

## **Operatively Managed Distal Radius Fractures: Complications and Reintervention Rates From a Single Center**

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**Purpose:** The primary aim was to determine the rate of complications and the reintervention rate in a consecutive series of operatively managed distal radius fractures.

**Methods:** Data were retrospectively collected on a consecutive series of 304 operatively managed adult distal radius fractures (OTA / AO 2R3) treated at our institution in a single year. Inclusion criteria were acute unstable displaced distal radius fractures that were managed with surgery within 28 days of injury. Demographic and injury data, as well as details of intraoperative and postoperative complications and their subsequent management, were recorded.

**Results:** There were 304 fractures in 302 patients over the 1-year period. The mean age was 57 years and 74% were female. The majority of patients were managed with open reduction and internal fixation (ORIF) (n = 278, 91%), with 6% (n = 17) managed with manipulation and Kirschner wires and 3% (n = 9) with bridging external fixation. There were 27% (n = 81) with a postoperative complication. Complex regional pain syndrome (CRPS) was most common (5%, n = 14), followed by loss of reduction in 4% (n = 11). Ten patients (3%) had a superficial wound infection that was managed with oral antibiotics. Deep infection occurred in one patient and was managed with washout, antibiotics, and revision to bridging external fixator. Tendon rupture occurred in 3% (n = 10) of patients; six involved extensor pollicis longus (EPL), three involved flexor pollicis longus (FPL), and one involved both FPL and flexor digitorum profundus (FDP) to the index finger. 14% (n = 42) underwent further surgery. The most common indication was removal of metalwork (9%, n = 27), followed by carpal tunnel decompression (n = 4), revision ORIF (n = 4), and tendon transfer for EPL rupture (n = 4). Increasing age ( $P = 0.02$ ), female gender ( $P = 0.02$ ), and high-energy mechanism of injury ( $P < 0.001$ ) were associated with developing a complication. High-energy mechanism injury was the only factor associated with requiring further surgery ( $P < 0.001$ ).

**Conclusion:** This study has documented the complication and reintervention rates following distal radius fracture fixation in a consecutive series of patients from a large center with a defined catchment population. Given the increased risk of complications associated with surgery and the positive outcomes reported in the literature, nonoperative management of displaced fractures should be considered in older patients.