Common Hand Problems

Sunshine Coast Hand Therapy www.sschandtherapy.com Katie Whittle (2011)

Condition	Mechanism	Therapy	Prognosis	Surgical indications
Boutonniere deformity	An axial load placed on the tip of the digit causing rupture of the central slip of the extensor tendon. The finger presents with incomplete extension at the PIP joint and hyperextension of the DIP joint.	Early intervention splinting PIP joint in extension for 4 - 6 weeks whilst maintaining DIP joint flexion. Therapy following this period focussing on regaining movement and strength.	Good outcomes with early intervention. Delayed intervention results in longer rehabilitation time and inferior joint movements.	Compound injuries require surgical intervention.
Gamekeeper's Thumb	Radial force on the base of the thumb causing a tear of ulnar collateral ligament. Presentation of pain, swelling at the base of the thumb and discomfort on pinching and grasping firmly.	Provision of a short thumb spica for 4-6 weeks to allow the area to heal.	Partial tears should respond well to immobilisation.	A Stener lesion - when the aponeurosis of adductor pollicis becomes interposed between the ruptured ulnar collateral ligament and its insertion will require surgical intervention.
Mallet finger	Forceful flexion on the DIP joint of extended finger. It results in the rupture or bony avulsion of the extensor tendon insertion.	6-8 weeks full time splint immobilisation of the DIP joint in extension (Xray to check reduction of avulsion). Followed by a further 2 weeks of night splinting.	Good results with early intervention and optimal patient compliance.	Surgery is indicated with lacerations of the tendon, deep skin abrasions, and if the bony avulsion is greater than 20% of the articular surface or if fragment is rotated.
Volar plate injury	Hyperextension of PIP or DIP joints of the finger resulting in a disruption of the volar plate (a thick ligament that prevents over extension of the joint). Oedema and bruising is seen on the volar surface of the finger +/- a small avulsion fracture on Xray.	Early intervention by extension blocking splint, oedema control and tendon gliding for 4 weeks.	Good results with early intervention. No intervention usually results in fixed flexion deformity and sometimes chronic inflammation.	When dislocation produces a large bony fragment.

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Trigger finger	A sensation of catching, snapping or locking of the finger or thumb on movement caused by a disparity in size of the flexor tendon and A1 pulley (over MP head). The digit will pop back suddenly when moved from a flexion to an extended position.	With early intervention of a MP blocking splint the area of tenderness and swelling may resolve leading to smooth tendon glide.	Conservative treatment +/- cortisone injection can produce good outcome if treated early.	If finger is locking significantly, surgical release of the A1 pulley is required.
Jersey Finger	Usually results from grasping another's jersey during rugby and the finger is forced into extension. Results in avulsion of the flexor digitorum profundus tendon from its insertion on DIP joint. Most common on the ring finger.	Conservative treatment of rest, ice, compression and elevation.	Partial tears should respond well to conservative treatment.	Complete avulsion of the tendon with no active tendon glide of the FDP tendon (i.e. no flexion of DIP joint) requires surgical intervention.
De Quervain's Tenosynovitis	Usually results from repetitive thumb activity. Tendons of extensor pollicis brevis and abductor pollicis are involved. Causes pain and swelling over the radial side of the wrist. Sharp pain when the thumb is held in opposition and the wrist is moved towards the ulna.	Conservative treatment involves the fitting of a long thumb spica, NSAID trial +/- cortisone injection. Once symptoms ease, slowly upgrade differential tendon gliding exercises and strengthening.	Mild cases may respond over 4-6 weeks otherwise progress is often slow. Condition is likely to be self limiting with 90% responding over 12 months in one series.	Role of surgery uncertain, may be demand driven early or used for more persistent problems.
Lateral Epicondylitis	Repetitive or prolonged forceful wrist extension is the likely cause. Pain is felt over the lateral aspect of the elbow at the common extensor insertion. The muscle indicated is extensor carpi radialis brevis which is involved in wrist extension.	Resting the wrist in extension can lessen symptoms. Following reduction of pain, concentric exercises of wrist extensors, strengthening of forearm rotators, and upper limb muscles. Use of counter force brace for work long term.	Progress is often slow - 3 - 6 months. Change of activity and repetition will provide best long term benefits. Corticosteroid injections may provide symptomatic relief. 5-10% non responders.	Options for recalcitrant problems: Extracorporeal SWT Botulin injection Autologous injection Surgery

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