ORTHOPEDICS & SPORTS MEDICINE
BAYCARE CLINIC®

Dr. Klika & Dr. Kirkpatrick
DRUJ Reconstruction
Phase 1- Maximum Protective Phase- Weeks 0 - 6

Goals for phase 1
- Immobilize and protect reconstruction
- Pain and edema control
- Educate patient in home program and importance of wearing splint at all times
- Educate patient to return to clinic for splint adjustments as needed to ensure comfort and compliance with splint use.

Other considerations
- Patient will most often be referred to therapy for initial therapy visit after his/her 2-week follow-up with surgeon. This appointment consists of splint fabrication and patient education in ROM of uninvolved joints, edema management, scar management, and education in physical activity restrictions.
- Begin therapy if patient unable to make full composite flexion

Orthosis
- Muenster splint- elbow at 90 degrees, wrist in slight extension, forearm in neutral
- To be worn at all times

ROM
- 2 weeks post-op: AROM to uninvolved joints (shoulder, digits)
    - Begin therapy if patient has increased swelling and/or inability to make composite flexion
    - If the patient has no issues with swelling and able to complete composite flexion the patient is instructed to continue splint at all times, with deferred therapy until week 4 for check-up on scar and edema

Scar Management
- Begin scar massage no sooner than 2 days after suture removal after scar is fully closed with no scabbing present. Begin with light massage using lotion.
- Apply scar remodeling products as needed

Edema Management
- Light compression with coban or compression sleeves to digits, hand, and forearm
- Elevation
- Manual Edema Mobilization (MEM)

Functional Activity
- Splint on at all times
- Use involved UE with non-resistive, light ADL/IADL only within limits of the splint.
- Wear splint for showering, but may remove for hand hygiene

Phase 2 – Begin Range of Motion- Weeks 6 – 12

Goals for phase 2

- Continue to protect healing repair while restoring pain-free AROM
- Continue pain, edema control, and scar management

Orthosis

- Transition to wrist hand orthosis. Patient may begin weaning from orthosis at 8 weeks post operatively.

ROM

- Initiate gentle active range of motion to wrist and forearm AROM 6x/day for 10-minute sessions; begin with closed chain AAROM using small light weight ball and progress to open chain against gravity.
- Continue with active and passive shoulder, elbow, digit ROM as appropriate

- 8 weeks
    - Gentle PROM may be initiated

Manual Therapy

- Continue phase 1 scar and edema management
- Desensitization

Modalities

- Fluidotherapy for heat, ROM, and desensitization
- Paraffin may be used for deep heat

Functional Activity

- Encouraged participation of involved UE in non-resistive ADL
- Wrist support/splint provided by MD to be worn with heavier ADL/IADL within physical activity restrictions

Phase 3 – Maximize ROM and Initiate Strengthening- Weeks 12 to 16

Goals for phase 3

- Restore functional pain-free range of motion
- Initiate isotonic strengthening
- Return to activities of daily living

Other considerations

- PROM to forearm should be performed by securing at the forearm and not distal to the wrist to avoid torsional load on the DRUJ
- Although PROM is indicated for joint and soft tissue restrictions, avoid painful ROM and stretching beyond a functional range of motion. The end goal of surgery is to stabilize the wrist for pain-free function.

Orthosis

- Continue wrist hand orthosis with heavy activities

ROM

- Continue AROM to wrist and forearm
- Pain-free PROM to wrist and forearm to restore functional motion

Strengthening

- Initiate forearm, wrist and hand strengthening beginning with isometrics and progressing to isotonics
- Initiate isotonic strengthening including resistive wrist and forearm exercises using looped TheraBand
- Gentle grip strengthening and pinch strengthening with putty
- Begin closed chain proprioceptive/stabilization exercises (example: rhythmic stabilization with patient's hand placed on ball) Progress to open chain proprioception/stabilization exercises (examples: marble in lid, labyrinth/phone games, wrist alphabet with light free weight, oscillation with flex bar, gyroball, body blade)
- Scapula stabilization and proximal upper extremity strengthening

Manual Therapy

- Continue phase 1 scar and edema management
- Desensitization as needed

Modalities

- Fluidotherapy for heat, ROM, and desensitization, as needed
- Paraffin may be used for deep heat, as needed

Functional Activity

- Continued use of involved UE with ADL/IADL within physical activity restrictions
- Utilize wrist hand orthosis with heavier activities

Phase 4 – Progress Strengthening and Return to Function- Weeks 16+

Goals for phase 4
- Restore functional strength
- Return to work full duty
- Restore ROM to 85% of pre-surgical ROM at 6 months

Other considerations
- Patients returning to heavy labor jobs may benefit from continued wrist support use to prevent re-injury

Orthosis
- Continue wrist hand orthosis with heavy activities

ROM
- Begin aggressive PROM
- Maximize wrist and forearm ROM to 85% of pre-surgical range by 6 months post operatively

Manual Therapy
- Continue scar and edema management as needed

Strengthening
- Progress forearm, wrist, and hand strengthening
- Progress scapula stabilization and proximal UE strengthening

Functional Activity
- Continued use of involved UE with ADL/IADL within physical activity restrictions

Work Conditioning
After 16 weeks and with MD consent a comprehensive work conditioning program for patients with high demand / heavy manual labor occupations may be appropriate

References

Cannon, Nancy M. et. al. Diagnosis and Treatment Manual for Physicians and Therapists, 4th Ed. The Hand Rehabilitation Center of Indiana. Indianapolis, Indiana. 2001.

Lawler E, Adams BD. Reconstruction for DRUJ Instability. Hand 2007; 2:123-126.

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