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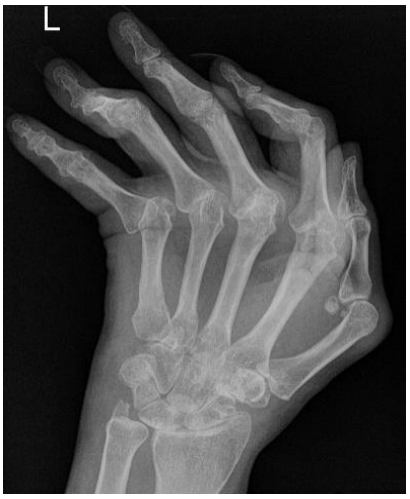
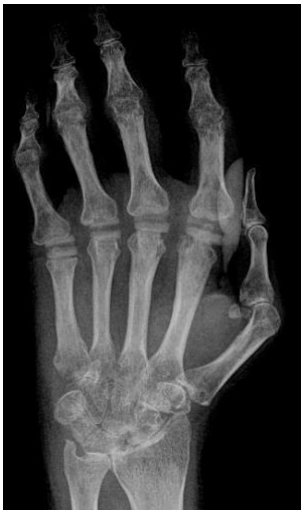
OCCUPATIONAL THERAPY – HAND THERAPY

MCP JOINT REPLACEMENT & EXTENSOR MECHANISM RECONSTRUCTION
Dynamic splinting protocol for Professor M Imam



Pre-op

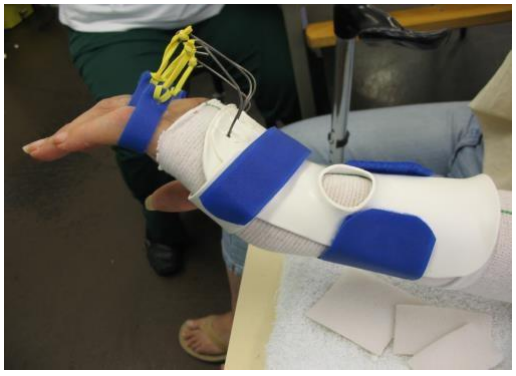


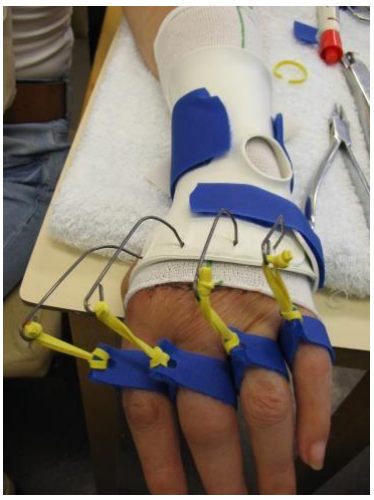
Post-op

Op – Patient is placed in POP for 2/52 & then reviewed by consultant.

2/52 post op

- ROS and bulky dressings in clinic
- Fabricate two splints (third may be needed for exercises only):
    1. **Dorsal-based dynamic out-rigger splint for day-time** (to be worn for 6/52 and longer as advised) (see below):





- Wrist at 30˚ extension (or at comfortable extension for patient) and

neutral deviation if possible.
- MCP 10-20˚ flexed / 15-20˚ radial deviation
- IPJ's free (proximal phalanx held in sling)
- Thumb free

2. **Volar-based resting splint in POSI for night-time** (To be worn for 12 weeks and longer if necessary)
   - Wrist 30˚ extension, neutral deviation
   - MCP 60˚ flexion
   - IPJ 0˚
   - Thumb free
3. **IPJ blocking (Sandwich)** splint to isolate MCPJs when exercising (see below)

- Exercises **within** dynamic splint, to be completed every two hours:
  - Passive extension of MCP joints
  - Active flexion of PIP & DIP joints (intrinsic minus / hook grip)
  - Active MCP flexion (with exercise splint)
- Reinforce advice regarding risk of dislocation, plus:
  - Not to use hand for ADL
  - Not to drive
  - Do not get wound or splint wet
  - To maintain elevation
  - Free active elbow, shoulder & thumb movement
- If scar is healed then soak hand & commence scar management – consider ultrasound as appropriate.

3/52 post op

- Scar management – soaking, massage, ultrasound as appropriate
- Assess AROM
- Begin the following exercises:
  - Passive wrist extension
  - Finger walking towards radial border.

4/52 post op

- Check & encourage the following exercises:
  - Intrinsic minus & intrinsic plus movements
  - Isolated PIP & DIP active flexion / extension
  - Radial finger walking
  - Active range of motion at wrist fingers & thumb
  - Active flexion of MCP within exercise splint
- If appropriate, then remove day-time splint & replace with *hand* based dynamic, or neoprene 'mud' splint.
- Scar management – monitor for adhesions
- Commence light pinch grips within dynamic splint.

6/52 post op

- Fabricate hand-based dynamic splint for day-time to free the wrist (to be worn for up to 6/12 post op)
- Continue with night splint

- Commence light functional activity
- Advise re joint protection e.g. avoiding grips that encourage ulnar deviation
- Commence **gentle** passive flexion exercises.
- Provide patient with 6/52 post extensor tendon repair information

7/52 post op

- Check the current exercises
    - Standard active finger exercises
    - Walking fingers towards radial border
    - Lifting fingers off flat surface
    - Gentle passive flexion of MCP / PIP joints
- Scar management – vigorous friction / scar massage to prevent adhesions, monitor for any hyper-sensitivity
- Reduce night splint to hand-based only for comfort if needed.
- Increase exercises as appropriate

8/52 post op

- Commence passive exercises:
    - Passive active assist of all finger flexion (individual & composite)
- Build on intrinsic muscle strength:
    - Squeeze therasponge between fingers
    - Radial deviation with yellow theraband resistance.
- Monitor for oedema, sensitivity, scar management, functional difficulties
- Measure AROM
- Advise re returning to driving and work
- Provide patient with 8-10/52 post extensor tendon repair information

12/52 post op

- Grade use of hand
- Resisted grip exercises within dynamic splint
    - Pinch grip (e.g. pegs)
    - Gross grip (e.g. therasponge)

Ongoing

- Discontinue use of dynamic splint, except for heavy activity as required
- Continue night splint
- Monitor functional use of hand & avoid grips that encourage ulnar deviation of fingers.