

FLEXION CONTRACTURES OF THE FINGER

The palmar aspect of the PIP joint is especially prone to developing a flexion contracture following an acute injury of that joint. This may include PIP joint dislocations, collateral ligament sprains or volar plate (hyperextension) injuries.

Prolonged joint swelling is often the main reason for this. Ongoing swelling loaded with fibrin thickens and eventually contracts the palmar aspect of the capsule. This may happen gradually over the weeks and months following injury, as patients with chronic swelling often find they lose the ability to fully extend the finger.

Commonly the joint remains painful, catches on clothing or whilst at work and becomes aesthetically unpleasing to look at.

Comparative strength of the flexors over the finger extensors and intrinsic muscles accentuate this pattern, as does the resting position of the finger in flexion whilst the patient sleeps or is at rest.

For flexion contractures left untreated that become fixed at 30 degrees or more, serial splinting can be a good conservative management approach. If little progress is made surgical release may become the only option.



A fixed flexion contracture of proximal interphalangeal joint



Examples of static and Dynamic splinting.



PREVENTION

Good early management is the key to preventing problems developing long term.

- Exclude the possibility of a fracture, or avulsion of the volar plate.
- Early referral for hand therapy and resting splintage.
- Resting the joint in a safe position ie: for the PIP joint this is in as full extension as comfortable with the knuckle joint (MLP) flexed. This allows the swelling to settle down – the key to preventing long term problems.
- Massage and gentle compression for swelling. We can advise on products or splints to help with this.
- Balancing exercise with rest in a safe position; buddy straps can help with maintaining movement, but can restrict lymphatic drainage if too tight and will not guarantee against developing a flexion contracture.
- For long term best results, splinting may need to continue for up to 4 months for up to 8 hours a day.

Good early treatment often prevents the development of complications, contractures and subsequent lengthy ongoing management.

We can give advice about restoring motion, preventing tendon adhesion and avoiding a flexion contracture. Eventually a strengthening programme for the finger extensors and for grip strength may be needed.

Prosser, R (1996) "Splinting in the management of proximal interphalangeal joint flexion contractures" J Hand Ther (4) 378-385

Glasgow, C, Wilton J, Tooth, L (2003) "Optimal daily total end range time for contracture: Resolution in hand splinting" J Hand Ther 16 (3) 207-218