Author’s response to reviews

Title: The effectiveness of non-surgical interventions for common plantar digital compressive neuropathy (Morton’s neuroma): a systematic review and meta-analysis

Authors:

Barry Matthews (bg.matthews@qut.edu.au)
Sheree Hurn (sheree.hurn@qut.edu.au)
Michael Harding (paragonpodiatry@iinet.net.au)
Rachel Henry (henryrachel69@hotmail.com)
Robert Ware (r.ware@griffith.edu.au)

Version: 2 Date: 12 Dec 2018

Author’s response to reviews:

Authors’ response to reviews

TITLE: The effectiveness of non-surgical interventions for common plantar digital compressive neuropathy (Morton's neuroma): a systematic review and meta-analysis

AUTHORS:

Barry Matthews (bg.matthews@qut.edu.au)
Sheree Hurn (sheree.hurn@qut.edu.au)
Michael Harding (paragonpodiatry@iinet.net.au)
Rachel Henry (henryrachel69@hotmail.com)
Robert Ware (r.ware@griffith.edu.au)

VERSION: 2 Date: 12 December 2018
Authors’ response to reviews:

We would like to thank the reviewers for their time and efforts in reviewing our revised manuscript. We have addressed the reviewers’ comments in full and provided a point by-point response to each suggestion for revision below. Line numbers refer to the revised manuscript with highlighted changes. Text/sentence revisions are highlighted in red.

REVIEWER 1:

General comments

The question posed by the authors is on a topic which I expect will be interest to readers of JFAR (and to an array of disciplines) and the article is generally well written. I have some comments/suggestions that require consideration. Please consider the ‘non-essential’ revisions simply as a ‘suggestion’ with action from the authors as optional.

Minor Essential Revisions

COMMENT 1

Title, abstract, and throughout the manuscript: The term ‘efficacy’ is normally reserved for findings obtained from RCTs. Given that many studies were from pre/post studies I think that ‘effectiveness’ is more appropriate for this systematic review. Please revise the title and content within the manuscript to reflect this. Please note that efficacy may be appropriate in some instances in the manuscript i.e. where the results have been exclusively derived from RCTs.

RESPONSE:

Thank you for your comment. The term efficacy has been replaced throughout the manuscript with effectiveness when not related to the findings of a RCT. Changes made, lines 2, 27.

COMMENT 2

Throughout the manuscript. Please change ‘data was’ to ‘data were’. As data is plural it should be written as ‘data were…’.
COMMENT 3

Numbers: I notice that there is some inconsistency regarding how numbers are presented. In general, it appears that you have used words for the numbers one through nine, but for larger numbers you have used the actual number i.e. 12. This is fine, but please ensure that you do this consistently. For example, in the abstract it states ‘7 studies’ and the later you use ‘two’. In this example I suggest you change ‘7’ to ‘seven’. Please check the entire manuscript.

RESPONSE:

Thank you for your comment. Changes made, lines 41, 186-187, 192-194.

COMMENT 4

Background 4, line 89: Spacing issue after reference [3].

RESPONSE:

Thank you for your comment. Space deleted, line 91.

COMMENT 5

Methods, line 126: change ‘levels’ to ‘level’.

RESPONSE:

Thank you for your comment. “s” deleted, line 128.

COMMENT 6
Study selection, line 153: Should this be the ‘fourth’ reviewer given 3 different people (BM, RH, & MH) have already screened the full texts? Please review this and correct/clarify as required.

RESPONSE:
Thank you for your comment. Third changed to fourth, line 156.

COMMENT 7
Risk of bias in individual studies, line 177: Should ‘quality index’ be ‘Quality Index’ as it’s the name of a tool? Please check and revise throughout the manuscript as necessary.

RESPONSE:
Thank you for your comment. Quality Index capitalised, lines 180, 182-183, 186, 191, 295, 603.

COMMENT 8
Summary measures and synthesis of results: Please make it absolutely clear that findings from RCTs were not synthesised with pre/post data via meta-analysis. My initial concern when reading this review was that this may be the case, and I would like to make it absolutely clear to the JFAR readership that the data from RCTs and pre/post studies were handled different and separate from each other.

RESPONSE:
Thank you for your comment. We have included the following sentence to clarify the data synthesis. “The data for the RCT meta-analysis only includes RCT data and the pre/post case series meta-analyses only includes pre/post case series data.,” lines 221-222.

COMMENT 9
Figure headings: Similar to comment (8), can you please make sure that the reader can read the heading of the Figures/forest plots and know that the studies within are either RCTs OR pre/post studies (and not both).
RESPONSE:

Thank you for your comment. The figure headings now identify that only RCTs are included in the RCT meta-analysis figure and only pre/post case series in the pre/post analysis, line 772, 785, 789.

COMMENT 10

Forest plots: At the bottom of the forest plots can you please label ‘favours pre-test’ and ‘favours post-post’ on the appropriate side of the plots.

RESPONSE:

Thank you for your comment. The forest plots have been labelled “favours pre-test” and “favours post-test”, Figures 3-6. Figure 7 has not been labelled as the success rate has a lower limit of 0.

COMMENT 11

Summary measures and synthesis of results, lines 225-228. An alternative to the traffic light system, and more widely used in systematic reviews, is a criteria developed by van Tulder et al (van Tulder M, Furlan A, Bombardier C, et al. Updated method guidelines for systematic reviews in the Cochrane collaboration back review group. Spine 2003;28:1290–9). In this criteria: Strong evidence=consistent findings among multiple studies including at least three high-quality studies; Moderate evidence=consistent findings among multiple trials, including at least three moderate-quality/high-quality studies or two high-quality studies; Limited evidence=consistent findings among multiple low-quality/ moderate-quality studies, or one high-quality study; 4. Very limited evidence=findings from one low-quality/moderate quality study. Please consider if the Tulder system is better than the traffic light system for your review.

If you can mount an argument that the traffic light system is a better, then I suggest you consider reworking this sentence to improve fluency. I suggest something along the lines of: ‘The figure and traffic light tool categorise interventions into three groups; (i) green to indicate an intervention with a high level of evidence (RCT or meta-analysis of RCTs) and a statistically significant reduction in pain, (ii) red to indicate an intervention with a high level of evidence (RCT or meta-analysis of RCTs) and no statistically significant reduction in pain, or (iii) amber for all interventions that don’t align with the green or red categories.’
RESPONSE:

Thank you for suggesting an alternative to the traffic light system. We developed a second figure using the van Tulder et al criteria and compared the two figures.

The van Tulder et al figure groups the nine interventions into one Moderate (Corticosteroid injections), four Limited (all non-invasive) and four No Evidence (all invasive except corticosteroid injections). We are concerned that the Van Tulder et al figure while identifying the “best” intervention gave no direction for the “next best” intervention/s to consider when a corticosteroid injection was not the “best” evidence-based medicine for an individual patient. We believe the traffic light figure provides more subtle separation between the interventions, considering most of the evidence found by this review was low/moderate quality. Ultimately, clinicians provide interventions for patients and through a shared decision-making model try to choose the “best” intervention for an individual patient. We believe the traffic light figure assists the clinician more than the van Tulder et al figure in achieving this goal.

We also believe the summary information provided by the van Tulder et al figure would be less helpful for researchers when considering the design of future RCTs than the detailed table and figures already included in the review.

Thank you also for your comment rewording the explanation of the traffic lights. We have replaced our wording with your more fluent wording, lines 230-235.

COMMENT 12

Line 302: Remove ‘inflamed nerve’ as this implies known pathophysiology.

RESPONSE:

Thank you for your comment. We have reworded the sentence to “Properly fitted footwear with a wide toe box, low heel and a metatarsal pad was assessed in two studies”, lines 316-317.
COMMENT 13

Line 303: ‘NUG’ needs to be spelt in full in the 1st instance. I see this is done later in the manuscript (line 332).

RESPONSE:

Thank you for your comment. The full and abbreviated versions have been reversed, lines 318, 346.

COMMENT 14

Lines 311-313: I suggest you remove (or temper) the proposed mechanism of action unless this is 100% established. This review is focussed on clinical outcomes so there is no need to explain the potential mechanism of action in the results section (as this is not a ‘result’).

RESPONSE:

Thank you for your comment. The sentence has been shortened to “One study investigated ESWT, which involves microsonic energy (shockwave) pulses delivered to the plantar forefoot”, lines 326-327.

COMMENT 15

Varus/valgus foot wedge: The intervention is well described here. I suggest that this language is used consistently throughout the manuscript (see table where the term ‘orthosis’ is used). I suggest avoiding the term ‘orthosis’ in this context due to the nature of the intervention.

RESPONSE:

Thank you for your comment. The term orthosis has been replaced with varus foot wedge or valgus wedge in Table 2 (line 597).
COMMENT 16

Results, Botox injection, lines 371-373: Provide results here as you have for the other interventions.

RESPONSE:

Thank you for your comment. The results are now included in the text, lines 386-387.

COMMENT 17

Discussion, lines 441-443: Please ensure this reads as a ‘proposed mechanism’, as it currently reads it seems factual.

RESPONSE:

Thank you for your comment. The sentence has been rewritten “A proposed pathological process involves the connective tissue becoming thickened and fibrotic in Morton’s neuroma [60] changing the protective tunnel into a nerve entrapment with ischemia [59]”, lines 455-457.

COMMENT 18

Discussion, lines 447-448: I suggest you avoid the term ‘abnormal’. Further, please consider rewording this sentence as, in additional to altering kinematics, foot orthoses can be used to alter plantar pressures, muscle activity, kinetics, etc.

RESPONSE:

Thank you for your comment. The term abnormal has been removed and the sentence reworded “The current understanding is that foot orthoses alter the magnitude, timing, and velocity of motion in the foot. In addition to altering kinematics, foot orthoses also alter plantar pressures, muscle activity and kinetics, reducing the stress on the tissues and the risk of further tissue damage [62-65].”, lines 502-505.
COMMENT 19

Discussion, line 509: I suggest you avoid the word ‘significant’ in a scientific paper unless referring to statistics. ‘Clinically meaningful’ may be a more appropriate alternative here?

RESPONSE:

Thank you for your comment. The term “significant” has been replaced with “meaningful”, line 524.

COMMENT 20

Discussion: In the final paragraph you point out that RCTs are needed. Is it worth briefly outlining the benefits of RCTs over pre/post studies? This will contextualise the studies included in this review and further strengthen the need for future RCTs. Here you could talk about the use of a control group and the benefits it can provide (accounts for placebo, Hawthorne effect, etc.).

RESPONSE:

Thank you for your comment. An additional sentence has been added in the discussion, “Using a randomised study design where an intervention group is compared with a control group allows researchers to measure the causal benefit of the intervention. That is, the effect of intervention beyond any placebo effect a sham treatment may have, or beyond any natural improvement with time, which cannot be determined in a pre/post case series.”, lines 536-540.

Non-essential

COMMENT 21

Background: The paragraphs are very long but this may be unavoidable. Please consider breaking these down into smaller paragraphs if possible.

RESPONSE:

Thank you for your comment. The first and last background paragraphs have both been split into two smaller paragraphs, lines 69/71, 97/99.
COMMENT 22

Background, line 85: this sentence is very long and may benefit from some commas, it could read as follows: ‘…intervention or, due to contraindications, are not suitable for surgery.’

RESPONSE:

Thank you for your comment. Your suggested commas have been added, line 87.