Incidence of Chondral and Osteochondral Lesions in Ankle Fracture Patients Identified with Ankle Arthroscopy Following Rotational Ankle Fracture: A Systematic Review, Williamson, E. et. al. *Journal of Foot and Ankle Surgery*, 61, 668-673, 2022

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Osteochondral lesions (OCLs) can occur in patients with unstable ankle fractures. Direct visualization of the cartilage in the ankle joint via arthroscopy is helpful in diagnosis and treatment of OCLs. Arthroscopic examination may happen at the time of ORIF. This literature review examines the incidence of intra-articular chondral lesions, the location within the ankle, the ankle fracture type, characterization of chondral injury, and clinical outcome.

The literature review revealed 54.5% of ankle fractures also had an OCL. 15.3% of ankles had lesions on the tibial plafond, 12.2% has lesions of the lateral malleolus, and 9.8% had lesions of the medial malleolus. Higher incidence of OCL was found in Weber C fractures compared to other Weber types. Trimalleolar and isolated fibular fractures were associated with higher incidence of OCL than bimalleolar and medial malleolar fractures. Within the Lauge-Hansen ankle classification system, supination-adduction ankle fractures were associated with higher incidence of OCL than supination-external rotation, pronation-external rotation, and pronation-abduction types. The literature revealed 59.2% of OCLs had less than 50% thickness involvement, and 25.8% had full thickness OCLs. The literature was inconclusive regarding clinical outcome between patients with and without OCLs. Two studies reported no difference in clinical outcomes, while one study noted significantly worse FAOS scores.

The authors conclude that there is a high incidence of OCLs in the setting of unstable ankle fractures. More than half of patients have at least one osteochondral lesion. Ankle arthroscopy gives diagnostic clarity on chondral injury location and severity and may be considered for certain fracture patterns. This diagnostic information could be useful for surgeons when discussing future adverse outcomes regarding ankle fractures and associated OCLs. However, the authors find there is a lack of evidence to support routine ankle arthroscopy with ORIF of the ankle. They conclude that the literature does not show beneficial therapeutic effects of concomitant ankle arthroscopy in short-term outcomes.
