Reviewer's report

Title: β-blockers after myocardial infarction and 1-year clinical outcome – a retrospective study

Version: 0 Date: 30 Jun 2019

Reviewer: Alessio Alogna

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Hagsund et al. retrospectively investigated the impact of beta-blockers after MI based on data from the Swedish national quality register for acute coronary care. They performed a comparison between patients discharged without and with betablockers, concluding that i) the most of the patients in the no-betablockers group was appropriately discharge without this class of drug ii) beta-blocker treatment was associated with fewer re-MI at 1 year, but did not impact on mortality.

Now, I believe in the role of observational studies as a powerful, intellectual hypothesis-generating tool, and I appreciate the idea of comparing two groups of patients from a solid, real-world national registry. In this direction, I found the data on the reasons for discharge without betablockers of interest. However, as stated by the authors themselves in the limitations of the study, the numbers in this retrospective study, especially considering the low event-rate, are far too exiguous to support any of the conclusions on the impact of the betablockers stated in the current version of the manuscript. Furthermore, without a propensity score-matching, it is hard to accept the current description of conclusions, having in mind the multitude of confounders playing a role in such heterogeneous population of patients. In this sense, I believe that this study would need a larger amount of patients, and/or a clear downgrading of the prognostic implication of the analysis.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
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Acceptable

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