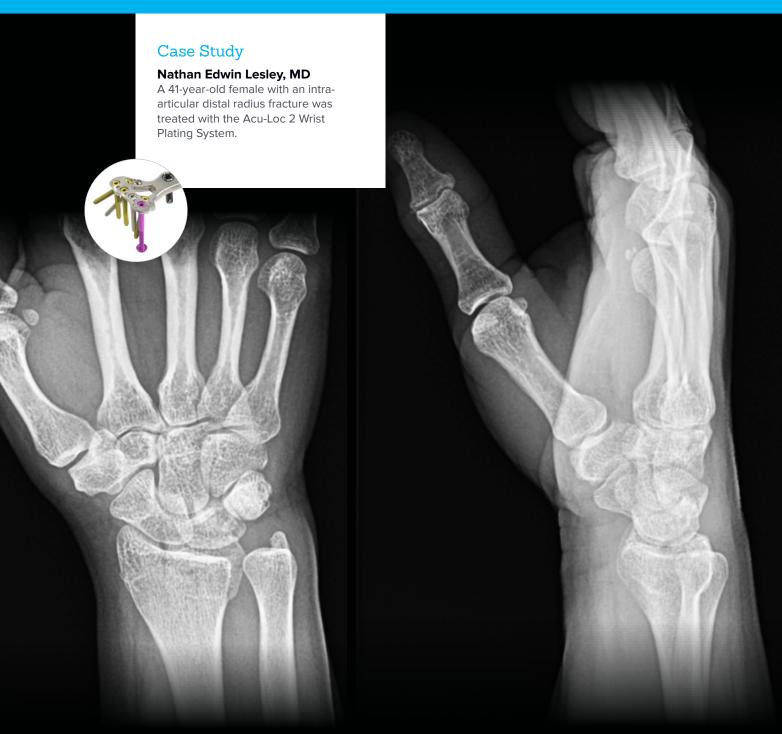


## Intra-articular Distal Radius Fracture Treatment Using Plate and Screw Fixation



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# Case Study | Nathan Edwin Lesley, MD







#### Patient History

The patient is a 41-year-old female who was referred after a fall that occurred at work. She had been seen in the emergency department and was informed that she had sustained a nonoperative wrist fracture. She presented in a splint with moderate (6/10) pain. The original X-rays revealed a minimally displaced, intra-articular fracture of the distal radius. Repeat X-rays indicate a subtle, subluxed position of the lunate. A CT scan was ordered, which confirmed a significant articular gap in the sagittal plane, with fracture lines extending through the volar and dorsal cortices. Operative treatment was recommended.

#### **Treatment**

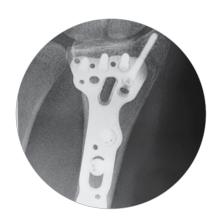
Intraoperatively, volar and proximal displacement of the volar 30 percent of the distal radius was observed. The fragment was reduced and an Acu-Loc 2 plate was implanted. A nonlocking screw was first placed through the slotted shaft hole, using the plate to buttress the distal fragment. Locking distal screws and nonlocking proximal screws completed the construct.

### Postoperative Care

Postoperatively, the patient was placed in a nonremovable wrist splint, followed by a removable wrist splint with gentle ROM instructions beginning at 10 days. At three months follow-up, the patient had achieved 80 degrees of flexion, 80 degrees of extension, and full pronation/supination.

#### Discussion

Distal radius fractures often have underappreciated/unrecognized intraarticular components which, if treated nonoperatively, can result in posttraumatic arthritis. CT scans can be used to better assess these fractures. A volar distal radius plate is ideal for achieving compression of intra-articular fractures displaced in the sagittal plane. By using a nonlocking screw through the slotted hole of the Acu-Loc 2 plate, a buttress effect is achieved with these volar Barton-type fracture patterns.



6 months postoperative



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