

Sucessful Healing of an Aseptic, Atrophic Non-Union of the Ulna Using Next Generation Bone Matrix with Bone Marrow Aspirate

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CASE STUDY

ConCelltrate® 100

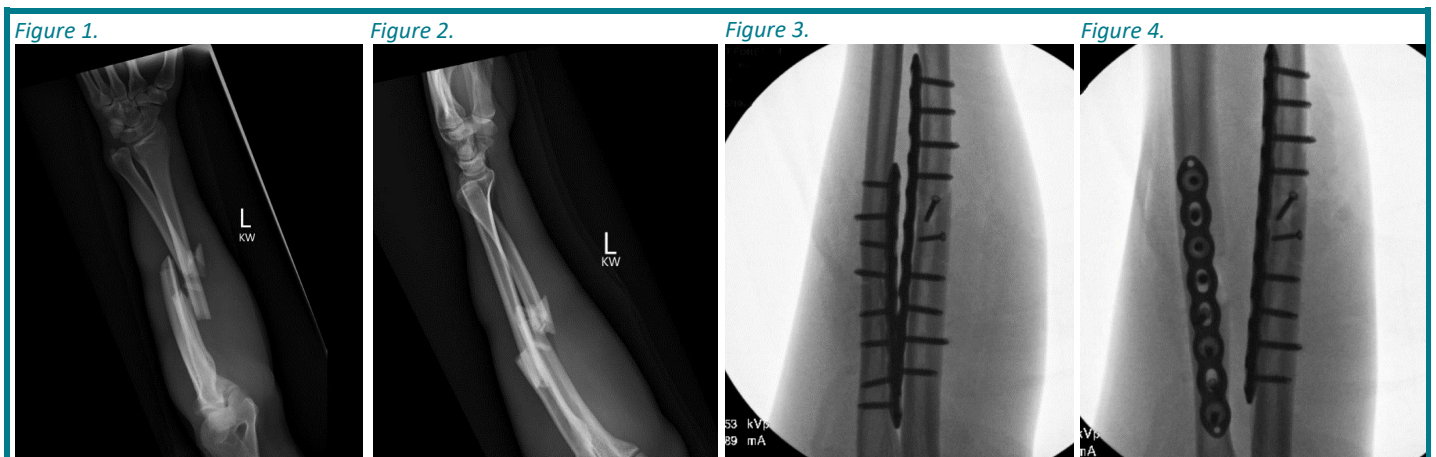
Surgical Summary

Clinical Presentation:

- 27 year old male, post motor vehicle accident sustaining a closed, left, both-bone forearm fracture. (Figure 1 and 2).
- Patient denied current alcohol, tobacco or drug use.
- Medical history was significant for Ulcerative Colitis with long term management with steroids and biologic immunomodulators.
- Operative management of both bone forearm fractures on hospital day 1.

Intraoperative Findings:

- Diaphyseal, multi-fragmentary fractures of the left ulna and simple fracture pattern to left radius (AO/OTA 2R2A3 2U2C2).
- Compression plating performed for the radius. Lag screw fixation with neutralization plating performed for ulna. (Figure 3 and 4)



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Post-Operative Note:

- Post-operative course notable for uneventful soft tissue healing with full radiographic union of radius noted at 3 months.
- Delayed union radiographically noted of ulna at 5 ½ months with progressive bone resorption at fracture site; Patient reported pain at the ulnar non-union site and pain with activities of the left arm. (Figure 5 and 6)
- Infectious workup negative. Diagnosis of aseptic, atrophic non-union of ulna.

Surgical Procedure – Bone Grafting:

- At 6-months post-op from initial surgical procedure, patient required a surgical procedure for aseptic, atrophic nonunion with stable hardware.
- Nonunion site debrided and prepared for bone grafting in standard fashion.
- Bone marrow aspirate (BMA) from left hemipelvis obtained. BMA combined with 5cc of ConCelltrate® 100 bone matrix and placed into nonunion site.

Post-Operative Course After Bone Grafting Procedure:

- Uneventful soft tissue healing noted.
- Full radiographic union of ulna non-union site at 3 months post grafting. (Figure 7 and 8)
- Full clinical healing with no tenderness at non-union site or pain with activities.

Surgeon Comment:

“ConCelltrate® 100 bone matrix is a superior orthobiologic for use in bone grafting procedures. It has an excellent biologic profile in isolation. As a carrier for bone marrow aspirate, it is superior for its handling characteristics and resistance to irrigation. This provides confidence that biology is being delivered and contained at the site most needed.”

Figure 5.



Figure 6.



Figure 7.



Figure 8.

