Author's response to reviews

Title: RFE based chondroplasty in wrist arthroscopy indicates high risk for chondrocytes especially for the bipolar application

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Author's response to reviews: see over
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Authors,

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Author’s response: see over

General

The hole manuscript had been revised by a native speaker.

The regulatiosn about using cadaver for studies had been added (See line 11-115).

Reviewer: Tamir Pritsch

Reviewer’s report:

minor essential revisions

The authors performed a cadaver study in order to assess the risk of performing radiofrequency chondroplasty in the wrist, and determine the difference in heat generation between monopolar and bipolar RFE.

Although the topic is important and the study was nicely designed and performed, the paper needs moderate revisions. In addition, there are multiple grammar and phrasing mistakes that need to be corrected. I outlined only some of the mistakes but the language of this paper needs significant improvement.

Page 2 line 33 – rephrase – instead of " to the estimated sealing effect. But...." Write, " to the estimated sealing effect, however...."
See Page 2 line 33 it was rephrased as suggested

Page 2 line 45 – rephrase "did not exceed 30 deg..." instead of did not reach more than...

See Page 2 line 45 it was rephrased as suggested

Page 2 line 48-50 – please rephrase the sentence – unclear and cumbersome

See Page 2 line 48 -49 the sentence is rephrased

Page 4 line 83 – please rephrase the sentence/ don’t start the sentence with" but".

See Page 4 line 83 the hole sentence is rephrased

In general don’t open your sentences with BUT. Please rephrase.

Page 5 line 96-98 – Please rephrase. Sentence is poorly written.

See noe page 5 line 130 -132 the sentence is rewritten

Page 5 line 106 please add a short explanation of why you hypothesize there is a difference between bipolar and monopolar RFE.

See Page 6 line 170 ....“due to the different energy distribution of the systems“

Page 8 – how did you come up with the protocol of applying radiofrequency for a strait 45s? What is it based on and what was the rational? Isn’t applying several increments of 15s clinically more reasonable in terms of avoiding the excessive temperature? This can be addressed in the discussion section as well (page11 lines 221-227).

We decided to use the application for 30s in the cut mode due to the experimental work of Lu et al. The benefit using RFE for a chondroplasty is the sealing effect. If you don’t reach this effect the method is properly not the wright one to say that RFE is superior in the outcome than mechanical debridement. At least this study is one of a lot more studies we have to perfom to find the right and save application algorithm for using RFE in the wrist.

See line 314-315 Noteworthy, a signicantly higher smoothing grade was present after 30s when compared to 20s applied

Page 9 line 174 how did you measure the distance from the RF-probe to perform the statistical analysis that was done.
See in the method section Page 8 line 231-232 „Afterwards, every wrist was dissected in order to validate correct placement of each TSE by measuring the distance to the location of the RF in millimeters“

**Reviewer:** yiftah beer

**Reviewer's report:**

1- Minor Essential Revisions- results chapter is not clear (Lines 166-204)

Some Corrections had been made in the results section for a better understanding. The most important thing is to defear between mean an maximum temperature.

2- Minor Essential Revisions- results in figures are clear, However, I suggest to indicate which result is significant on the chart as well, not only in results chapter

The results are indicated as suggested with this Sign: ***

3- Minor Essential Revisions- comparison results in figures are clear, significance should be noted on figure 4

The results are indicated as suggested with this Sign: ***