

Case Study:

Use Of Acutrak 2[®] Headless Compression Screw For Treatment Of Scaphoid Waist Fracture



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Case Presentation

The patient was a 21-year-old right-handed rancher who was kicked by a calf while at work three months earlier. He later presented to clinic with persistent wrist pain, loss of motion, and grip strength. Preoperative radiographs demonstrated a nonunion for a scaphoid waist fracture without dorsal intercalated instability on his left hand.

Preoperative Plan

Dr. Ramesh Srinivasan decided to proceed with the Acutrak 2® Headless Compression Screw (HCS) due to the continuous variable thread pitch design that provides a wide window of compression, facilitating anatomic restoration and rigid fixation. Open reduction internal fixation (ORIF) with distal radius bone graft was planned through an extended dorsal approach so that the bone graft could be obtained for the distal radius.

Operative Findings and Approach

Dr. Srinivasan created a six-centimeter incision extending from the patient's Lister's tubercle to the dorsal aspect of the radiocarpal joint. After completing the arthrotomy, the scaphoid nonunion site was meticulously debrided of all scar tissue. Autologous bone graft was next obtained from the dorsal distal radius at Lister's tubercle. The nonunion site was densely packed with this bone graft to promote creeping substitution and subsequent healing. A 20 mm Acutrak 2 Mini HCS was placed across the nonunion site. Total operative time was 62 minutes, including closure and splint application.

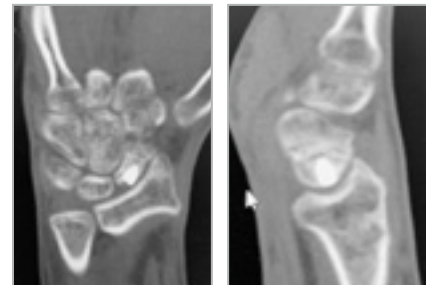
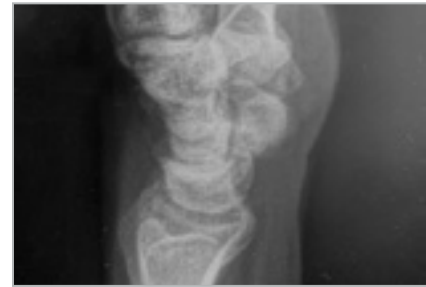
Follow-Up

At the six-week follow-up, the patient achieved full range of motion and restoration of grip strength. At the three-month follow-up, postoperative radiographs demonstrated complete healing. Clinically, the patient reported total resolution of pain. Postoperative CT scans also demonstrated complete bone bridging. The patient was cleared to return to full duty as a rancher without restriction.

Discussion

When the patient sought treatment after months of delay, it presented a more complicated case due to scar tissue that had since formed. Using an ORIF approach, Dr. Srinivasan harvested bone graft to support the nonunion location. He continues to address scaphoid fractures with the Acutrak HCS System due to the reliable compression and excellent patient outcomes.

Preoperative



Postoperative



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