Arthroscopic Assessment of Medial Malleolar Reduction

Eric F. Swart, MD
J. Turner Vosseller, MD
Columbia University Medical Center
New York, NY
Arthroscopic Assessment of Medial Malleolar Reduction
Eric F. Swart, MD
J. Turner Vosseller, MD

Our disclosure is in the Final AOFAS Mobile App.

We have no potential conflicts with this presentation.
Arthroscopic Assessment of Medial Malleolar Reduction

- Some ankle fractures are treated with ORIF in an effort to establish anatomic alignment and avoid a malunion, thereby diminishing the risk of post-traumatic arthrosis.

- Cortical cues are typically used to guide reduction of ankle fractures.
Arthroscopic Assessment of Medial Malleolar Reduction

- However, an articular step-off is more likely related to the risk of post-traumatic arthrosis than is a cortical step-off.
- Arthroscopy has been used as an aid to the treatment to the diagnosis and treatment of articular fractures.
- The current study prospectively assessed both the quality of the articular reduction with arthroscopy and the adequacy of using cortical cues for articular reduction.
Arthroscopic Assessment of Medial Malleolar Reduction

- Methods
  - 12 consecutive patients enrolled in this prospective diagnostic study
  - All had medial malleolar fractures requiring ORIF
  - Outcome variables of interest:
    - Extra-articular fracture displacement
    - Articular surface displacement
Arthroscopic Assessment of Medial Malleolar Reduction

- Results
  - 10/12 patients had an anatomic reduction based on cortical cues
  - On arthroscopy, 7/12 had an anatomic reduction, while four patients had a slight gap (<1mm) at the anterior edge of the fracture, and one patient had an anterior gap just less than 2 mm
Arthroscopic Assessment of Medial Malleolar Reduction

Results

- The two patients that did not have an anatomic reduction based on cortical cues had clearly borne some weight in the splint prior to surgery.
- The medial malleolus was somewhat impacted in these patients such that an anatomic cortical reduction left a gap open at the articular surface.
- In these two patients, the fixation plan was altered, with a small cortical gap left open to provide a (near) anatomic reduction. Still, one of these patients had a gap just less than 2 mm.
Arthroscopic Assessment of Medial Malleolar Reduction

Conclusions

- The cortical reduction often matched up with the articular reduction.
- Surgeons should be wary in any patients that may have borne weight in the splint, as these patients could have some impaction of the medial malleolus, making the cortical cues a poor proxy for articular reduction.
Arthroscopic Assessment of Medial Malleolar Reduction


Arthroscopic Assessment of Medial Malleolar Reduction


