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

Version: 0 Date: 05 Dec 2018

Reviewer: C. W. Fan

Reviewer's report:

BGTC-D-18-00707

Reviewer's comment

The authors conducted a systematic review and meta-analysis of the role of compression stockings for the secondary prevention of venous ulcers and symptoms of chronic venous insufficiency in older persons age 70 years and older.

Compression stockings were effective in preventing recurrence of venous ulcers. Overall findings showed that Grade 2 compression stocking was most effective; Grade 2 was superior to Grade 1 and non-inferior to Grade 3.

There was no study found reporting on the role of compression stockings reduce symptoms of venous insufficiency in 70+. Study by Jungbeck showed no difference between Grade 1 and Grade 2 compression stockings for symptoms reduction at 8 weeks. There was no long term effectiveness. At 5 years, 28%-42% of the patients were not wearing the prescribed stockings; the higher the grade, the higher the lack of adherence to wearing the stockings. This could account for the lack of efficacy (Nelson 2006)

Title: consider using "…secondary prevention of venous ulceration with compression stockings and symptoms of chronic venous insufficiency in older person …" in the title

Abstract

Please include the results of the symptoms of chronic venous insufficiency.

The thrombosis and mobility were included in methods but there was no mentioned of the findings of thrombosis and mobility in the results
Page 2, line 54, rephrase the sentence please, either state that "patients wearing Grade 3 compression stockings had lower recurrence risk compared with patients with stockings, (RR 0.46 etc)…” or "patients not wearing stockings were at higher recurrence risk than those wearing Grade 3 compression stockings (RR >1 …)

Introduction

Page 4, would it be useful to report compliance in the methods? The lack of efficacy long term may be due to decreased compliance

Methods

Page 4, would authors consider adding in a column on the compliance of compression stockings use if this is reported in the studies. Including a column on intention to treat vs per protocol as one infers effectiveness and the other efficacy.

Results

Page 8, for the table, in the last column, it might be useful to report actual % of recurrence as well as relative risk to give the readers an idea of the actual rates. For the last row, last column, please indicate if the study was significant, the reader found out from page 10 that there was no difference between Grade 1 or Grade 2 stockings. ( please include the findings of Jungbeck in the abstract.

Page 9. Is skin break lasting more than 4-6 weeks an accepted definition of leg ulcer?

Discussion

Page 11

Consider replacing "Swollen leg" with "symptoms of venous insufficiency".

Line 265 and 266 "uncertain". Rather than use uncertain, consider (line 265), a study has shown that stockings of higher compression grades (grade 3) were better than the medium grade (Grade 2). Line 265, you found a paper which stated that there was no difference in symptoms of Venous insufficiency in patients wearing Grade 1 or Grade 2 compression stockings. (you have found a paper - so you can quote it)

Page 12

Consider adding a sentence in the introduction, "… Carvalho and Al Shammeri reported that by wearing compression stockings patients under 70 years old found improvement in symptoms of venous insufficiency. The effectiveness in not known in the older population.
The compliance paragraph showed be part of the results. (table) then in the discussion, you can refer to how difficult it is to maintain compliance, so while compression stockings are efficacious, the patients will not wear them long term - perhaps consider a different way of preventing recurrence of leg ulcer. You described the challenges of applying compression stockings on page 13

**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.

Yes

**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:

Acceptable
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