addition to those variables already entered in the model shown in
the original manuscript. Importantly, in that model, the low
education level (illiterate or primary) remained independently
associated with higher mortality (hazard ratio = 1.16, 95% con
dence interval, 1.02–1.34; P = .03). Furthermore, the use of
aldosterone antagonists was inversely associated with mortality
(hazard ratio = 0.74, 95% confidence interval, 0.57–0.96; P = .02).

In conclusion, our study shows that a higher educational level,
as a marker of higher socioeconomic status, is associated with
a more favorable prognosis for long-term mortality after acute
myocardial infarction, even after a carefully adjusted multivariable
model. The above-mentioned analyses further support our
previously reported findings.

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

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

To the Editor,

Having read the article by Raposeiras-Roubin et al., we feel that it
warrants a number of considerations, since beta-blockers (BB)
are the only drugs used in optimal medical therapy following acute
coronary syndrome (ACS) that are currently being questioned.
In their analysis of the long-term effect of BB therapy on ACS patients
with an ejection fraction > 50% at discharge, a subgroup of
patients without a clear indication for this treatment, the authors
found a 36% reduction in 5-year mortality.

At present, 3 points are considered to be central to BB therapy
following ACS. Firstly, although the use of BB has increased
exponentially over the past decade, a recent meta-analysis shows
that, in the reperfusion era, no benefit is observed with BB
therapy after ACS. Secondly, the guidelines for secondary
prevention issued by the American Heart Association and the
American College of Cardiology recommend the use of only those
BB—carvedilol, metoprolol, and bisoprolol—that have been shown
to improve survival after ACS; moreover, they recommend a
treatment duration of at least 3 years, and acknowledge that it
seems logical to prolong their use indefinitely, although there is no
available evidence in this regard. Thirdly, as these agents do not
appear to provide any benefit in terms of prognosis or recurrence
of major cardiovascular complications in patients with stable chronic
ischemic heart disease, the appropriate duration of treatment is
unknown.

In the DIAClean registry, 81% of the patients received BB at
discharge, more than 20% more than in the MASCARA registry
(67.8%). During the interval between these 2 registries, there was
also an increase in the frequency of revascularization, from 63% to
85%. However, in the study by Raposeiras-Roubin et al., the rate
of interventional procedures did not exceed 70%, possibly because
it includes patients admitted as long ago as 2003, corresponding to
a period prior to the MASCARA registry. On the other hand, none
of the publications mention which BB were administered. For the first
time, the 2011 guidelines for secondary prevention of
the American Heart Association and the American College of Cardiol-
yogy included the recommendation that only those agents that have
been found to improve survival be administered, given that some
of them have not been studied in the post-ACS context or have not
even been shown to have any beneficial effect, as is the case of
atenolol. A Spanish registry of patients with chronic ischemic
heart disease revealed that precisely those drugs recommended by
the American Heart Association and the American College of Cardiology are associated with good resting heart rate control, a
finding that has been directly correlated with an improved
prognosis.

Thus, we consider that the article provides solid and clinically
relevant evidence regarding the use of BB in patients with ACS,
although, in our setting, there continues to be an important lack of
knowledge as to which BB should be administered to which
patients and for how long after ACS.

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