Reviewer’s report

Title: The comparative efficacy of angiosome-directed and indirect revascularisation strategies to aid healing of chronic foot wounds in patients with co-morbid diabetes mellitus and critical limb ischaemia: a literature review

Version: 0 Date: 14 Apr 2017

Reviewer: Jean Mooney

Reviewer’s report:

Thank for allowing me to review your manuscript: Comparing the efficacy of angiosome-directed and indirect revascularisations to optimise wound healing in patients with diabetes and critical limb ischaemia.

You have made a very thorough review of the literature, that is both in depth and current. You have stated clear criteria to justify the few papers that met your strict inclusion criteria. Your literature review identified 5 studies that fully met all inclusion criteria, and you have also included a wealth of associated material that supports your choices, and both justifies the rigour and explains your methodology. You introduce the reader to the concepts of ischaemic ulceration, the importance of revascularisation the lower limb / foot to achieve healing in chronic wounds and describe the concept of angiosomes, and use this to define your research question, i.e.: that a thorough review of the literature is necessary in order to reveal if there is sound evidence that would support the future routine inclusion of angiosome-directed intervention as part of vascularisation surgery to restore or improve arterial supply distal to the ankle in patients with co-morbid diabetes and critical lower limb ischaemia. You have drawn sensible and justified conclusions.

However, the main part of the review, i.e. the sections that describe 'findings and analysis' and 'discussion' is quite difficult to follow, and tends to mask your ultimate conclusions.

Could I suggest that you revise your text, in particular the 'findings and analysis' so that you separate 'findings' (that is results) from 'analysis (that is your discussion of what your 'findings' revealed).

* May I suggest that you rewrite the 'findings' as 5 additional tables of results, that is a summary table highlighting the main points within each of the 5 papers you reviewed. Each of these new tables would be tabulated in the same manner:

- 2 columns (C1: Characteristics; C2: Comments / critique of the characteristics noted in C1)
- 5 rows listing sub-section of the various characteristics you have noted (R1: Study population characteristics; R2: Intervention; R3: Outcome measure; R4: Completeness to follow-up; Methodological rigour; R5: Wound healing Rate)
I think that by this means that issues that need to be highlighted within the 'analysis' (i.e. the discussion) will become very clear to you, and thereby to the reader.

May I also request that you re-proofread your text, and in particular take a critical look at your cursive style, as this tends throughout to be rather 'wordy', is thus not straightforward, and at times would not necessarily be not be readily understood by the more generalist reader. This proof reading will also ensure that a few areas of statement ambiguity are clarified, and also redress the occasional lapses in use of past / present tense, correct any errors of punctuation, and remove the odd unnecessary word that has crept into the text.

I also wonder if the title might benefit from some amendment, so that the potential reader gains as much insight as possible about the content of the article (this title is your 'grabber' - if the title does not attract the reader, the article may not be read!).

Perhaps something like this could be considered:

* 'The comparative efficacy of angiosome-directed and indirect revascularisation techniques to aid healing of chronic foot wounds in patients with co-morbid diabetes mellitus and critical limb and foot ischaemia: a literature review'

In other words, I think it would be of benefit to include 'foot', 'lower limb' and literature review' within the title!

In a similar manner, I think that your abstract might read better if written along the lines of:

* 'A wide ranging search of published papers that reported angiosome-directed (AD) and indirect surgical (IS) revascularisation techniques in subjects with chronic foot wounds due to co-morbid diabetes mellitus (DM) and critical lower limb and/or foot ischaemia (CLI) revealed 5 studies that fulfilled all inclusion criteria. Critical analysis of their combined results, from an aggregated population (n = 280) indicated better wound healing outcomes in those subjects who had undergone AD interventions (p[AD] <0.001; p[IS] 0.04) and suggested an almost 2-fold increase in the probability of wound healing within 12 months for those who underwent AD revascularisation surgery (AD-healing rate 1.97, [95% CI 1.34 -2.9]). This analysis indicated that AD revascularisation techniques could be a very useful adjunct to standard IR revascularisation surgery, and could increase the likelihood of healing in chronic foot wounds in subjects with co-morbid DM and CLI. Further research to form an evidence base for this technique (AD + IS) is warranted.'

I think this would be not only a more succinct summary of your paper, but would better highlight your final 'selling point' - that the addition of AD-techniques makes a very real difference to healing times in DM patients with CLI.

This is a very interesting subject that is of importance to both the generalist podiatrist, the diabetes-specialist podiatrist, and the vascular specialist. Thank you for all your hard work so far.
Please try not to be offended by my comments - I know only too well how disappointing it is when you have worked so hard on a paper only to have it sent back for further revision. But I am certain that this paper is well worth some extra work on your part, as it could make a very fine article, and I will look forward to reading the next (and hopefully) final draft.

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