# **Case Series: Fixation of Diaphyseal Forearm Fractures**

Treated with the Anatomic Midshaft Forearm Plate System



**Innovative Solutions** 

00:0

00000

# Indication: Acute Left Radius and Ulna Fracture

**Product:** Acumed<sup>®</sup> 6-hole Locking Midshaft Ulna Plate and 6-hole Locking Midshaft Volar Radius Plate

Surgeon: Dr. Jared Salinsky, DO

# History

A 26-year-old woman fell and sustained acute fractures of the radius and ulna. Her initial follow-up revealed proper union, but the patient was unavailable for future evaluations.

# Examination

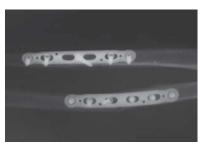
With both-bone forearm fractures, fixation can be difficult for both bones due to gross instability and bayonet appositioning. Similarly, the rotation and bowing of the radius makes both radius and ulna fixation a challenge.

# Treatment

The precontoured Acumed<sup>®</sup> Midshaft Radius and Ulna Plates are extremely utilitarian for these fractures. Also, the presence of both locking and nonlocking holes lends the ability to either compress or lock different parts of the fracture, as the fracture pattern dictates. Consequently, fixation and stability improves, while operative time decreases.

#### X-Rays





Indication: Left Radius and Ulna Fracture Product: Acumed<sup>®</sup> 8-hole Locking Midshaft Volar Radius Plate and 8-hole Locking Ulna Plate Surgeon: Dr. Jared Salinsky, DO and Craig Bennett, M.D.

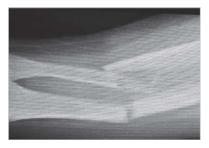
# History

A 45-year-old female suffered a fall at home while cleaning the gutters and sustained a both-bone forearm fracture of the left arm. The patient came to the emergency room, was tentatively reduced and splinted and then admitted for eventual fixation.

# Treatment

On hospital day number two, the patient underwent an open reduction internal fixation of both her radius and ulna through two separate incisions. We noted the precontoured nature of the plate matched the curvature of the native radius, making the fixation more anatomic. Similarly, the varying locking and nonlocking holes made fixation easier and more rigid. The patient healed uneventfully and by six weeks had resumed almost normal activity.

#### X-Rays





# Case Series: Anatomic Midshaft Forearm Plate System

Indication: Nonunion of Midshaft Displaced Left Ulnar Fracture Product: Acumed<sup>®</sup> 8-hole Locking Midshaft Ulna Plate Surgeon: Dr. Jared Salinsky, DO

#### History

This 42-year-old man was in a work related motor vehicle accident and underwent an uneventful open reduction with internal fixation for a midshaft displaced left ulna facture. He also had a contralateral hand fracture that was treated with a cast. The fracture underwent initial direct fixation with two interfragmentary screws and a locking plate.

### Examination

The patient initially did well and returned to work relatively early at four weeks. However, he subsequently developed pain about five months postoperatively which was diagnosed as a nonunion.

#### Treatment

He underwent revision open reduction internal fixation. In this procedure, the nonunion was excavated and packed with bone graft. An Acumed 8-hole Locking Midshaft Ulna Plate was used this time with three screws proximal and three screws distal to the fracture.

Indication: Comminuted Distal-Third Fracture of Right Ulna Product: Acumed<sup>®</sup> 6-hole Locking Midshaft Ulna Plate

Surgeon: Dr. Jared Salinsky, DO

#### History

This 38-year-old right-hand dominant male was playing baseball while he was struck with a baseball causing a comminuted distal-third ulnar shaft fracture. We discussed all treatment options and the patient wanted this fracture repaired using open reduction internal fixation so that he could return to play as soon as possible.

#### Treatment

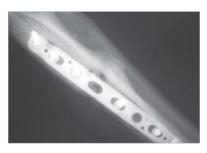
Several days after the injury, we completed open reduction internal fixation using an Acumed<sup>®</sup> 6-hole Locking Midshaft Ulna Plate. This plate was especially useful for this fracture because of the thinner, tapered ends. Towards the distal end of the ulna, the bone becomes very subcutaneous and easily palpable. A thicker 3.5mm DCP plate is frequently irritable and uncomfortable when near the distal end of the ulna.

Because the fracture was so comminuted, we were concerned about correct length and anatomic alignment. To this end, we were able to align the fracture and provisionally affix the plate to the bone with plate tacks. Once under fluoroscopy, we confirmed the length and alignment to be anatomic. We bridged the fracture due to the extensive comminution right at the fracture site, and additional bone graft was used. The patient's postoperative visits have been uneventful and he continues to heal without pain, displacement, or palpable hardware.

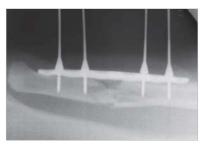
#### X-Rays

**X-Rays** 









# Case Series: Anatomic Midshaft Forearm Plate System

Indication: Diaphyseal Fracture of the Right Ulna **Product:** Acumed<sup>®</sup> 8-hole Locking Midshaft Ulna Plate **Surgeon:** Dr. Jared Salinsky, DO

# History

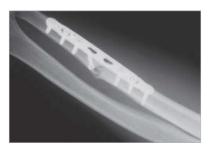
The patient was a 32-year-old male involved in a motorcycle accident and suffered a midshaft fracture accompanied with a butterfly fragment. Initially, there was significant swelling and the surgery was postponed almost two weeks.

#### Treatment

The patient ultimately underwent an open reduction and internal fixation; an interfragmentary lag screw was used for the butterfly fragment and an Acumed 8–hole Locking Midshaft Ulna Plate was applied for compression. The patient healed with no postoperative complications.

#### X-Rays





Indication: Grade 2 Open Fracture – Right Ulna Product: Acumed<sup>®</sup> 12-hole Locking Midshaft Ulna Plate Surgeon: Dr. Jared Salinsky, DO

# History

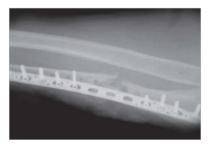
This injury to a 48-year-old male was initially a grade 2 open fracture of the right ulna; it was comminuted and grossly unstable. It was appropriately irrigated and debrided, and eventually fixed with a competitor's scalloped 3.5mm LC-DCP plate. However, the fracture failed to heal and the patient would eventually undergo a revision surgery.

#### Treatment

Open reduction internal fixation with an Acumed<sup>®</sup> 12-hole Locking Midshaft Ulna Plate was performed to heal the fracture. Bone graft was used and the fracture went on to heal without incident. The patient had also sustained an ipsilateral hand injury which was treated operatively. The patient was followed closely and was fairly compliant with typical postoperative care. The initial nonunion was thought to be due to the high energy of the initial injury. Nevertheless, the second ulnar surgery that was done using the Acumed Locking Ulna Plate resulted in anatomic union.

#### **X-Rays**





ELB70-00-B Effective: 6/2011 ©2010 Acumed LLC