Introduction: OCD of the capitellum affects young athletes involved in elbow bearing activities. Unstable lesions are best managed surgically, although debate remains regarding the optimal method. Arthroscopic treatment allows rapid recovery, but the effect on the articular surface is undetermined. The purpose of the present study is to evaluate the outcome of arthroscopic OCD fragment excision and capitellar microfracture using functional assessment scores and repeat imaging.

Methods: We reviewed records of 13 consecutive patients with OCD lesions of the capitellum managed with arthroscopic microfracture. The mean age at the time of surgery was 17.1 years (10.9-26.8); 6 patients were skeletally immature and 5 were skeletally mature. Pre- and post-operative functional assessment included active range of motion, Mayo Elbow Performance Score (MEPS), and Timmerman/Andrews Elbow Score. All patients underwent plain radiographic and MRI evaluation at latest follow-up (minimum 12 months).

Results: The mean range of motion improved in both flexion (133.3° -> 138.6°, p=0.067) and extension (19° -> 0.8°, p= <0.01). The mean MEPS (70.9 -> 94.5, p= <0.01) and Timmerman/Andrews Elbow scores (116.4 -> 190, p= <0.01) improved significantly. Plain radiographs demonstrated degenerative changes in 1/11 (9%). MRI evaluation demonstrated an improvement in overall joint congruence and the formation of a reparative articular surface in 8/11 (73%). No reoperations or major complications were encountered.

Conclusion: Arthroscopic OCD fragment excision and capitellar microfracture demonstrates good to excellent functional results in short term follow up. Follow up MRI suggests potential for a reparative fibrocartilaginous articular surface. Longer term follow-up is necessary to determine durability of the technique.

Optimization of Magnetic Resonance Imaging of the Anterior Bundle of the Ulnar Collateral Ligament: A Randomized Controlled Trial of 3 Patient Positions (SS-26) *Ryan G. Miyamoto, M.D., Patrick Duffy, M.D., Charles Ho, M.D., Ph.D., Thomas Hackett, M.D.*

Introduction: Controversy exists regarding the ideal patient/elbow positioning for optimal magnetic resonance imaging in patients being evaluated for ulnar collateral ligament (UCL) injuries. The objectives of this study are to determine which of three commonly utilized patient positions provides optimal imaging of the UCL, superiority in terms of patient comfort, and provides the highest intraobserver and interobserver reliability in assessing the ligament. Our hypothesis is that optimal positioning can lead to better evaluation of the ligament,

reduce patient discomfort and decrease motion artifact providing better scans, and potentially reduce the necessity for MR arthrography. Randomized controlled trial, Multirater agreement study

Methods: Fifteen subjects with each underwent 3-Tesla magnetic resonance imaging of the elbow in three commonly utilized positions in a randomized order. All subjects filled out a post-scan comfort questionnaire after each position. Each of the imaging sequences was reviewed by seven observers; one musculoskeletal radiologist and six orthopaedic surgeons who had completed a sports medicine fellowship. Two of the observers graded the images at two different time points. Multirater and intrarater agreement was calculated based on the observed agreement, the Fleiss kappa coefficient for interrater reliability, and Cohen's kappa statistic for intrarater agreement.

Results: The supine/forearm pronated position was significantly more comfortable than supine/forearm supinated (p=0.023) and prone/forearm supinated (p=0.018). In the supine/forearm pronated position, there was a 69% interrater observed agreement (Kappa=0.41) and a 69% intrarater observed agreement (Kappa=0.39). For this position, the orthopaedic surgeons agreed with the radiologist 66% of the time. In the supine/forearm supinated position, there was a 59% interrater observed agreement (Kappa=0.14) and a 68% intrarater observed agreement (Kappa=0.24). For this position, the orthopaedic surgeons agreed with the radiologist 38% of the time. In the prone/forearm prone position, there was a 68% interrater observed agreement (Kappa=0.37) and a 69% intrarater observed agreement (Kappa=0.41). For this position, the orthopaedic surgeons agreed with the radiologist 54% of the time.

Conclusion: Non-contrast magnetic resonance imaging of UCL is most comfortable for patients in the supine/forearm pronated position. This position also demonstrated the highest agreement between orthopaedic surgeons and the musculoskeletal radiologist. Grading of the intact UCL was reliable and reproducible in the supine/forearm pronated position and the prone/forearm supinated position.

Arthroscopic Proximal Row Carpectomy (SS-27) *Noah D. Weiss, M.D., Ricardo Molina, M.D., Sean Correa, OPA-C, Stephanie Gwin, B.A.*

Introduction: To evaluate the safety, efficacy, and potential advantages and disadvantages of an all-arthroscopic Proximal Row Carpectomy.

Methods: Eighteen patients underwent an all-arthroscopic Proximal Row Carpectomy (APRC). Following