Flexor and Extensor Tendon Rehabilitation Post Surgery

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Aims & Objectives

- Rehabilitation process
- Tendon repairs – how does rehabilitation vary?
- Common Problems
- Surgeons' input in rehabilitation
- Case study
- Questions

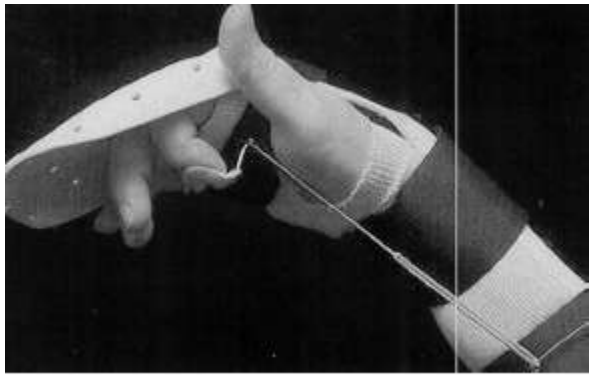
Rehabilitating Tendon Repairs

- Early Active Mobilisation
- Protective splintage
- Oedema management
- Scar management / tethering prevention

Early Active Mobilisation

- Pioneered for flexor repairs 1980s
- Less evidence for extensors
- Should be commenced 2-5 days post surgery
- Active tendon gliding
- Key is simplicity of regimen for both patients and staff (Gratton, 1993)

Finger Flexor Tendon Repair Regimes

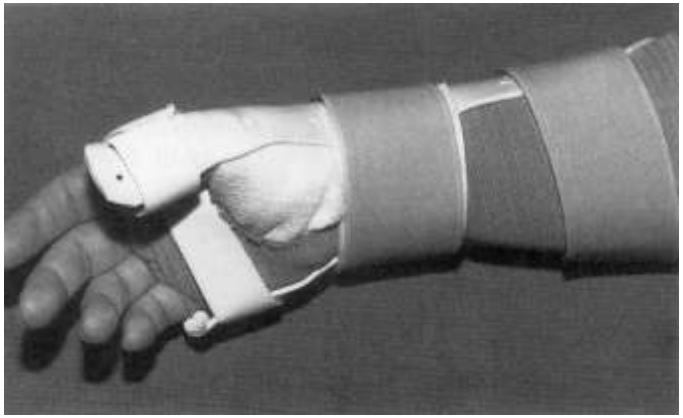


- Kleinert Regime (1967): dorsal splint. Wrist & MCPJ flexion, IPJs extended. Elastic traction from fingernail through palmar pulley to volar forearm
- Hourly active extension & passive flexion exercises
- Poor mobilising of DIPJ
- Incidence of flexor contractures at PIPJ
- Approx 5% rupture rates

Finger Flexor Tendon Repair Regimes

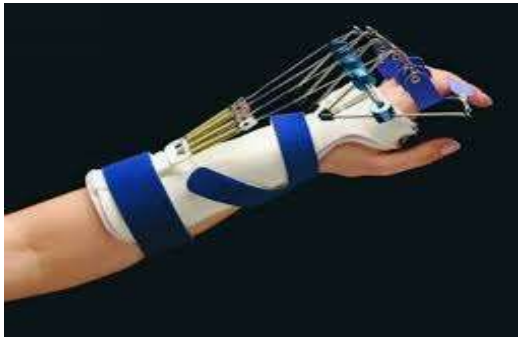
- Belfast Regime (Small et al. 1989)
- Modified regime: 4 weeks continuous splintage, 2 weeks protective splintage
- Progressive active flexion exercises
- Better patient compliance
- Lower risk of contactures

FPL Repair



- Similar regime to FDP/FDS modified Belfast regime
- Gradual increase in flexion/opposition within splint over 4 weeks
- 2 weeks further protective splintage

Extensor Tendon Rehabilitation Regimes



- Static splintage vs dynamic splintage
- Saini et al. (2008) showed static splintage early active mobilisation equally effective
- Static splintage = better patient compliance

Extensor Tendon Repair (zone 1 & 2)

- Continuous splintage 6-8 weeks
- No passive flexion up to 10 weeks
- Same rehabilitation regime as conservatively managed zone 1 extensor injuries (mallet finger)

Extensor Tendon Repair Zone 3

- Gutter splint continuous for 3 weeks
- Gutter splint at night, buddy strapping/capener splint during day for 3 weeks

Extensor tendon repair zone 4-7

- Modified Norwich regime
- Splint continuously 4-6 weeks
- Exercises (MCPJ extension; IPJs flexion) within splint from day one

EPL Repair

- Modified Norwich regime
- Splint continuously 4 weeks
- Exercises within splint as per Norwich regime

Wrist flexors/extensors

Splint continuously for 4 weeks

Review at 4 weeks – ?protective splintage for further 2 weeks

Common Problems

- Re-rupture (rates anything from 5% to 35%)
- Non-compliance
- Tethering
- Contractures

Surgeons' Input

- Make patient aware:
- Splintage
- Employment implications
- Timescale
- Pain management

Case Study FPL repair

- 11 year old female, missed injury
- Delayed FPL repair (repaired at 7 weeks)
- Very tight repair ++ flexion in splint
- 2 week static period
- 8 weeks total splintage
- 4 months rehabilitation
- Full range of movement