Reviewer's report

Title: Is depression a real risk factor for acute myocardial infarction mortality? A retrospective cohort study

Version: 0 Date: 12 Feb 2019

Reviewer: Phillip Tully

Reviewer's report:

I fail to see what is controversial about the role of depression and AMI outcomes from the literature cited, much of it dating more than 10 years ago. In fact, the literature has generally moved on to pertinent issues such as depression screening, collaborative care and what works for whom.

The meta-analysis of pre and post MI depression should be read, and cited in the introduction. "The impact of premorbid and postmorbid depression onset on mortality and cardiac morbidity among patients with coronary heart disease: meta-analysis. Leung YW, Flora DB, Gravely S, Irvine J, Carney RM, Grace SL. Psychosom Med. 2012 Oct;74(8):786-801." This seems like essential reading for the authors to make claims about pre-existing depression.

And yet ultimately, the entire rationale should be revised, as this study essentially assesses antidepressants, and not depression. Nomenclature should be changed throughout accordingly referring to users of antidepressants. In doing so, the authors should be very clear about what codes were used. I cannot see N06B, N06C and N06D being very useful here.

Please provide descriptive data about what classes of antidepressants were used. If only antidepressants were assessed, these should be meaningfully grouped by class or pharmacological profile.

Please integrate more literature about antidepressants and adverse outcomes after MI, as opposed to that which refers to measured depression.

see Antidepressant Use by Class: Association with Major Adverse Cardiac Events in Patients with Coronary Artery Disease by Grace et al.

Minor
There is heavy use of acronyms making the study difficult to follow. For example PHD and HDR are uncommon acronyms and could be spelled out in full.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

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

Unable to assess

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
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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