Osteochondral Lesions of the Talus: A Continued Optimal Management and Clinical Follow-up Enigma

Commentary on an article by Hong-Yeol Yang, MD, and Keun-Bae Lee, MD, PhD: “Arthroscopic Microfracture for Osteochondral Lesions of the Talus. Second-Look Arthroscopic and Magnetic Resonance Analysis of Cartilage Repair Tissue Outcomes”

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Successful management of osteochondral lesions of the talus remains a clinical conundrum for surgeons—not simply in terms of intraoperative decision-making regarding optimal treatment technique and use of biological adjuncts but also in terms of reliable postoperative assessment of treatment success. Despite the utilization of validated patient outcome measures and less-invasive means of evaluating repair success such as the magnetic resonance observation of cartilage repair tissue (MOCART) scoring system, discrepancy between the perceived improvements seen with these evaluation methods and yet lack of true anatomical restoration of the presenting osteochondral pathology remains a troublesome reality.

With this frame of reference, Yang and Lee aimed to investigate the outcomes related to cartilage repair tissue with use of both MOCART and second-look arthroscopy at >2 years of follow-up after microfracture. By utilizing both magnetic resonance imaging (MRI) and arthroscopy for assessment, a longer-term follow-up time frame, and comparison with standard outcome measures, the authors were able to readily ascertain the durability of the repair construct and the accuracy of each assessment tool.

Similar to the findings in previous studies, standard outcome measures demonstrated improvements in all functional outcome categories at a mean of 3.6 years. Significant correlation between FAOS scores and arthroscopic ICRS grading was observed as well. Of concern, however, 24% of the patients had mismatch between MRI and arthroscopic assessment of lesion healing. Additionally, 36% of lesions were incompletely healed with non-hyaline-like tissue at the time of the latest follow-up.

As indicated by the authors, the limitations of the study, including the small sample size relative to other published studies and the potential for selection bias given that second-look arthroscopy was only performed on patients who had agreed to follow-up procedures, are certainly a concern. Despite these factors, the follow-up time frame of >2 years along with comparison of MOCART and arthroscopic findings provide further evidence with regard to the clinical concerns of non-hyaline fibrocartilage healing of these lesions and the limitations of less-invasive means of assessing this healing. With the advent of small-bore needle arthroscopy options, it may be that true assessment of healing incorporates these diagnostic tools routinely or when there is any doubt with regard to the nature of healing.

While not within the scope of this article, the biggest question remaining is the continued need for more reliable means of repairing these lesions with biological adjuncts that can help to restore the native hyaline cartilage rather than replacement with fibrocartilage and yet avoid the morbidity associated with more-invasive means such as osteochondral autograft or allograft transplantation. Despite improved functional outcomes measures, the clinical failure rates observed in this study and others certainly portend poor long-term durability for some of these repairs, particularly in younger patients, and leave us searching for continued improvement in the management of these and other osteochondral lesions.

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Disclosure: The author indicated that no external funding was received for any aspect of this work. On the Disclosure of Potential Conflicts of Interest form, which is provided with the online version of the article, the author checked “yes” to indicate that the author had a relevant financial relationship in the biomedical arena outside the submitted work (http://links.lww.com/JBJS/F624).

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