Postoperative Protocol For ORIF Both Bone Forearm Fracture- Dr. Trueblood

**Indications:** Fractures of the radial and ulnar shaft are common injuries of the upper extremity. Even relatively minor displacement of the fracture fragments can result in permanent loss of rotation in addition to a visible deformity. These injuries are managed operatively except in very rare cases of limited functional demands or medical comorbidity.

**Technique:** Fixed-angle, volar plating is the mainstay of modern distal radius operative treatment. A longitudinal incision is made over the flexor carpi radialis tendon. The tendon is mobilized from the distal, volar wrist crease to the distal third of the forearm and retracted ulnarly to protect the palmar cutaneous branch of the median nerve. The flexor pollicis longus is visualized and retracted ulnarly to expose the distal radius. The pronator quadratus and brachioradialis are elevated off their insertion sites to expose the fracture site. The fracture is then reduced using both direct and indirect means. For some intra-articular fractures, Dr. Trueblood may also employ wrist arthroscopy to ensure an anatomic reduction. Provisional fixation is placed. One or more plates are then applied to the fracture and secured using fixed-angle screws. Once a stable construct has been achieved, the wound is irrigated copiously and meticulous hemostasis is achieved with bipolar electrocautery. The pronator quadratus is repaired over the plate and the brachioradialis is left to heal in its relaxed position. The wound is then closed in layers and the patient placed into a sterile dressing with a well-molded volar wrist splint. The patient is predictably discharged to home with plans to follow-up in 10-14 days.

**First 10-14 postoperative days:**
- Postop splint.
- Non-weight bearing to operative extremity.
- Patient encouraged to move elbow and fingers through full range of motion 10x/ hour.
- Elevation and ice encouraged for edema control.

**--1st PO visit 10-14 days--**
- AP/ lat of forearm
- Stitches out in clinic. Steri-strips applied.
- Assess pain control. Rx refills/ adjustments as needed.
- Fit patient with removable cock-up wrist splint.
- Instruct in scar massage. Start scar massage with lotion/ silicone pads 48 hours after stitches are out. May shower, but patient is not to scrub or otherwise irritate the incision until at least 21 days after surgery.
- Therapy prescription.

**Work Restrictions:** May type and write. No lifting, pushing, pulling, or driving/ operating
heavy machinery. No lifting > 5 pounds. Full time splint use in the workplace.

**Weeks 2-6**
- AROM/ PROM of digits. AROM/ AAROM of wrist. No strengthening or PROM.
- Edema control
- Modalities prn
- HEP
- Continue non-weightbearing to operative extremity.

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**2nd postop visit at week 6—**
- AP/ Lat of forearm
  - If 3+ cortices bridged with callus and fracture site nontender, advance to Phase 2 therapy
  - If still tender or no bridging callus, then continue Phase 1 therapy restrictions and see back in 2 weeks.
- Assess pain control and ROM.
- Patient to wean from splint over course of 1-2 weeks as they increase in confidence with the use of their injured extremity.
- Work restrictions: 10# weight lifting. No pushing/pulling. May operate motor vehicle/light machinery. Must be able to attend physical therapy and wear splint on work site, as needed.
- Therapy consult order:

  *If patient’s pain is out of proportion to expectation or swelling unusually pronounced at 6 week follow-up, they need to see Dr. Trueblood at his next available office visit.*

**Phase 2 Therapy (Regain full ROM and functional strength)**
- Weight bearing: WBAT
- ROM: Aggressive AROM/ PROM
- Strengthening: Start light grip strengthening at 6 weeks. Start wrist extension/flexion/pronation/supination strengthening at 8 weeks.
- Splinting: Wean from static wrist splint as tolerated. If ROM< 40° in any direction at 8 weeks, add static progressive splint to address that deficit.
- When Strength= 80% of contralateral side in grip and lifting from the floor, may consider transitioning to work hardening program in patients with heavy manual labor job descriptions.

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**3rd follow-up visit at 12 weeks—**
- Neutral PA/ Lat/ oblique views of operative wrist.
- ROM and Strength Assessment
- Pain Score, Quick-DASH Score
- Review Job Description to confirm appropriate return to full duty work.
- Expectations: Patients should be independently using the injured extremity for all activities of daily living. Heavy laborers should be ready to return to work without restrictions at this point. For unusually high demand activities, work hardening may be used to transition the patient back to full duty. Maximum Medical Improvement is 1 year from the day of surgery.