Reviewer's report

Title: Impact of leg lengthening on viscoelastic properties of deep fascia

Version: 1 Date: 9 June 2009

Reviewer: Robert Schleip

Reviewer's report:

I have read this paper with interest. The paper is well structured, it investigates an important area, and the applied investigation methods are appropriate for this context and questions. I would classify this article as important in its field. Before publication it nevertheless needs few modifications:

Major

1. A brief explanatory sentence is needed why the "load for pre-conditioning for the hysteretic tests was 200g for control fasciae; whereas the load was 400g for the experimental groups." Why did you choose to apply different loads for these?

2. The 4 experimental groups (A,B,C,D) to which the result sections refers should be briefly described in the method section. It is too cumbersome for readers having to look these up in previously published papers in order to understand e.g. the meaning of Figure 3. A least a very brief description is needed, what differentiates these 4 groups.

3. In the result section or discussion: indicate whether the majority of tissue ruptures occurred near the contact clamps (which could indicate a slight weakness of this contact clamping method) or also within other locations within the tissue.

4. If correctly understood, the load-displacement behaviour at 20% tibia distraction was more close to that of normal fascia than at 10% distraction. If true, this counter intuitive (and interesting!) result deserves being more clearly described in the result section as well as being addressed in the discussion section.

5. Figures 4 and 5: please include an indication for the variance of the data in each column (e.g. standard deviation, or similar).

Minor

6. Please include a description from which exact fascia layer and location the tissue samples were excerpted. Also how the long and short axis of the tissue samples were oriented in relation to the animal’s anatomy (probably with the long axis parallel to the limb axis).

7. Figure 1: the photograph of the Instron machine is not ideal, as the reader needs to either guess or have familiarity with these devices in order to understand how the tissues were positioned in relation to it. I suggest substituting
it with a technical drawing or photo that includes the tissue positioning. Alternatively the paper would even be improved (in its professional appearance and reader-friendliness) if the authors decided to leave that figure 1 out all together.

8. Figure 3: please indicate which curve represents which experimental group?

Discretionary Revision

9. As a recommendation only: if possible, describe not only the absolute force values in the result section (e.g. 2.69 mN), but also relate them as per square mmm cross sectional area (e.g. 0.35 mN/mm2). This way future usefulness of your data will be improved, as your force values can more easily compared with other measurements.

Quality of written English: Needs language correction by a native speaker before being published

Level of interest: An article of importance in its field

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests