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**Ankle Arthroscopy: An Unnecessary Addition to Ankle Injuries**
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**Indications**
- Transchondral talar fractures
- Talar fractures
- Low grade distal tibia fractures
- Syndesmotic disruption
- Malleolar fracture
- Chronic pain after ankle fracture

**Pros:**
- Large body of evidence showing high incidence of OCLT
- Good visualization of joint
- Can debride cartilage lesions and loose bodies
- May help with diagnosis of deltoid and syndesmotic injury
- Better pay? No!
  - Per AAOS included in 27792 (open treatment distal fibular fracture) is an arthrotomy and in the arthrotomy it includes debridement. Since an arthrotomy is going into the joint, the scope is also going into the joint. Chapter One of the NCCI guidelines also talks about when you start out via scope and then go to open the scope is considered inclusive.

**Cons:**
- Doesn’t help fix the fracture
- Takes extra time and set up
- Often requires invasive distraction methods
- Added costs $$ not reimbursed in todays health care environ
- Doesn’t really help overall plan in majority of cases
- No evidence that arthroscopic treatment of intraarticular lesions affect outcome
- Infiltration of tissues increases swelling and potential comorbidity
- Distorts anatomy
- Risks of nerve injury from percutaneous portals
Summary:
Despite numerous studies showing high incidence of osteochondral lesions in ankle fractures, there is no evidence based literature to suggest arthroscopy alters outcome.

References:

The Role of Arthroscopy in the Management of Fractures About the Ankle, Bonasia, Rossi, Saltzman, Amendola, JAAOS April 211: “Although the use of arthroscopy in trauma is increasing, the effectiveness of ARIF compared with ORIF in the management of fractures of the distal tibia, malleolus, displaced talar neck, and talar body has yet to be determined. Thus, most of these fractures can still be managed with open procedures.

The "LIFT" lesion: lateral inverted osteochondral fracture of the talus.
In 8 of 10 patients the fragment was reattached in an open manner in conjunction with lateral ligament reefing. The fragment was excised in 2 patients.

The rate of intra-articular pathology associated with ankle trauma is high and arthroscopic treatment often has an important role to play. Its major role is in the assessment and treatment of joint surface damage, syndesmotic instability, and intra-articular fractures.

Nickisch et al, Postoperative complications of posterior ankle and hindfoot arthroscopy, JBJS March 2012:
8% complication rate in 189 procedures
6 Dysesthesia, 4 Achilles tightness, 2 CPRS, 2 infection, one cyst

The role of arthroscopy in the management of fractures about the ankle.
the effectiveness of ARIF compared with ORIF for management of fractures of the distal tibia, malleolus, displaced talar neck, and talar body has yet to be determined. Most of these fractures are effectively managed with open procedures.

Cartilage lesions and the development of osteoarthritis after internal fixation of ankle fractures: a
prospective study.

Findings show that initial cartilage damage seen arthroscopically following an ankle fracture is an independent predictor of the development of posttraumatic osteoarthritis.

Evidence-based indications for ankle arthroscopy.

There is insufficient evidence-based literature to support or refute the benefit of arthroscopy for the management of synovitis and fractures (grade I).

Arthroscopically detected intra-articular lesions associated with acute ankle fractures.

Chondral lesions were found in sixty-one patients (73%).
“While our analysis revealed that the severity of the fracture is associated with an increased number of chondral lesions, we are not aware of any published studies showing that treating these lesions or preferentially assessing patients with supination-external rotation or pronation-external rotation type-IV fractures with arthroscopy improves outcomes.”

Leg anterior compartment syndrome following ankle arthroscopy after Maisonneuve fracture.

With this type of ankle fracture, there is a higher potential risk of acute compartment syndrome developing than with other types of ankle fractures.

Incidence of chondral lesions of talar dome in ankle fracture types.

28% incidence of talar chondral lesions.

Arthroscopic findings in Maisonneuve fractures.

All four of the cases had cartilaginous damage to the medial section of the talar dome.

Diagnosis and treatment of combined intra-articular disorders in acute distal fibular fractures.

Arthroscopic assisted ORIF group had better AOFAS scores than ORIF, but they all had a 2nd surgery TAS at one year which may have affected their outcome

**Arthroscopically assisted treatment of ankle fractures: arthroscopic findings and surgical outcomes.**

The use of an arthroscope during treatment of malleolar fractures enables diagnosis and treatment of the lesions within the ankle joint.

**Arthroscopic assessment of occult intra-articular injury in acute ankle fractures.**

Ankle fractures have a high incidence of concomitant intra-articular pathology with syndesmosis disruption portending a particularly high risk of articular surface injury to the talar dome.

**The role of ankle arthroscopy on the surgical management of ankle fractures.**

Level 1: No difference was noted between SF-36 scores or lower extremity scores between the two groups. At short-term follow-up, it does not appear that the arthroscopic procedure will impact upon the patient’s eventual outcome in this small group of patients.

**Arthroscopic findings in acute fractures of the ankle.**

Lesions of the cartilage were found in 79%, more often on the talus. No outcomes data supporting use of TAS

**Arthroscopic visualization of the tibial plafond during posterior malleolar fracture fixation.**

Four cases wherein this technique was thought to be helpful. (No outcome data provided)