

Evidence Discussion (MS 13.1)

Chondral/Osteochondral Lesions, Including Osteochondritis Dissecans and Fractures

Radiography should be the first imaging test performed to evaluate chondral/osteochondral lesions.^{1, 2}

Radiographs help to exclude other causes of pain and to determine skeletal maturity, which significantly affects prognosis and management of Osteochondritis Dissecans lesions (OCD), because open physes have a much higher potential for healing with conservative treatment.³

In patients with Osteochondritis Dissecans(OCD) or subchondral insufficiency fracture on radiographs or if radiograph is negative but osteochondral fracture is still suspected, MRI without IV contrast maybe indicated to evaluate cartilage for additional injuries and for grading of osteochondral fractures and OCD.^{1, 2} MRI is also useful to determine the best method of treatment.¹

CT without contrast maybe indicated to evaluate patients with OCD to confirm loose bodies or when MRI is not definitive.¹ MR arthrography or CT arthrography is an effective test for locating intra-articular osteochondral fragments, loose bodies and grading chondral and osteochondral lesions.^{1, 2}

Radiographs were found to be substantial to excellent at detecting healing of OCD lesions³. In clinical practice, serial radiographs are recommended for monitoring healing of juvenile OCD lesions. Repeat MRI is suggested only if radiographs are not diagnostic for healing and for worsening symptoms, or change in examination.³

1. Bennett DL, Nelson JW, Weissman BN, et al. Expert Panel on Musculoskeletal Imaging. ACR Appropriateness Criteria[®] Nontraumatic Knee Pain. Am Coll Radiol (ACR); 2012. Last Review: 2018. <https://acsearch.acr.org/docs/69432/Narrative/>.
2. Rubin DA, Anderson MW, Hastreiter DM, et al. ACR Practice Guideline. ACR-SSR Practice Guideline for the Performance and Interpretation of Magnetic Resonance Imaging (MRI) of the elbow. Am Coll Radiol (ACR). Revised 2021. <https://www.acr.org/-/media/ACR/Files/Practice-Parameters/mr-elbow.pdf?la=en>.
3. REVIEW ARTICLE: Osteochondritis Dissecans Lesions of the Knee: Evidence-Based Treatment Journal of the American Academy of Orthopaedic Surgeons (J):10.5435/JAAOS-D-23-00494, January 30, 2024. | DOI: 10.5435/JAAOS-D-23-00494 Nammour, Michael A. MD; Mauro, Craig S. MD; Bradley, James P. MD; Arner, Justin W. MD