1º FLEXOR TENDON REPAIR
-REHAB-

Royal United Hospital Bath NHS Trust

Early Mobilisation Technique
- inhibits restrictive adhesion formation
- promotes intrinsic healing and synovial diffusion
- produces a stronger repair compared with immobilised tendons

Physiotherapy should begin ~48hrs p.o. (following communication with surgeon).

Initial Session
- R/O POP & dressings
- Wound assessment and gentle cleaning if required-aseptic technique
- Wounds redressed with minimal dressings to allow mobilisations
- Dorsal thermoplastic splint fashioned . Include all 4 digits (except FDP Zone 1-Ref 3) or thumb only for FPL repair:
  Wrist flexed ~0-20º
  MCP's flexed ~60-90º (90º if Digital Nerve Repair)
  IP's neutral
- Advise patient to keep tension off digit strap to prevent inadvertent resisted flexion

- Home Exercise Program (HEP) taught-with splint kept on:
  Passive flexion MCP & IP's/active extension IP's x5) "Warm-up"
  Isometric hold in flexion i.e. place and hold x5) Hourly
- Elevation +++ (for 2 weeks p.o.)
  -Explanation of rehab and importance of patient involvement-

First 3 weeks p.o.
- Splint remains on full time (F/T), except under physiotherapy supervision
- HEP a/a continued
- Wound and Skin care advised
- Scar Tissue Massage (STM) begun when wound healed, avoiding strain on repaired tendons
- Protected Passive Movements i.e. in offloaded position

3-6 weeks p.o.
- As first 3 weeks
- Active flexion, after warm-up (HEP)
- Active Differential Tendon Gliding Exercises. These elicit maximum total and differential flexor tendon glide at wrist/palm level:
  Straight Fist = maximum FDS glide in relation to surrounding structures
  Full Fist = maximum FDP " " " " " "
  Hook Fist = maximum glide between FDS & FDP
- **Light** Activities e.g. towel walking
  light pick-ups
  gentle putty squeezing (light putty)

6 -8 weeks p.o.

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Physiotherapy
Sen I Hands

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- Splint extended to neutral position and worn part time (P/T)i.e. O/N & "at risk" times. Initially the times without the splint are short.
- Blocking exercises FDP - PIP & MCP Ext, Flex DIPJ (other fingers flexed)
  FDS - fingers extended, flex PIP, 1 finger at a time
- Gradual introduction of resisted exercise e.g. sustained grip activities
  heavier putty
  putty scraping (p.445 Ref 2)
- Smoothly gliding tendons-not even light resistance until 7-8 weeks p.o.

10-12 weeks p.o.
- Return to work
- Splint discarded
- Slow stretch EOROM if full length not achieved

12-14 weeks p.o.
- Return to contact sport

Variations
- Mr. Paterson advises Belfast regime*/Early Active Movement(EAM)/Controlled Active Movement(CAM):
  Initial HEP includes active flexion MCP & IP's x2, after warm-up.
- Mr Giddins advises active flexion to begin ~ 3weeks p.o.
- Over keen patients are progressed slowly, as well as patients showing minimal scarring.

Immobilisation

This is the treatment of choice for
- children under 10 years
- those with cognitive deficits
- those clearly unable/unwilling to participate in a complex rehab program
- to protect other injured structures

References

1. Hunter, Mackin, Callahan: Rehabilitation of the Hand. Surgery & Therapy. (1995).
2. Flexor Tendon Rehab: The Journal of Hand Surgery. Vol.14-B No. 4 p. 383-395. (1989)
3. Harkness C: Canniesburn Hospital Hand Course. (1996)