

Editorial



Role of β -Blockers in Chronic Coronary Artery Disease Management in the Percutaneous Coronary Intervention Era: Good Symptom Control or Something More?

Ji Woong Roh , MD, PhD, and Yongcheol Kim , MD, PhD

Division of Cardiology, Department of Internal Medicine, Yonsei University College of Medicine and Cardiovascular Center, Yongin Severance Hospital, Yongin, Korea



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Correspondence to

Yongcheol Kim, MD, PhD, FACC, FESC, FAPSC
Division of Cardiology, Department of Internal Medicine, Yonsei University College of Medicine and Cardiovascular Center, Yongin Severance Hospital, 363, Dongbaekjukjeon-daero, Giheung-gu, Yongin 16995, Korea.
Email: Yongcheol@yuhs.ac

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ORCID iDs

Ji Woong Roh 
<https://orcid.org/0000-0003-0895-5146>
Yongcheol Kim 
<https://orcid.org/0000-0001-5568-4161>

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β -blockers provide survival benefits to patients with myocardial infarction (MI) or heart failure with reduced ejection fraction and effectively reduce the mortality and/or incidence of cardiovascular events.¹⁻⁴⁾ However, there is no definite evidence of survival benefits of β -blockers in chronic coronary artery disease (CAD). Nevertheless, β -blockers are recommended as Class IA treatment on the current chronic CAD guidelines for effective symptom control mediated by a reduction in the myocardial oxygen demand with left ventricular wall stress through heart rate and myocardial contractility reduction.⁵⁾ Regarding the indications for revascularization in patients with chronic CAD, the persistence of symptoms despite optimal pharmacotherapy and significant CAD is confirmed by anatomical and/or functional assessment.⁶⁾ However, only a few observational studies have assessed the clinical benefits of β -blockers in patients with chronic CAD undergoing percutaneous coronary intervention (PCI).⁷⁾⁸⁾

Park et al.⁹⁾ demonstrated that the β -blockers were not associated with outcome improvement, including mortality, in patients with chronic CAD undergoing PCI. Even different doses and types of β -blockers showed no significant differences in the outcomes, including mortality. However, in patients with previous MI, β -blockers provided benefits of mortality reduction in that study. The strength of their study was that patients who were maintained on β -blockers after discharge were included and their data were analyzed according to the different doses and types of β -blockers during the study follow-up. These meticulous efforts could be the basis for the evaluation of the clinical benefit of continuous β -blocker administration in patients with chronic CAD undergoing PCI, not to whether they received β -blockers at specific time-points, such as at discharge or immediately after PCI. Moreover, a subgroup analysis of this study showed that β -blockers could provide the clinical benefits of reducing mortality in patients with previous MI with or without revascularization. Although the observational study had inherent limitations, its results suggest that β -blockers should be prescribed for chronic CAD patients with prior MI with or without revascularization for survival benefits, not just for symptom control.

Conflict of Interest

The authors have no financial conflicts of interest.

Data Sharing Statement

The data generated in this study is available from the corresponding author upon reasonable request.

Author Contributions

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However, there are no data on the role of symptom control by β -blockers in patients with chronic CAD in the current study. Nonetheless, β -blockers are highly effective in reducing symptoms of angina, improving the exercise capacity, and diminishing the requirement for sublingual nitroglycerin in chronic CAD, regardless of PCI.¹⁰ Therefore, β -blockers should be prescribed to patients with chronic CAD undergoing PCI who require control of heart rate and symptoms regardless of previous MI or revascularization. In addition, β -blockers are recommended in patients with heart failure with reduced ejection fraction (<40%), although this study did not show the clinical benefits of β -blockers in those patients. Therefore, this suggests a need for conducting randomized control trials that accurately evaluate whether β -blockers provide any benefit in chronic CAD in PCI era.

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