Reviewer’s report

Title: Effects of preventive use of compression stockings for elderly with chronic venous insufficiency and swollen legs: A systematic review and meta-analysis

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Reviewer: Astrid Stephan

Reviewer's report:

Many thanks for the opportunity to review this interesting manuscript. The manuscript with the title "Effects of preventive use of compression stockings for elderly with chronic venous insufficiency and swollen legs: A systematic review and meta-analysis" reports a systematic review, which aims to identify the effect of compression stockings for elderly people. Though the systematic review basically seems to be well reported and conducted due to state of the art, some aspects needs to be clarified or considered.

Fundamental questions:

1) A recent Cochrane Review (Nelson et al. 2014) is mentioned, and the author did not find any further studies conducted since this review, or any ongoing trials. Moreover, the findings of the Cochrane review were confirmed. Thus, it does not become clear what the added value of this systematic review is. This needs to be better explained.

2) What was the rationale to include only people 70 years or older? According to the flow chart, the authors excluded 17 studies due to population. Was this due to age restriction? Within the discussion section it is stated that effects revealed in a younger population may be transferred to elderly people as well (page 12, line 285-287). So it should be reasoned why an age-restriction was necessary in this review.

Minor, specific questions:

Abstract

It should be reported, which outcomes were investigated (primary and secondary), and "no findings" should be reported as well in the abstract.
Methods

Please start with a basic introduction of the methods applied. The registration of the protocol can be presorted later on, though it is the first bullet point in the PRISMA statement to be included in the methods, it does not read very well, I think.

Was any other inclusion criteria applied? Such as language restriction, type of intervention or intervention components (additional counseling) and way of intervention delivery, for example support from home care organizations?

Why was mobility chosen as a primary main outcome? The rationale does not become quite clear and there is no discussion about mobility in the context of venous insufficiency provided.

How were data collected across the included five studies? This may be of importance since you include studies lasting up to five years.

Results

Caption of figure 2 is lacking

It should to be reported whether compression was the only intervention applied or whether other intervention components, such as information or counseling, were provided.

Since only 5 studies were include, more details regarding participants (gender, co-morbidity) and the application of the intervention would be desirable.

What does this sentence mean: "The studies compared different classes of compression and used different standards. However, we defined classes according to the European standard." (line 173-174, on page 7)

Discussion

The discussion should also include limitations.

Conclusion

The conclusion needs to be specified since you only investigated elderly people. Maybe I did not understand correctly or missed something, but wasn't it the case that you included only studies investigating leg ulcer recurrence? Wouldn't it better to say that further evidence for effects on primary outcomes is lacking instead of scarce?
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.

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 recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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