

Debate of Arthroscopy for Acute and Chronic Ankle Fractures – Pro

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We should arthroscope all acute ankle fractures! I have been championing this mantra for 30 years. In 1993, we presented a paper at the AANA Annual Meeting detailing the technique and advantages for Arthroscopy-assisted Open Reduction Internal Fixation (AORIF).¹ AORIF provides an accurate diagnosis, facilitates treatment of all intraarticular injuries and permits lavage and debridement that may help pain and improve postoperative motion. AORIF also assists in reduction and internal fixation, and allows assessment of intraarticular surfaces after reduction and internal fixation.^{2,3}

Our studies and many others have found a high percentage (up to 60-80 percent) of Traumatic Articular Surface Injuries (TASLs) in patients with acute ankle fractures.^{4,5,6} Stufkens et al. showed the initial cartilage damage seen via arthroscopy of acute ankle fractures is an independent predictor of post-traumatic arthritis.⁷ Takao et al. and Lee et al. have demonstrated the benefit of AORIF over Open Reduction Internal Fixation (ORIF) alone.^{8,9} Studies that have shown no difference in results do not have a long enough follow-up to know if patients do better with or without arthroscopy assistance. There are at least two cases where arthroscopy was not used on professional athletes at the time of their ORIF and acute

osteochondral fractures were missed. Subsequently, the patients had persistent pain that caused them to miss an additional season after a second surgery was required. Our patients expect and demand that the ankle fracture surgery performed is definitive and complete so that they can have the best possible result. Unfortunately, despite optimal care, the results of ORIF are not always good due to several factors.

Approximately 20 percent of patients who have ORIF for an ankle fracture still have persistent pain and problems.¹⁰ Ankle arthroscopy is also very useful for these patients to diagnose and treat intraarticular abnormalities like chondromalacia, loose bodies, nonunion, synovitis and arthrofibrosis. Furthermore, numerous authors have emphasized the role of arthroscopy for chronic ankle fracture patients.¹¹⁻¹⁵

Using arthroscopy for an ankle fracture, even prior to open reduction, adds very little time to the surgery and clearly provides a great deal of additional information that can aid in the diagnosis, treatment and ultimate prognosis of the patient long term. Some orthopaedic surgeons have expressed great concern about fluid extravasation with ankle arthroscopy. However, I have never seen fluid extravasation to be a problem and oftentimes it helps to delineate the fracture planes more clearly prior to doing the open surgery.

Pearls that can assist the surgeon to perform a successful ankle arthroscopy as part of an open reduction and internal fixation include:

- 1) Establishing a separate inflow cannula and washing out the joint completely of all debris and blood.
- 2) Never using an intraarticular pump.
- 3) Using soft tissue distraction gently to examine the entire joint.
- 4) Using fluoroscopy to verify hardware position and fracture reduction.
- 5) Getting out of the dark ages with new instrumentation and new techniques to help our patients achieve better long-term results.

The patients need to know the full extent of their injury and their ultimate prognosis for the future. The use of ankle arthroscopy for the treatment of acute and chronic ankle fractures provides this information and greatly assists in giving the best possible care to our patients. Hopefully, in the future, more high-quality, long-term Level I studies will be done to further delineate the importance of ankle arthroscopy in the treatment of acute and chronic ankle fractures.

References

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