Author’s response to reviews

Title: The TOPSHOCK study: Effectiveness of Radial Shockwave Therapy compared to Focused Shockwave Therapy for treating patellar tendinopathy. Design of a randomised controlled trial.

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Author’s response to reviews:

Dear Dr. Shipley,

Thank you for the reviewer report and the opportunity of revising our manuscript. Below we give a response to the concerns raised by the reviewer.

Concern 1:
Focused and radial shockwave will create some pain discomfort to the patients. So the energy given is dependent on the patients. But the intensity of energy will give the impact to the clinical result. But in your study, you used the universal energy to treat. This is different to the clinical practice. How do you think?

Because the energy intensity is a factor that is indeed thought to influence the effectiveness of ESWT we chose to keep this factor constant between subjects in order to be able to make a valid comparison between the focus and radial ESWT group which is the aim of our study. The use of patient guided energy intensities may influence the results because one method may be more painful compared to the other method, therefore leading to a difference in energy intensity level between groups.

We choose the present energy intensity based on current knowledge from literature. Rompe et al. (2008) used a similar intensity with favorable results. They did not report any drop-out because of the treatment being to painful (This explanation is now added (in red) under the heading ‘Focused shockwave therapy’ on page 8 of the manuscript).

Concern 2:
The soft tissue character will influence the energy feeling. If the soft tissue is thicker, the energy transmission will decline. How do you eliminate this effect?
The reviewer is correct that there might be some differences in energy transmission possible. However, the patellar tendon is a superficial tendon and differences between subjects in distance from the shockwave applicator to the tendinopathic tissue will be very small. Moreover, the aim of our study was to compare focus and radial ESWT and to our opinion by randomizing the subjects into the two groups, overall the groups should be comparable regarding the thickness of soft tissue and consequently regarding energy transmission, allowing a fair comparison of the effect of radial vs. focused ESWT.

We hope that we have been able to address the concerns of the reviewer and that you will consider the manuscript for publication.

On behalf of all co-authors,

Henk van der Worp