

MSK SERVICES PATHWAY - HAND PATHOLOGY

GPs to follow guidance offered within this pathway and where relevant refer using Ardens templates and within remit of CCG Restricted and Not Routinely funded policy.

RED FLAG

Diagnosis to monitor

- History of or suspected malignancy from Clinical Examination
- Active infection
- Cervical stenosis

History & Symptoms

Medical Professionals seeing patients with MSK complaints in primary care should be trained in assessing for alarming features and red flags in all patients.

[▶ Click Here](#)

ASSESSMENT & DIAGNOSIS OF OTHER CONDITIONS

Dupuytren's contracture

[▶ Click Here](#)

Hand/wrist OA

[▶ Click Here](#)

Carpal tunnel syndrome

[▶ Click Here](#)

Cubital tunnel

[▶ Click Here](#)

Tendinopathies

[▶ Click Here](#)

Distal RU joint / TFCC injuries

[▶ Click Here](#)

Ganglions or finger cysts

[▶ Click Here](#)

Trigger fingers

[▶ Click Here](#)

RED FLAG SCREENING: SPECIFIC FOR HAND PATHOLOGY

| | |
|---------------------------|--|
| Red Flag diagnoses | <p>Consider Urgent Referral if:</p> <ul style="list-style-type: none"> History of or suspected possible malignancy from clinical examination. Features suggesting cervical stenosis, e.g. central cord symptoms/signs. <p>Consider referral to ED/fracture clinic:</p> <ul style="list-style-type: none"> Active infection. |
| Injuries | <p>Acute bone, joint or tendon injuries should be directed to ED/fracture clinic. Sequelae/complications of previous injury should be referred onwards to secondary care with an urgency directed by clinical interpretation.</p> |

DIAGNOSIS: DUPUYTREN'S CONTRACTURE

| TYPE OF INFORMATION | GUIDELINES |
|--------------------------------|---|
| Background information | <p>Consider the Procedures of Limited Clinical Value (PLCV) and Procedures Not Funded (PNF) Policy – Palmar Fasciectomy, Collagenase injections and radiation therapy to treat Dupuytren's contracture are restricted procedures.</p> <p>Dupuytren's contracture is a progressive fibroproliferative disease that is believed to show autosomal dominant inheritance. It affects between 3–5% of the population and is up to 6 times more common in men than women.</p> |
| Subjective History | <p>Known risk factors:</p> <ul style="list-style-type: none"> Family history and/or previous medical history diabetes. Occasionally due to liver disease Epilepsy (unclear if link to epilepsy itself or anti-convulsant medication) Greater weekly alcohol intake Hand trauma (link is unproven) <p>Patients describe difficulties with face washing, combing their hair, and putting their hands in their pockets or fitting them into gloves.</p> |
| Examination findings | <p>Natural progression of Dupuytren's:</p> <ul style="list-style-type: none"> Skin thickening and pitting Nodule formation Cord formation Contractures <p>Look for Garrod's knuckle pads (dorsal fibromatosis of the PIP joints) and nodules on the soles of feet (Ledderhose's), which indicates more aggressive disease.</p> <p>The Hueston table-top test involves the patient attempting to lay the palm of the hand flat on a table surface. The test is positive if the patient is unable to flatten the hand on the table.</p> |
| Investigations | <p>Investigations are not indicated</p> |
| Conservative management | <p>For people with Dupuytren's disease who do not have contracture or any significant loss of function:</p> <ul style="list-style-type: none"> No treatment is necessary at this stage. Provide an explanation of the condition and reassure the person that any painful nodules should improve with time. Advise the person to return for review if a contracture develops, as referral is then recommended. <p>Consider referral to Hand Therapy to maximise function and ADL</p> |

DIAGNOSIS: DUPUYTREN'S CONTRACTURE

| TYPE OF INFORMATION | GUIDELINES |
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| Referral on for secondary care opinion: | <p>Consider referral if:</p> <ul style="list-style-type: none"> • Any contracture at PIP joint or significant contracture at MCP joint, in line with PLCV policy which states: • MCP contracture >30 degrees • Any PIP contracture • 1st web contracture • Significant limitation of hand function in activities of daily living. • Radial sided disease. |

DIAGNOSIS: HAND/WRIST OA

| TYPE OF INFORMATION | GUIDELINES |
|-------------------------------|---|
| Background information | <p>Osteoarthritis is defined as a disorder of synovial joints which occurs when damage triggers repair processes leading to structural changes within a joint. Joint damage may occur through repeated excessive loading and stress of a joint over time, or by injury. These repair processes alter the structure of the joint over time, causing typical features of:</p> <ul style="list-style-type: none"> • Localized loss of cartilage. • Remodelling of adjacent bone and the formation of osteophytes (new bone at joint margins). • Mild synovitis (inflammation of the synovial membrane that lines the joint capsule). <p>In some people, these repair processes may alleviate symptoms, but in others they cannot fully compensate for the joint damage, and symptoms of pain and stiffness may occur. Any synovial joint can be involved, and the most commonly affected peripheral joints are the knees, then the hips, and the small joints of the hand.</p> |
| Subjective History | <p>Typically, there is a history of:</p> <ul style="list-style-type: none"> • activity-related joint pain — typically only one or a few joints are affected at any one time, and pain develops over months or years; • no morning joint-related stiffness, or morning stiffness lasting no longer than 30 minutes; and • functional impairment. <p>If multiple joints involved consider inflammatory arthropathy (especially if DIPs spared).</p> |
| Examination findings | <p>Osteoarthritis of the hand typically affects the first CMC joint at the base of the thumb, the distal interphalangeal (DIP) joint, and the proximal interphalangeal (PIP) joint.</p> <ul style="list-style-type: none"> • Pain can radiate distally towards the thumb or proximally to the wrist and distal forearm, and is often exacerbated by pinching actions or strong grip. • There may be wasting of the thenar muscles at the base of the thumb. • The CMC joint may develop a fixed flexion deformity, with hyperextension of the distal joints. • In advanced disease, there may be 'squaring' at the joint caused by subluxation (partial dislocation), formation of osteophytes, and remodelling of the bones. • Initially, there may be features of inflammation such as pain, warmth, redness, and swelling of affected DIP and PIP joints. • As disease progresses, there may be ulnar or radial deviation at affected joints. <p>May have associated features including:</p> <ul style="list-style-type: none"> o Mucoïd cysts (painful mucus-filled cysts) adjacent to the joint on the dorsum of the finger, which may cause longitudinal ridging of the nail. o Heberden's and Bouchard's nodes (bony nodules on the dorsum of the finger next to the DIP and PIP joints, respectively). |

DIAGNOSIS: HAND/WRIST OA

| TYPE OF INFORMATION | GUIDELINES |
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| Investigations | <p>Routine X-ray of the affected joint(s) is not usually needed to confirm the diagnosis. Consider arranging an X-ray:</p> <ul style="list-style-type: none"> • if there is diagnostic uncertainty; • to exclude alternative conditions; • if there is a sudden clinical deterioration in symptoms. <p>Note: structural changes on X-ray may not correlate with reported symptoms and functional impairment.</p> |
| Conservative management | <ul style="list-style-type: none"> • Advise on nature of OA involvement/natural evolution of OA and treatment options • Consider analgesia or NSAIDs – if ineffective consider topical capsaicin • Splinting specific to affected joint (wrist, thumb, finger) and advice on activity modification (ergonomic advice) • 1st dorsal interosseous strengthening for base of thumb OA • Corticosteroid injections <p>Consider referral to Hand Therapy</p> |
| Referral on for secondary care opinion | <p>Referral to specialist hand surgeon for review and further management if:</p> <ul style="list-style-type: none"> • no improvement after 3 months of conservative management; or • insufficient improvement with previous appropriate conservative management. |

DIAGNOSIS: CARPAL TUNNEL SYNDROME

| TYPE OF INFORMATION | GUIDELINES |
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| Background information | <p>Consider PLCV and PNF Policy – carpal tunnel release is a restricted procedure. Carpal tunnel syndrome is a collection of symptoms and signs caused by compression of the median nerve in the carpal tunnel at the wrist.</p> <ul style="list-style-type: none"> • The carpal tunnel is an anatomical compartment bounded on three sides by carpal bones and on the palmar side by the transverse carpal ligament. It contains the median nerve and the flexor tendons. • Reduction in the dimensions of the carpal tunnel or increase in the volume of its contents produce an intermittent or sustained high pressure in the tunnel which causes ischaemia of the median nerve and impairs nerve conduction leading to paraesthesia, pain and decreased function of the nerve. • If pressure on the nerve is continued this can lead to segmental demyelination with more constant and severe symptoms which are in some cases associated with muscle weakness and wasting. |

DIAGNOSIS: CARPAL TUNNEL SYNDROME

| TYPE OF INFORMATION | GUIDELINES |
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| Subjective History | <p>Potential risk factors, include</p> <ul style="list-style-type: none"> • variations in the anatomy of the carpal tunnel, • age over 30 years, • high BMI, • pregnancy, • occupations involving repetitive movements of the wrist • CTS is three times more common in women than men <p>Other risk factors include</p> <ul style="list-style-type: none"> • Peri-menopause • Osteoarthritis and rheumatoid arthritis • Psychosocial factors such as low mood • Distal upper limb tendinopathies and tendonitis • Vibration • Hypothyroidism • Diabetes mellitus • Acromegaly • Space occupying lesions including osteophytes and ganglion cysts. • Wrist trauma <p>Cause is likely to be multifactorial.</p> <p>Typical symptoms include</p> <ul style="list-style-type: none"> • intermittent tingling, numbness or altered sensation and burning or • pain in the distribution of the median nerve (the thumb, index finger, middle finger, and radial half of the ring finger). • symptoms are often worse at night and can disrupt sleep. • may affect one or both hands. • pain in the hand may radiate up the arm into the wrist or as far as the shoulder. • loss of grip strength, clumsiness and reduced manual dexterity |
| Examination findings | <p>Look for:</p> <ul style="list-style-type: none"> • Sensory loss in the distribution of the median nerve. • Atrophy of the muscles of the thenar eminence. • Reduced strength of thumb abduction. • Dry skin on the thumb, index, and middle fingers – trophic ulcers at the tips of the digits may be present. • Positive findings on tests such as Phalen’s, Tinel’s and carpal tunnel compression (Durkan’s) test <p>Exclude nerve root involvement from cervical spine by history and clinical examination.</p> |
| Investigations | <p>DO NOT REFER FOR IMAGING</p> <p>Nerve Conduction Studies (EMG) to be considered if: doubt over diagnosis, possible dual pathology (double crush, diabetic neuropathy etc), recurrence after previous surgery.</p> <p>Arrange appropriate investigations (such as blood tests or ultrasound scan) if a specific underlying cause (such as hypothyroidism or ganglion cyst) is suspected</p> |

DIAGNOSIS: CARPAL TUNNEL SYNDROME

| TYPE OF INFORMATION | GUIDELINES |
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| Conservative management | <p>In the first instance CTS can be managed by:</p> <ul style="list-style-type: none"> • optimising treatment of any underlying condition, such as osteoarthritis, rheumatoid arthritis or hypothyroidism; • advising the person that lifestyle modification / work adaptations may help; and • splinting in a neutral position – this can help with night time symptoms in particular. <p>DO NOT PRESCRIBE NSAIDS OR DIURETICS TO TREAT CTS.</p> <p>Consider up to two corticosteroid injections if adequately trained in case of :</p> <ul style="list-style-type: none"> • no neurological deficit; and- • no improvement from night splint; or • negative NCS but good history |
| Referral on for secondary care opinion | <p>In line with PLCV policy. Consider referral if:</p> <ul style="list-style-type: none"> • partially or unresponsive to conservative management or unconfirmed diagnosis, refer for surgical opinion • severe symptoms affecting function or neurological deficit (continuous decreased sensation +/- muscle atrophy) |

DIAGNOSIS: CUBITAL TUNNEL

| TYPE OF INFORMATION | GUIDELINES |
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| Background information | Compression of the ulnar nerve at the elbow. |
| Subjective History | <p>Typical symptoms described are:</p> <ul style="list-style-type: none"> • paraesthesia/numbness in ulnar nerve distribution; • waking at night; and • decreased intrinsic muscle strength +/- wasting. |
| Examination findings | <p>Typical features are:</p> <ul style="list-style-type: none"> • Decreased sensation in ulnar nerve distribution. • Intrinsic muscle weakness/wasting. • Early fatigue of 1st dorsal interosseous muscle. • Wartenberg's sign (direct tenderness, sensory changes, and positive Tinel's sign over the radial sensory nerve) • Ulnar clawing. <p>Exclude nerve root involvement from cervical spine by history and clinical examination.</p> |
| Investigations | Consider elbow x-ray if history of OA, or previous trauma to, elbow. Consider nerve conduction studies to confirm diagnosis. |
| Conservative management | Postural advice. |
| Referral on for secondary care opinion | <p>Refer to upper limb/hand surgeon if:</p> <ul style="list-style-type: none"> • significantly troublesome symptoms, sleep disturbance; • any wasting/weakness; and • patient willing to consider surgery. |

DIAGNOSIS: TENDINOPATHIES

| TYPE OF INFORMATION | GUIDELINES |
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| Background information | <p>The basic aetiology is a stenosing tenosynovitis as the tendon passes through its retinacular sheath. Repetitive shear stress through the sheath causes irritation to the tendon and its synovial lining (tenosynovium) with inflammation and hypertrophy, along with fibrosis of the retinacular sheath. Over time, the canal will narrow to a point that precludes smooth gliding of the tendon: stenosing tenosynovitis</p> <p>The most common is De Quervain's: tendonitis of the abductor pollicis longus and extensor pollicis brevis tendons as they pass through the first dorsal compartment of the wrist at the radial styloid process.</p> |
| Subjective history | <p>Exclude acute injury/tendinopathy secondary to recent injury</p> <p>De Quervain's presents with pain, tenderness, and swelling localised to the radial side of the wrist 1 to 2 cm proximal to the radial styloid. It is aggravated by thumb movement.</p> <p>Risk factors include:</p> <ul style="list-style-type: none"> • age (40-60) • female • hx of current concomitant conditions with similar pathology • insulin-dependent diabetes • pregnancy and lactation |
| Examination findings | <p>For De Quervain's pain is exacerbated by ulnar deviation of the wrist when the thumb is clasped in the palm (Finkelstein test).</p> <p>Rule out CMC arthritis (direct tenderness over the joint and positive grind test) and radial sensory nerve neuritis (Wartenberg's syndrome presenting with direct tenderness, sensory changes, and positive Tinel's sign over the radial sensory nerve)</p> |
| Investigations | <p>Consider x-ray wrist of base of thumb to exclude other diagnosis and evaluate underlying OA as main cause of tendinopathy</p> |
| Conservative management | <p>Most primary stenosing tendinopathies in adults can be successfully treated non-surgically with:</p> <ul style="list-style-type: none"> • advice on relative rest education with modification of hand/wrist activities • analgesia/NSAIDs if suitable. • splinting relevant to type of tendinopathy <p>Consider corticosteroid injection in case of Dequervain's tendinopathy can only be considered if no improvement after 4 weeks of conservative management and healthcare professional adequately trained</p> <p>Consider referral to Hand Therapy</p> |
| Referral on for secondary care opinion | <p>If symptoms recur after an injection and modification of activities refer to specialist hand surgeon.</p> |

DIAGNOSIS: DISTAL RU / TFCC INJURIES

| TYPE OF INFORMATION | GUIDELINES |
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| Background information | The Triangular Fibrocartilage Complex (TFCC) is the ligamentous and cartilaginous structures that separate the radiocarpal from the distal radioulnar joint. The TFCC consists of an articular disc, meniscus homologue, ulnocarpal ligament, dorsal & volar radioulnar ligament and extensor carpi ulnaris sheath. |
| Subjective history | <p>Mechanism of Injury:</p> <ul style="list-style-type: none"> Occurs with compressive load on TFCC during marked ulnar deviation Forced ulnar deviance (i.e. swinging bat, racket, etc) causes increased load on TFCC |
| Examination findings | <p>Provocative tests:</p> <ul style="list-style-type: none"> Tenderness on Palpation: The TFCC is located between the os pisiform, the ulnar styloid and the FCU. TFCC Compression Test: Pain/clicking with a combination of ulnar deviation and axial compression while performing repetitive flexion and extension. |
| Investigations | <p>Normal x-ray</p> <p>Only refer for further imaging (MR arthrogram) if change of management being considered</p> |
| Conservative management | <p>Most TFCC injuries can be managed conservatively through:</p> <ul style="list-style-type: none"> RICE and activity modification in acute phase; followed by wrist mobilization / ROM exercises; followed by intensive wrist strengthening |
| Referral on for secondary care opinion | Refer for orthopaedic opinion only if change of management being considered |

DIAGNOSIS: WRIST OR FINGER GANGLION/CYSTS

| TYPE OF INFORMATION | GUIDELINES |
|---|--|
| Background information | Consider PLCV and PNF Policy – excision of ganglion on wrist is a restricted procedure |
| Subjective history | <p>Risk factors:</p> <ul style="list-style-type: none"> • female; • age 10 to 30 years; • trauma - a definitive link between traumatic injuries of the wrist joint and ganglion formation has not yet been confirmed; • scapholunate instability. <p>Exclude other possible causes of swelling by history and clinical examination.</p> |
| Examination findings | <p>Typical features on examination:</p> <ul style="list-style-type: none"> • subcutaneous wrist mass • Diameter is typically 1 to 4 cm, although can reach up to 8 cm. • Characteristics include being smooth and slightly mobile with no connections to underlying tendons. • wrist pain • Patients may experience occasional aching discomfort secondary to compression of surrounding structures. • non-tender mass • There is usually minimal to no pain on palpation unless the cyst is overlying neurological structures. • increased mass size after activity • Ganglions can often increase temporarily with strenuous activity of the involved extremity. • trans-illuminating mass • Typical 'glow' of a fluid-filled cyst is observed when a penlight is held next to the cyst. |
| Investigations | X-ray hand/wrist to exclude underlying significant OA/ligamentous injury |
| Conservative management | <p>Educate patient with regard to nature, history of ganglion secondary to OA. They are almost always self-limiting. Most disappear within 5 years.</p> <p>Injections are not indicated. Aspiration under local anaesthetic by orthopaedic surgeon can be considered if sizeable ganglion, interfering with daily activities.</p> |
| Referral on for secondary care opinion | <p>Consider referral only if:</p> <ul style="list-style-type: none"> • significant underlying joint involvement or pain; • not well managed by conservative means; or • if unsure of diagnosis. |

DIAGNOSIS: TRIGGER FINGER

| TYPE OF INFORMATION | GUIDELINES |
|---|---|
| Background information | <p>Consider PLCV and PNF Policy – trigger finger release is a restricted procedure</p> <p>The basic common features of all stenosing tendinopathies are pain, swelling, and tenderness at the point where an extrinsic tendon enters its retinacular sheath. Symptoms increase with active motion and more so with resisted motion. Lack of motion associated with increased pain may signify locking, and patient may report needing forcibly straighten fingers when locked.</p> |
| Subjective history | <p>Risk factors – as for De Quervain’s</p> <p>Consider combined CTS involvement through history and clinical diagnosis.</p> |
| Examination findings | <p>Digital flexor tendon tendonitis at the A1 pulley in the hand (trigger finger) typically presents with painful catching or popping of the flexor tendon, which occurs as the patient flexes and extends the digit. The digit may be locked in flexion; passive manipulation into extension may release the locking. Prolonged neglect will result in flexion contracture of the finger. A tender nodule may be palpable at the A1 pulley.</p> <p>Trigger finger classification</p> <ul style="list-style-type: none"> • Grade 0: mild crepitus in the non-triggering finger. • Grade 1: no triggering, but uneven finger movements. • Grade 2: triggering is actively correctable. • Grade 3: usually correctable by the other hand. • Grade 4: the digit is locked. |
| Investigations | Not indicated |
| Conservative management | <p>Education of patients with regard to diagnosis.</p> <p>Corticosteroid injection at A1 pulley if troublesome/locked.</p> |
| Referral on for secondary care opinion | <p>If locked (irreducible) and does not release 1-2 weeks after injection, or if no improvement / recurrence after 1 injection, consider referral to hand surgeon.</p> |