

3. Barrabés JA, Bardají A, Jiménez-Candil J, del Nogal Sáez F, Bodí V, Basterra N, et al. Pronóstico y manejo del síndrome coronario agudo en España en 2012: estudio DIOCLES. *Rev Esp Cardiol.* 2015;68:98–106.
4. Bangalore S, Makani H, Radford M, Thakur K, Toklu B, Katz SD, et al. Clinical outcomes with beta-blockers for myocardial infarction: a meta-analysis of randomized trials. *Am J Med.* 2014;127:939–53.
5. Smith Jr SC, Benjamin EJ, Bonow RO, Braun LT, Creager MA, Franklin BA, et al. AHA/ACC Secondary Prevention and Risk Reduction Therapy for Patients With Coronary and Other Atherosclerotic Vascular Disease: 2011 update: a guideline from the American Heart Association and American College of Cardiology Foundation. *Circulation.* 2011;124:2458–73.
6. Bangalore S, Steg G, Deedwania P, Crowley K, Eagle KA, Goto S, et al. β -Blocker use and clinical outcomes in stable outpatients with and without coronary artery disease. *JAMA.* 2012;308:1340–9.
7. Ferreira-González I, Permanyer-Miralda G, Marrugat J, Heras M, Cuñat J, Civeira E, et al. Estudio MASCARA (Manejo del Síndrome Coronario Agudo. Registro Actualizado). Resultados globales. *Rev Esp Cardiol.* 2008;61:803–16.
8. Cordero A, Bertomeu-González V, Mazón P, Moreno-Arribas J, Fácila L, Bueno H, et al. Differential effect of β -blockers for heart rate control in coronary artery disease. *Clin Cardiol.* 2011;34:748–54.

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Beta-blocker Use After an Acute Coronary Syndrome. Which one, in Whom, and for How Long? Response



Tras un síndrome coronario agudo, ¿qué bloqueador beta se debería dar, a quién y cuánto tiempo? Respuesta

To the Editor,

We would like to thank Cordero et al. for their comments, because they communicated certain doubts about the compactness of our work,¹ offering the opportunity to clarify them now.

Firstly, the context of stable coronary artery disease is different from acute coronary syndrome. Although they are 2 different stages of the same disease, the clinical and therapeutic implications are different, and therefore the results from one setting cannot be generalised to the other.

Secondly, in the setting of acute coronary syndrome, the time when beta-blockers are introduced and their route of administration must be differentiated. The use of intravenous beta-blockers in the hyperacute phase is a matter of question, particularly for patients with haemodynamic instability. Therefore the meta-analysis² referred to in the letter from Cordero et al. must be interpreted with caution, because while it is true that no mortality benefit was found with beta-blockers, this was based on a meta-analysis in which more than 90% of patients were from the COMMIT clinical trial (effect of intravenous metoprolol in the early phase).

Thirdly, based on recent evidence from the era of percutaneous coronary intervention, with the exception of the data from the J-Cypher registry in less than 1000 patients,³ other clinical trials that evaluated the prescription of oral beta blockers on discharge from hospital after acute coronary syndrome have demonstrated a prognostic benefit in total mortality with this medication, including in the subgroup of patients with preserved left ventricular systolic function.^{4–8}

Lastly, we must correct a small error in the cited rate of intervention from the DIOCLES registry⁹: far from the 81% that Cordero et al. referred to, it was 65.6% (60.7% percutaneous coronary intervention and 4.9% aortocoronary revascularisation surgery), figures which are even lower than the CardioCHUS registry (69.7% percutaneous coronary intervention and 4.6% aortocoronary revascularisation surgery), which, if anything, reinforces our results even more.

Therefore, we communicate our defence of the use, unless contraindicated, of oral beta-blockers (in particular carvedilol, bisoprolol, and metoprolol) after acute coronary syndrome in all patients, including those with preserved left ventricular systolic

function, knowing that in this group the evidence is limited to observational studies and propensity score analysis.

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REFERENCES

1. Raposeiras-Roubín S, Abu-Assi E, Redondo-Diéguez A, González-Ferreiro R, López-López A, Bouzas-Cruz N, et al. ¿En la era actual existe beneficio pronóstico del tratamiento con bloqueadores beta tras un síndrome coronario agudo con función sistólica conservada? *Rev Esp Cardiol.* 2015;68:585–91.
2. Bangalore S, Makani H, Radford M, Thakur K, Toklu B, Katz SD, et al. Clinical outcomes with β -blockers for myocardial infarction: a meta-analysis of randomized trials. *Am J Med.* 2014;127:939–53.
3. Ozasa N, Kimura T, Morimoto T, Hou H, Tamura T, Shizuta S, et al. Lack of effect of oral beta-blocker therapy at discharge on long-term clinical outcomes of ST-segment elevation acute myocardial infarction after primary percutaneous coronary intervention. *Am J Cardiol.* 2010;106:1225–33.
4. Choo EH, Chang K, Ahn Y, Jeon DS, Lee JM, Kim DB, et al. Benefit of β -blocker treatment for patients with acute myocardial infarction and preserved systolic function after percutaneous coronary intervention. *Heart.* 2014;100:492–9.
5. Konishi H, Miyauchi K, Kasai T, Tsuboi S, Ogita M, Naito R, et al. Long-term effect of β -blocker in ST-segment elevation myocardial infarction in patients with preserved left ventricular systolic function: a propensity analysis. *Heart Vessels.* 2015 Jan 9 [Epub ahead of print].
6. Yang JH, Hahn JY, Song YB, Choi SH, Choi JH, Lee SH, et al. Association of beta-blocker therapy at discharge with clinical outcomes in patients with ST-segment elevation myocardial infarction undergoing primary percutaneous coronary intervention. *JACC Cardiovasc Interv.* 2014;7:592–601.
7. Nakatani D, Sakata Y, Suna S, Usami M, Matsumoto S, Shimizu M, et al. Impact of beta blockade therapy on long-term mortality after ST-segment elevation acute myocardial infarction in the percutaneous coronary intervention era. *Am J Cardiol.* 2013;111:457–64.
8. Hioki H, Motoki H, Izawa A, Kashima Y, Miura T, Ebisawa S, et al. Impact of oral beta-blocker therapy on mortality after primary percutaneous coronary intervention for Killip class 1 myocardial infarction. *Heart Vessels.* 2015 Apr 12 [Epub ahead of print].
9. Barrabés JA, Bardají A, Jiménez-Candil J, Del Nogal Sáez F, Bodí V, Basterra N, et al. Pronóstico y manejo del síndrome coronario agudo en España en 2012: estudio DIOCLES. *Rev Esp Cardiol.* 2015;68:98–106.

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