

Surgical Case Study

Ulna Fracture

Case Presentation

The patient is a 31 year-old manual laborer involved in a moped accident who suffered a **Type 2 open trans-olecranon fracture/dislocation of his right ulna** (Fig.1). Initial exam revealed a 3cm laceration over the ulnar subcutaneous border with a gross elbow deformity. He had intact sensation distally with a warm and well perfused hand. He has a pack-per-day smoking history.



Figure 1

Preoperative Considerations

One of the primary considerations was to avoid surface hardware in the setting of an open fracture. Given the open fracture scenario, the wound needed to be extended to fully evaluate the extent of contamination. Further dissection to allow for the use of a plate and screws may have added to increased periosteal stripping and devascularization, potentially prolonging the healing process.

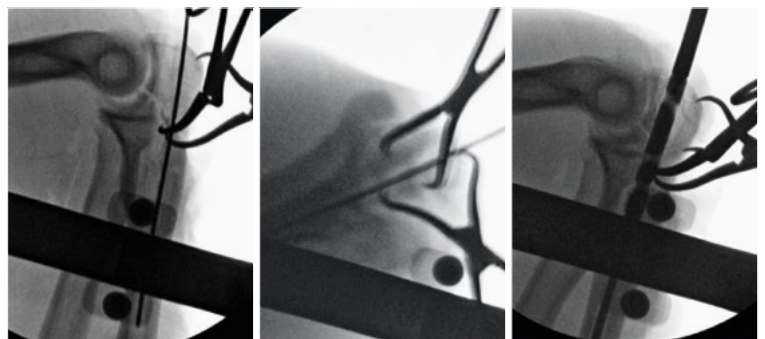


Figure 2

Surgical Technique

The patient was placed supine with a hand table. The open laceration was extended proximally and distally several centimeters to fully evaluate the zone of injury, clear all foreign debris, and debride any devitalized or contaminated tissue.

Once satisfied with irrigation and debridement, the olecranon was reduced anatomically and held with bone reduction forceps. As a young male, the patient's bone quality was quite good. Reduction held perfectly during nail preparation and placement (Fig. 2).



Surgical Technique *continued*

The canal was prepped using the Flex-Thread system’s reaming technique. The nail was inserted using the ratcheting driver. It should be noted that the insertion technique for this system aided greatly in maintaining reduction, as the insertion portion of this procedure easily “screwed” in (Fig. 3) rather than the more common impaction nailing.

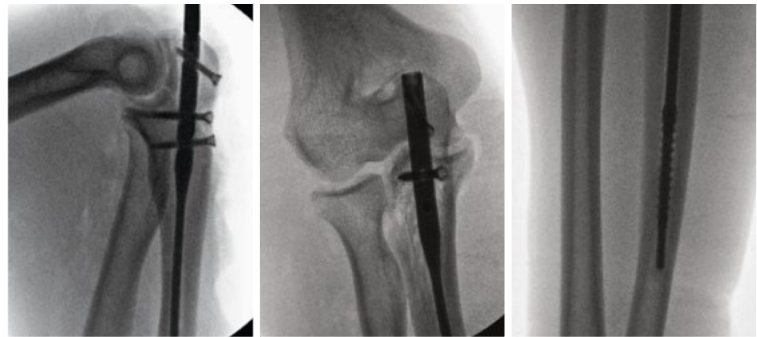


Figure 3

Postoperative Protocol

The patient was instructed that weight-bearing was allowed up to a coffee cup weight (less than 5 lbs). Full range of motion of the shoulder, elbow, and wrist was encouraged without restriction.

Images of results at a two-week post-op are presented in Fig. 4.

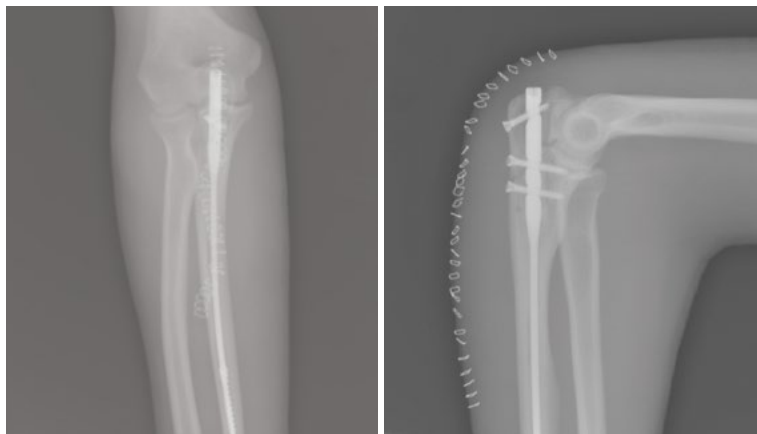


Figure 4

Summary

This case demonstrates several advantages of the Flex-Thread Ulna Nail System, including:

- Avoiding surface hardware in an open fracture.
- Flexibility and self-contouring design allows for placement in a wide variety of ulnar morphologies.
- Multiple points of divergent screw fixation interlocked with the nail provide superior fixation to a single screw (6.5mm, for example).
- Lower risk of implant irritation — especially for this manual laborer patient — because there is no surface hardware.



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