Editorial Commentary: Microfracture for Focal Cartilage Defects: Is the Hip Like the Knee?

Abstract: Reading about microfracture for focal cartilage defects of the hip, we ponder whether the hip resembles the knee with regard to focal cartilage defects. Minimally invasive microfracture has been a first-line therapy for focal cartilage defects. Microfracture results in fibrous cartilage and unpredictable repair volume, which could be better than absent cartilage, particularly if knee symptoms abate. However, of late, microfracture is not recommended because destruction of subchondral anatomy may result in subchondral cyst formation.

In the knee, we believe that as an alternative to microfracture, “arthroscopic abrasion arthroplasty results in a positive outcome in 66% of patients, and may still merit consideration as a salvage procedure.”¹,² Like microfracture, abrasion results in fibrous cartilage and unpredictable repair cartilage volume, but abrasion is performed without subchondral penetration. Preservation of the subchondral plate by performing abrasion may also improve the results of later cartilage cell transplantation if required, whereas the results of secondary cell transplantation are compromised by prior microfracture.³

However, our concerns with microfracture are based primarily on knee outcomes literature, whereas “Indications and Outcomes for Microfracture as an Adjunct to Hip Arthroscopy for Treatment of Chondral Defects in Patients With Femoroacetabular Impingement: A Systematic Review”—by MacDonald, of Ontario; Bedi, of Michigan; Horner, de SA, and Simunovic, of Ontario; Philippon, of Colorado; and Ayeni, of Ontario⁴—studies hip patients with cartilage defects having microfracture plus femoroacetabular impingement (FAI) treatment. The results of microfracture plus FAI surgery seem excellent, but it is essential to note that FAI surgery represents a major confounding variable and “There were no patients across any of the 12 [included] studies that had microfracture alone.” Additionally, noting that follow-up is short compared with 20-year published outcomes of knee abrasion arthroplasty,² we suspect that hip cartilage resembles knee cartilage and that, while microfracture shows short-term merit in patients having FAI surgery, abrasion arthroplasty might be safer.⁵ The promise of cell therapies also remains on the horizon.⁶-¹¹

James H. Lubowitz, M.D.
Editor-in-Chief

References
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