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: 03 Mar 2020

Reviewer: Carla D McArdle

Reviewer's report:

An interesting study which will have some value within the field of wound healing. Thank you for the opportunity to review this. I have some comments/queries which I have listed below.

1. It is unclear of the clinical applicability of MVO or equivalent and how often this is used routinely for treating chronic wounds? More information and evidence would be appropriate.

2. Briefly include details of the Fitzpatrick score.

3. It would be better to talk about participants rather than referring to limbs. On page 6 line 9 you refer to 'limbs included did not have history of anemia, PAD previous MI, heart attack etc.' in this instance it would be best to say participants as opposed to limbs.

4. Page 6, line 16 Twenty instead of 20 at the start of a sentence. If 20 participants were included (40 limbs) why do you mention in your discussion that 29 participants were included (5 male: 24 female). Please amend according to reflect exact participant numbers included.

5. Line 16 page 7, it is unclear what you mean by 800 samples were collected. More details on the exact process of how this was carried out.

6. The test protocol is relatively clear to follow

7. Was the experiment carried out in duplicate or triplicate? It would appear that the measurements over the 30 second period for no OF, OF and double OF includes all the data collected.

8. Within the study protocol, there is no details to describe the process of ensuring prevention of cross infection between healthy participants - what was the procedure for cleaning, sterilising the probe between participants when testing 'no layer of OF'. Could this procedure be used clinically already?

9. Results section line 5, all participants does not equal 29, information in the brackets should include limbs = 29 or n = number of participant, a limb isn't a participant.

10. Page 10 - line 11, no need to mention 29 twice in this sentence - remove one.
11. Page 11 - line 5, grammar

12. Figure 1 - is the purpose of this to display the average readings? I don't think this is the best way to present this as it would appear that these should be on a scale with the lines included for each limb measured.

13. Visually it looks like the figures always appear to move lower from 'no layer' through to two layers however on inspection of the numbers this is not always the case. Remove the use of individual lines for each limb unless this reflects the numbers present would be more appropriate.

14. Table 1 - it is unclear what the * means, I think the symbols need to align with the current key that you have.

15. Figure 2: important to include the min and max values, consider the use of box plots to display this more appropriately.

16. Discussion - why would there be a need to add double OF in the first instance? If OF causes skin stripping it would seem sensible to add this to the probe instead of attaching this to the skin, effectively this would be same without the skin attachment.

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