Reviewer's report

Title: Vitamin D and subsequent all-age and premature mortality: a systematic review

Version: 1 Date: 6 April 2013

Reviewer: Goran Bjelakovic

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 Minor Essential Revisions

This systematic review is dealing with an interesting problem. Authors investigated whether the association between low concentrations of plasma 25-hydroxyvitamin D and overall mortality is age dependant. Methods are appropriate and well described. The manuscript adhere to the relevant standards for reporting and data deposition. Limitations are clearly stated. The title and abstract accurately present what has been found.

I have only minor suggestions for improvement.

Abstract

Authors should report that they searched databases until February 2012.

Search strategy

„A literature search was carried out on Ovid Medline, Embase, Web of Science and the Cochrane Library during January and February 2012.“ Instead „during January and February 2012“ I suggest „until February 2012“.

Discussion

Authors should discuss findings of Michaelsson et al study that both high and low concentrations of plasma 25-hydroxyvitamin D were associated with elevated risks of mortality. One should consider the possibility of a U-shaped, or J-shaped relation between vitamin D status and mortality risk. The influence of dietary habits, sun exposure, latitude on the globe, and sex of the participants should also be discussed.

Limitations of the study

Significant publication bias should also be mentioned.

Conclusion

Authors should mention that we have insufficient data to conclude that there is inverse association between low vitamin D status and overall mortality in younger adults. More observational studies with younger participants are needed to strenghten this conclusion.

Level of interest: An article of importance in its field

Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.