Reviewer's report

Title: The effect of running task on muscle shear elastic modulus of posterior lower leg

Version: 1 Date: 10 Oct 2017

Reviewer: Toshiyuki Kurihara

Reviewer's report:

Thank you for your revised manuscript. Almost of all the questions were appropriately answered. The quality of this manuscript has become good level for publication. A few comments or suggestions are followings,

#1
I agree that the purpose of this study was to investigate the effect of running on the shear elastic modulus of the posterior lower leg. And the results showed that the shear elastic moduli of FDL and TP muscles increased after a running task. But, I still wonder even if the results indicated the significant elevation of the elastic moduli after tasks, the difference of the pre and post values were slight and SD were large. Was it proper to connect the elevation of elastic moduli on this study to the occurrence of MTTS? Were the absolute values of the elastic moduli high enough to the substantial for inducing MTTS? How do the authors think prolonged and repetitive running protocols would reach to the threshold of abnormal elastic moduli? Although the author added the some sentences in the limitation of discussion, it did not come to the point of mine.

#2 Author answered,
> In addition, as per your suggestion, the absolute values for shear elastic modulus in this study were 2-6 times lower than those in the previous study (Saeki et al, 2017), because the ankle joint positions differed between the two studies; the shear elastic modulus was measured at 0° dorsiflexion of the ankle joint in this study and at 20° dorsiflexion of the ankle joint in the previous study. I agree with above explanation, but the recent papers on Journal of Foot and Ankle Research "The reliability of shear elastic modulus measurement of the ankle plantar flexion muscles is higher at dorsiflexed position of the ankle, Junya Saeki, Tome Ikezoe, Masatoshi Nakamura, Satoru Nishishita and Noriaki Ichihashi, 2017,10:18" showed that. So, it may be better to refer this paper. But, why the author chose the angle of the ankle at 0 deg?

#3
Topic sentence at the beginning of the third paragraph was about the methodology. But the contents of this paragraph were the remarkable results of the previous studies on shear elastic modulus. It is still difficult to understand smoothly. Too long paragraph? Too details? Is it possible to divide the paragraph into two?

#4 I am not happy with the revision. The pain itself does not influence to the elastic modulus.
Why the author did not collect the data of SOL and FHL, which were measured in Ref. #15?

SOL and FHL could not be measured due to machine performance and technical problems.

Author answered. But, please indicate the detail of the problems. What specification of the machine performance deterred the measurements?

And, if possible, please write clearly inside the manuscript the reason why the author did not measure SOL and FHL. Otherwise, the future readers will be questioning it.

Otherwise good.

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:

Needs some language corrections before being published

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