Reply to the Letter to the Editor

Reply to the Letter to the Editor: How Does Ulnar Shortening Osteotomy Influence Morphologic Changes in the Triangular Fibrocartilage Complex?

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To the editor,

We would like to thank Spies and colleagues for their interest and insightful comments regarding our recently published study [2]. Arthroscopy is the gold standard for diagnosis of triangular fibrocartilage complex (TFCC) lesions. However, we made the diag-

nosis of TFCC injury based on physical examination and findings on MRI arthrography. Arthroscopy was performed to determine surgical strategies to treat the TFCC lesions, which underwent repair, reconstruction, or ulnar shortening at the first part of the operation.

As Spies and colleagues pointed out, in order to note improvement of the triangular fibrocartilage (TFC) thickness in Palmer Type 2, there should be a difference in the number of apoptotic cells by stage. However, in our study, this evaluation was not possible because all cases of

degenerative lesions were evaluated as Palmer Type 2, and we did not perform a detailed stage classification (Palmer 2A–2E). When the TFC is destroyed completely (as was the case for the Palmer Type 2E lesion) MRI cannot delineate the structure of the TFC, and these were ultimately excluded from the study.

Because our study only involved MRI evaluation, we did not have the ability to determine whether a change in disc thickness could have contributed to cell regeneration entirely, or if this change could have been caused by accumulation of bound water molecules within the extracellular matrix. We also evaluated regeneration of the TFC after ulnar shortening at the time of plate removal (usually 1 year after the initial procedure). As of this writing, 41% (115/282) of the wrists showed regeneration of the TFC. A total of 73% (55/76) of the wrists with large perforation had synovial recovery of the TFC. This is consistent with a previous study which showed that TFC can regenerate even in avascular areas [1]. However, it is difficult to explain the

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improvement of the TFC avascular area only by cell regeneration. Final MRI assessment was done at least 4 years after the initial treatment. We believe that the extracellular matrix can be involved in TFC repair.

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