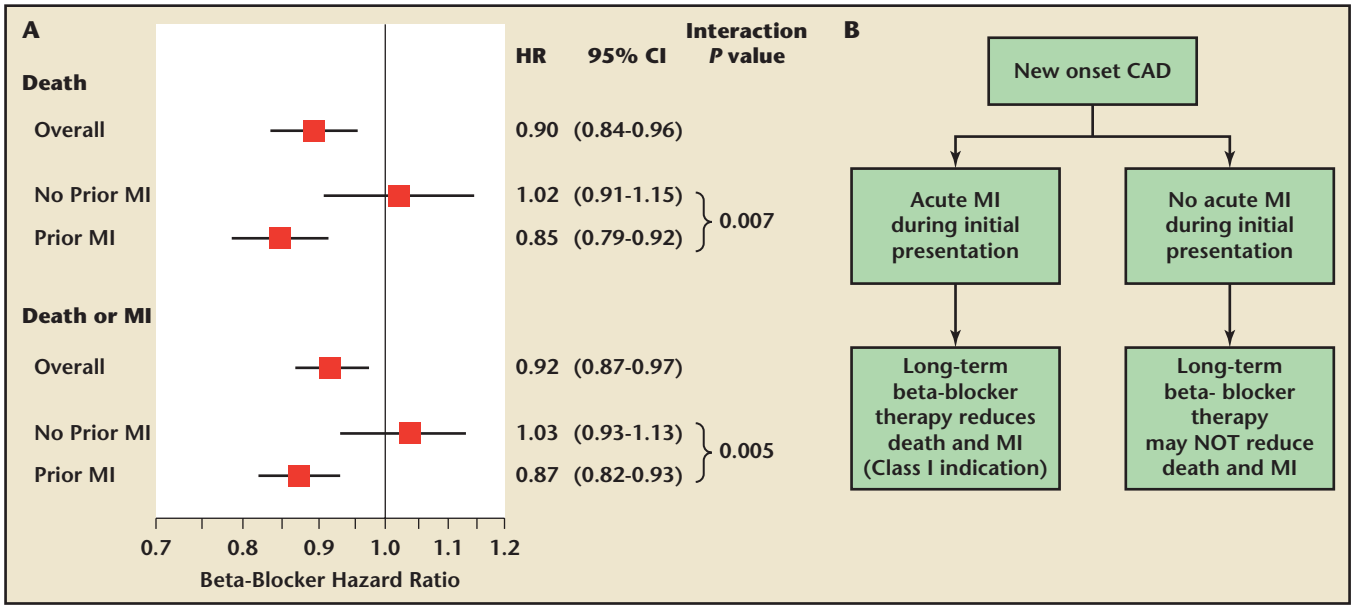

Figure 1. β-Blocker use and events. **(A)** Association of β-blocker use with cardiac events, overall and according to presence or absence of a prior MI. **(B)** Implications of study findings. CAD, coronary artery disease; CL, confidence interval; HR, hazard ratio; MI, myocardial infarction. Reprinted with permission from CardioSource.

risk factors only, known prior heart attack, or known coronary artery disease without heart attack, found the use of β-blockers was not associated with a lower risk of a composite of cardiovascular events that included cardiovascular death, nonfatal heart attack, or nonfatal stroke.[2] These findings are consistent with the findings of Andersson and colleagues.

These findings appear to place β-blockers in no greater a position to treat patients with chronic stable ischemic heart disease without a history of MI and/or LV dysfunction than alternatives including ranolazine, nitrates, and calcium channel blockers. It would also seem to support the concept of individualizing care by taking into account comorbidities, tolerability, and drug-drug interaction. The most recent societal guidelines on SIHD state that "β-blockers be prescribed as initial therapy for relief of symptoms in patients with SIHD" with a B level of evidence.[2] Perhaps it is time for guideline writers to reconsider the level of support they give to β-blockers in these patients ahead of the alternatives. ■

References

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2. Bangalore S, Steg G, Deedwania P, et al; REACH Registry Investigators. B-Blocker use and clinical outcomes in stable outpatients with and without coronary artery disease. *JAMA*. 2012;308:1340-1349.