Author’s response to reviews

Title: Stretching positions for the coracohumeral ligament: Strain measurement during passive motion using fresh/frozen cadaver shoulders

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Author’s response to reviews: see over
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Dr. Kai-ming Chan, Dr. Masahiro Kurosaka
Editor in Chief

*Sports Medicine, Arthroscopy, Rehabilitation, Therapy and Technology*

Dear Editor:

Manuscript ID: 8746465694178051
RE: Stretching positions for the coracohumeral ligament: Strain measurement during passive motion using fresh/frozen cadaver shoulders

Enclosed please find a first revised manuscript entitled “Stretching positions for the coracohumeral ligament: Strain measurement during passive motion using fresh/frozen cadaver shoulders” by Tomoki Izumi, Mitsuhiro Aoki, Yoshitaka Tanaka, Eiichi Uchiyama, Daisuke Suzuki, Shigenori Miyamoto and Mineko Fujimiya, which we would like to submit for publication as a paper in the *Sports Medicine, Arthroscopy, Rehabilitation, Therapy and Technology*.

We have attached the original manuscript (Microsoft Word format), 9 figures (JPEG format) and 2 Tables (JPEG format). We believe the manuscript has been written with the specifications of the Journal.

Your consideration of our manuscript for publication in the *Sports Medicine, Arthroscopy, Rehabilitation, Therapy and Technology* will be very much appreciated.

Yours sincerely,

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Response to the editor and reviewers

Underlines were written as revising points in the manuscript.
Reviewer number: 1
Specific comments:

What was the difference between the elevation and flexion or abduction?
The authors need to define the term more precisely.
→Following sentence was inserted into P10, L12.
→In this study, disarticulated scapula from the thorax was fixed on the jig in the frontal plane. Therefore, elevation was designated as glenohumeral abduction in the scapular plane, abduction was designated as glenohumeral abduction with 30 degrees horizontal abduction, and flexion was designated as glenohumeral abduction with 60 degrees horizontal adduction.

2. P21, L9: Figure 3
It was rather difficult for readers to understand what the authors wanted to show using the globe system. Please explain the meaning each line, number or arrow in these figures.
→Following sentence was inserted into P21, L5,
→In the globe system, the scapula plane was consistent with 0 degree of longitude. Then, the latitude of the globe system indicates elevation angle of the glenohumeral joint. The longitude of globe system indicates horizontal adduction or abduction angle of the glenohumeral joint. Arrows indicated direction of motion of the glenohumeral joint as external rotation. ER: External Rotation of the glenohumeral joint.

3. P21, L14: Figure 4
Please explain the meaning of arrows in the legends. The graph should also be explained in the legend.
→Following sentence was inserted into P21, L17
→This arrow is point of change in strain ratio from slack to tight in figure 4.
True strain of the joint capsule can be obtained from this point (provide two reference, i.e. Urayama and Izumi's papers).

4. Numbers of submitted files as figures 3 to 9 might be wrong. Please check
them again
→ We corrected numbering of figures.
Reviewer number: 2
Specific comments:

1. Page 7, line 11
Please spell the term “DVRT” and introduce the abbreviation.
→ Following sentence was inserted into Page 7, line 11.
→ DVRT (Differential Variable Reluctance Transducer, Microstrain, Williston, Vermont)

2. Page 13, line 2-7
I would suggest presenting the degrees in whole numbers by rounding off.
→ Page 13, line 2-7 was revised as follow.
→ The mean terminal range of passive external rotation at each glenohumeral angle as measured by the 3Space Fastrak system was as follows: 53.8±5.3°, 56.1±10.4°, 64.6±22.7° for 0°, 30°, 60° of elevation on the scapula plane, respectively; 58.4±16.0°, 59.9±15.0° for 30°, 60° of flexion, respectively; 55.2±13.4°, 57.4±9.8° for 30°, 60° of abduction, respectively; 51.2±6.8° for 30° of extension; 52.1±13.4° for 30° of extension with adduction.

3. Page 14, line 13
“inset”, please spell it correctly. “insert” seems to be more appropriate.
→ It was corrected as suggested.

4. Page 15, line 16-17
Coracohumeral ligament was obtained in external rotation with extension, and external rotation with extension???. Same phase was repeated. Please check them again.
→ It was revised as follow.
→ ...external rotation with extension, and external rotation with extension and adduction...
...external rotation with extension, and external rotation with extension plus adduction...

5. Page 16, line 13-15
I do not think that this paragraph is necessary.
→ It was removed as suggested.
6. Page 17, line 8-10
The conclusion should simply state the conclusion of the manuscript. The first sentence (line 8-10) does not seem to be necessary.
→ It was removed as suggested.