Author's response to reviews

Title:A comparison of various types and thicknesses of adhesive felt padding materials in the reduction of peak plantar pressure of the foot. A case study.

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Author's response to reviews: see over
Cover letter of concerns.

A comparison of various types and thicknesses of adhesive felt padding materials in the reduction of peak plantar pressure of the foot. A case study.

Comments to authors from Aoife Healey:

The majority of my comments have been adequately addressed however as is stated in my first review of the manuscript I strongly believe that further data analysis of the pressure data is required prior to publication. This case study promotes the use of felt padding and concludes that in shoe pressure measurements could be utilised to support the selection of appropriate felt padding material for a patient. I believe that these conclusions are not justified unless there is a full assessment of the peak plantar pressures at and on the periphery of the cut out on the felt padding. This is necessary to establish if the cut out is increasing peak pressures in the periphery, as potential harmful increases in peak pressures at the periphery of cut outs have been found in previous research (Paton and colleagues). While I acknowledge this will involve a significant amount of further analysis by the authors it will not require further data collection as the required data is within the current dataset. This further analysis will greatly improve the quality of your manuscript and the validity of your conclusions.

Response:

Thank you for the reviewer’s comments above about our article. We have inserted a section into the discussion about this as below:

Paton [5] demonstrated that cut outs in felt padding can increase pressures at the periphery of the cut out and this may be detrimental to a patient with for example poor tissue viability. Our study shows that the peak pressure with the padding, even at the edge of the cut-out, is lower than the peak pressure without padding over the second metatarsal head. Padding reduced peak pressure compared to the control and this included the periphery of the cut out as well as under all other metatarsal heads. This takes into account any undesirable shifting of high pressure from the padded area to the other metatarsal heads through, for instance, changes in gait resulting from the addition of the padding.

We have done this for the following reason:

We agree that there may be pressure increases at the edge of the cut-out, however, the reviewer may have missed the fact that the pressures we recorded were the peak pressures across the whole metatarsal heads area, which included the periphery of the padding cut-out area. This would therefore already include any possible cut-out edge effects. Our study shows that the peak pressure with the padding, even at the edge of the cut-out, is lower than the peak pressure without padding over the second metatarsal head. Padding reduced peak pressure compared to the control and this included the periphery of the cut out as well as under all other metatarsal heads. This also takes into account any undesirable shifting of high pressure from the padded area to the other metatarsal heads through, for instance, changes in gait resulting from the addition of the padding.
We hope this clarification will satisfy the reviewer that this has been taken account of in the study and is now featured in the discussion section of the article.

Yours sincerely

Dr Mike Curran.