Fig. 2. The 'safe position' held in place with a splint.

With the hand now in the safe position, elevation can be maintained until there is early reduction of the swelling (this is normally noted by wrinkling of the skin). Thereafter, the splint can be judiciously removed. Administration of analgesics must be maintained and the physiotherapist can start early active and passive range of motion exercises.

Summary

- The first goal is elevation and early motion. This might require analgesic support and physiotherapy intervention.
- If the trauma is excessive, the patient will not be able to mobilise and will invariably end up developing stiffness in a non-anatomical position.
- The hands of these patients need to be manipulated into the 'safe position' and immobilised temporarily.
- The safe position is with the MP joints flexed 90° and the IP joints fully extended. The thumb is kept away from the palm.
- Once the initial swelling subsides, the splint can be removed intermittently for active exercises and rehabilitation.
- Rehabilitation needs to be continued until maximum or normal range of motion is achieved. The judicious use of physiotherapy and occupational therapy by a dedicated hand therapist is advised.

Wrist pain

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Like many musculoskeletal joint pathologies, the wrist may be affected by a wide variety of clinical entities. This, combined with the

Table I. Summary of wrist pain

Zone of discomfort Pathology	Brief clinical description	History pointers	Examination	Special investigations
Dorsal Dorsal wrist syndrome/ occult ganglion	Diffuse clinical spectrum ranging from partial injury to scapholunate ligament to early ganglion formation	Age 15 - 35	Point tenderness over dorsal scapholunate ligament	Ultrasound/MRI
Kienböck disease (uncommon)	Avascular necrosis of lunate bone	Gradual onset of pain	Loss of extension together with dorsal swelling/ synovitis	X-ray/MRI
Dorsoradial De Quervain's	Tendon entrapment of APL and EPB in 1st dorsal compartment	Often mothers with young infant	Often nil to find except strongly positive Finkelstein's test (thumb in palm, forced ulna deviation of wrist)	Nil
Wartenberg's syndrome	Radial nerve neuritis – uncommon	Direct blow to radial side of wrist or tight band around wrist	Positive Tinel over the radial sensory nerve Decreased sensation dorsum 1st web space	Nil
Intersection syndrome (very uncommon)	Inflammation between wrist extensors and thumb extensors	Paddlers/rowers/sailors		Nil
Radial Scaphoid pathologies	Can range from acute fracture to non-union	Usually a history of trauma		X-ray
Radioscaphoid arthritis	Can present years later			X-ray
Scaphotrapezial trapezoid (STT osteoarthritis)	Often occurs in combination with thumb arthritis	Severe pain on forced radial deviation (reverse Finkelstein test)		X-ray
Volar radial Volar ganglion	More common in women 2nd most common wrist ganglion which originates from the volar wrist ligaments		Point tenderness between FCR and radial artery	Nil
Flexor carpi radialis tendonitis	Nil	Pain usually associated with STT arthritis	Nil	Nil
Base of thumb osteo arthritis	Very common cause of wrist & thumb pain	Pain on pinching, writing, opening jars, etc.	Tender base of thenar muscles. Strongly positive crank and grind test	X-ray
Volar Carpal tunnel syndrome	Most common entrapment neuropathy involving median nerve	Nocturnal symptoms Pins and needles	Positive Tinel test and positive Phalen's test	Nil

CONTINUED... Table I. Summary of wrist pain

Scaphoid tubercle injury	Fracture or bone bruise of scaphoid tubercle	Uncommon. Usually following a direct fall	Point tender over scaphoid tubercle	X-ray
Volar ulna				
Flexor carpi ulnaris tendonitis (uncommon)		Acute calcific tendonitis of FCU tendon. Acute severe pain	Can mimic infection	X-ray
Hamate fracture		Always after golf, baseball, cricket Occasionally due to fall	Pain on resisted flexion of little and ring fingers in ulna deviation at wrist	CT scan
Pisiform/triquetrum osteoarthritis	A not uncommon osteoarthritis between the pisiform of triquetrum bones	Elderly patients	Pain and crepitus between bones	X-ray
Ulna				
TFC	The triangular fibrocartilage complex of the wrist is a critical and often injured anatomical structure	Acute, severe pain on loading and rotating the wrist	Points to ulna side of wrist. Severe pain on end range pronation and supination	X-ray & MRI arthrogram
Extensor carpi ulnaris tendonitis		Uncommon	Swelling, crepitus ± subluxation of tendon can be palpated	Ultrasound/MRI
Distal radio-ulnar joint pathology	The distal radio-ulna joint can be an important cause of pain	Nil		X-ray
Ulna impaction syndrome	In patients with a positive ulna variance, the ulna can impact against the lunate causing pain	Complex and uncommon injury		X-ray & MRI
Lunato triquetral ligament tear	Lunato triquetral ligament is the 2nd most common ligament instability after the scapho-lunate ligament	Might be associated with avulsion fracture of triquetrum	Pain on ulna deviation of wrist	X-ray
Radiotriquetral ligament tear	Common injury after fall onto outstretched hand		Point tender over dorsal triquetrum	X-ray

fact that the wrist is packed with multiple anatomical structures, has the potential to make the clinical diagnosis of wrist pain difficult. Luckily, more than 90% of all wrist pain presentations fit into clear 'pattern recognition' entities. The diagnosis, as always, is facilitated by a pertinent history, a focused examination, and the judicious use of special investigations.

History

- Where is the pain?
- What exacerbates the pain (i.e. what specific actions and/or postures or time of day worsens the pain)?

These two questions are by far the clearest pointers to the possible problem. The clinician must make a note of where the patient points. The wrist is divided into discrete zones: dorsal, dorso-radial, radial, volar-radial, volar, volar-ulna, ulna and dorso-ulna. Each of these zones has a few common clinical entities that have specific pain presentations (Table I).

Other relevant questions

- Sports/hobbies?
- How long has the pain been there?
- Any history of trauma or so-called 'sprained wrist'?
- Is an infant being nursed?

Examination

Following standard orthopaedic practice, the wrist is examined in the following order: look, feel, move. Swelling can sometimes be seen with ganglions or de Quervain's tendonitis. Palpation reveals the area of maximum tenderness, which is important for some conditions but notoriously unreliable for others (Table I). Active and passive range of motion should be noted, specifically looking for pain at the end ranges:

- pain on end flexion: occult ganglion
- pain on end extension: occult ganglion, Kienböck disease, flexor carpi radialis (FCR) tendonitis
- pain on end pronation and/or supination: triangular fibrocartilage complex tear
- pain on end ulna deviation: de Quervain's
- pain on end radial deviation: scapho-trapezial-trapezoid (STT) arthritis.

Special investigations (Table I)

- These are commonly over-requested.
- Standard posteroanterior (PA) and lateral radiographs are usually sufficient for screening.
- An ultrasound scan can be done for tendonitis/occult ganglion.
- An MRI scan may be done for intrinsic pathology on specialist request.

Summary

- Wrist injury is a common cause of upper limb pain.
- It usually occurs after a fall.
- Ninety per cent fit into pattern recognition entities.
- Divide the wrist into distinct zones.
- There are very specific pathologies in each zone.
- If in doubt about diagnosis, then immobilise and repeat the examination in one week.

Common hand conditions

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Other than hand injuries and infections, the general practitioner and those involved in primary health care should be able to correctly diagnose, manage and treat where appropriate the common conditions affecting the hand. Many systemic diseases such as diabetes, rheumatoid arthritis and gout can, and often do, present with secondary hand involvement. This article focuses on five common primary hand conditions. These five pathologies cover more than 90% of all patients presenting with hand-related symptoms.

Carpal tunnel syndrome

- There is median nerve compression at the wrist level.
- It is the most common form of nerve entrapment.
- It commonly occurs in middle-aged