**Reviewer’s report**

**Title:** Does the application of Opsite Flexigrid occlude the oxygen saturation readings in healthy individuals using the moorVMS-OXY machine?

**Version:** 0  **Date:** 11 Mar 2020

**Reviewer:** Peta Tehan

**Reviewer's report:**

Thank you for the opportunity to review this paper which is a cross sectional within-subject repeated measures pilot study, aiming to determine if the application of opsite tape (one or two layers) impacts on tissue oxygenation readings using a moor device. This study was in 29 limbs from 27 participants. Overall I believe this research answers an important clinical question, and was executed well, however in its current form, requires some substantial revisions in order to make it easier for the reader.

**Abstract**

The abstract requires some revision in order to give a clear, concise account for the reader about the study. At present, there is a lot of information in the background, which I believe could be significantly condensed. The justification for the study should be made clearer. More information should be inserted into the methods and results, and the aims of the study should be clearly stated. The first sentence does not make sense, please review - "People who suffer have been diagnosed with peripheral arterial disease are susceptible to chronic wounds".

**Background**

There are multiple instances of unnecessary capitalisation, please amend (eg Ischemia does not need a capital letter, either does peripheral arterial disease, or diabetes mellitus)

More focus on the issues around measurement should be considered as this is the argument for the study and the overall justification for the study - is there a problem with cleaning of the probe? Why would we need to use tape? Make this clearer and this will add to the strength of the study

Measuring So2 at a wound bed creates risk factors? I believe you mean "can place the patient at risk"

The aims should be made clearer (ie spelt out)….i.e. Therefore the aims of this study were….  

**Method**

7 limbs were used to train efficient use of the MVO - what does this mean? I assume it means you were trialling the equipment and practicing the protocol? This needs to be clearly stated as such
Could you clearly state that the probe was on the plantar aspect of the 1st MTPJ? It is currently not clear and open to interpretation.

Line 35 - data was collected for 30 seconds per layer - do you mean each test condition (no tape, one layer, two layers)? Was there a rest period in between measures? Does your sensor include a heating probe? Information about data storage is not necessary in a manuscript. "To ensure reliability, repeatability and accuracy....." It is currently not clear what exactly was done here? Could you make this clearer? And what type of accuracy? The information about rest time and temperature controlled room requires a reference. Was the MVO protocol previously validated? This needs a reference.

Results

You refer to "this excel graph" - please refer to as Fig 1. "therefore the evidence shows" - may be better phrased as The results of this study demonstrate that...

Discussion

The discussion is very long with some information which could be condensed. The first paragraph should be reconsidered - Cleary summarise what you found, how it relates to previous research, why it is important, and clinically relevant, and then outline your limitations. I believe it is currently not clear to the reader and should be revised. Another limitation is the use of paired data - please consider. You mention "an equal gender ratio would be beneficial because the results would be more reliable" - reliable is not the right word - I think you mean representative?

Conclusion

So are you recommending the use of a single layer? What should the clinician do? Perhaps they need to clinically assess the situation and make a judgement based on your findings? - ie A single layer is going to impact on your measure, however only minutely and to the extent that it is not clinically significant? What does this study add? We now know that even one layer can impact on our measures.....should be considered carefully by the clinician taking into account the risks of use etc......

Ethics reference number should be added please

Level of interest

Please indicate how interesting you found the manuscript:

An article whose findings are important to those with closely related research interests
Quality of written English

Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

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