

Case Study: Use of VariAx Distal Radius Locking Plate System for ORIF of an Intra-Articular Distal Radius Fracture with Displaced Lunate Facet

Knowledge Builder Wrist Fracture & Reconstruction: Case 8 | A review by A. J. Mencias, M.D.

Patient History

This patient is a 62 year old right hand dominant female who is otherwise healthy. She fell on an outstretched right hand and wrist on 8/17/15. She presented to me with pain and swelling in her right wrist and was placed into a splint. She also had a CT scan of the wrist, that I reviewed, that confirmed a comminuted, intra-articular fracture of the distal radius (Figures 1A, 1B, and 1C). The patient does have a history of hypertension and hypercholesterolemia, but otherwise is healthy. She has never had an injury to the right hand or wrist in the past.

Assessment

Her diagnosis at the time of seeing me was an intra-articular fracture of the right distal radius with a significantly displaced lunate facet. The patient is a very active patient who plays musical instruments and as acts as the caretaker of her grandchildren. I felt that she was a good candidate for Open Reduction Internal Fixation (ORIF) of her right distal radius fracture through a volar approach.

Procedure/Treatment

The patient underwent ORIF of an intra-articular fracture of her right distal radius. This was done through the usual interval between the flexor carpi radialis and radial artery. Intra-operatively, I was able to identify a significant deformity and shortening as well as angulation. Once the fracture site was addressed, I was able to lengthen the distal radius and apply bone graft. Once an anatomic reduction was obtained, a Stryker VariAx Distal Radius Locking Plate was applied in standard manner. The extra short intermediate plate was utilized from the Stryker VariAx Distal Radius Locking Plate System (Figures 2A and 2B). The intermediate sized plate was utilized because it provided outstanding coverage for the anatomy of this fracture and specifically provided good fixation of the lunate facet and intra-articular displacement. It was perfectly sized for this fracture and the extra short plate allowed for less of an exposure. The procedure was tolerated well without complications. She was closed in the standard manner and asked to follow-up in the standard manner.



Figure 1A



Figure 1B



Figure 1C

Case Study: ORIF of a Left Distal Radius Intra-Articular Fracture using the VariAx Distal Radius Locking Plate System



Figure 2A



Figure 2B

Discussion

The unique characteristics of this case include the fact that the patient first came to see me almost two weeks out after the injury. Therefore, she had developed a small amount of healing that I noted intra-operatively. This made the reduction slightly more difficult and led to my utilization of bone graft due to a defect created after I took down the fracture site and obtained an anatomic reduction. We also used the intermediate sized plate from the Stryker VariAx Distal Radius Locking Plate System that provided full coverage of this patient's wrist. The extra short intermediate plate facilitated reduction of her fracture in an anatomic manner through a smaller incision.

Post-Operative Clinical Outcome

The patient underwent ORIF of her right distal radius without complication. We saw her post-operatively and she was doing quite well. Under 2 weeks out from her right wrist surgery, we were able to place her into a splint and begin occupational therapy. She was having minimal pain and taking minimal pain medication.

Conclusion

This patient did quite well after this surgical intervention at her last follow up three months post-op. She underwent an ORIF of her intra-articular right distal radius fracture two weeks after her injury. She recovered nicely and her wound was healing without evidence of infection. The hardware provided stability to the fracture and allowed for early range of motion, splinting, and therapy. The patient was very satisfied with the treatment results and suffered no complications after surgical treatment. AJM/mm

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