

## HAND AND WRIST

### Dupuytren's contracture

Dupuytren's contracture is a condition that causes lumps and cords to form in the palm of the hand and fingers. It can lead to the fingers bending down into the palm with loss of ability to straighten the fingers. The condition can be treated and helped, though not cured, by surgery. Depending on the severity of the condition the following operations can be performed: fasciotomy, selective fasciectomy, dermofasciectomy using skin graft.

### Ganglion

A ganglion presents as a fluid-filled cyst or swelling around the hand and wrist. Those on the back of the wrist joint may become quite large and can be sore. These can be removed but may recur. Ganglions can also occur on the back of the joint of the finger tip. These can also be removed in a similar way.

### Trigger finger release

The flexor tendon that bends the finger runs in a tight sheath or tunnel. Constriction of the tendon in the tunnel produces a swelling on the tendon which then flicks in and out of the sheath producing snapping of the finger from a bent to the straight position. This is painful and inconvenient. The sheath can be released and the triggering cured.

### Carpal tunnel release

Carpal tunnel syndrome (entrapment of the median nerve at wrist level) is a common condition that typically causes intermittent tingling and feelings of altered sensation in the thumb, index, middle and ring fingers of the hand. These feelings are often described as 'pins and needles.' Pain is also a feature of the condition and localises to the base of palm and front of wrist area. Carpal tunnel syndrome can be relieved by division of the thick ligament under which the nerve runs leaving a small discrete scar on the base of the palm.

### Other nerve compressions

There are a variety of other nerves in the arm that can become trapped or pinched in specific anatomical sites. Cubital tunnel syndrome is the most common of these and produces pain around the inner aspect of the elbow. It is relieved either by the use of night splints with a need to undertake surgical decompression in some cases.

### Tendon transfers

Following irreparable damage to one or more nerves in the arm it is possible to replace lost movement with muscles that can be spared from another part of the arm. The tendon is moved from its normal position to a new site to replace the missing movement. This can help the hand to function more normally.

#### Wrist stabilization operations

Wrist instability is caused by injury to the small ligaments that normally bind together the small bones of the wrist. Torn or partially torn ligaments produce painful clunking and a feeling of the wrist 'giving way.' This group of conditions can be treated by replacing the ligaments using tendon slings, for example modified Brunelli procedure for scapholunate instability, and Adams ligament for reconstruction of distal radioulnar ligaments. Where osteoarthritis has already occurred, partial wrist fusion operations are the best treatment option.

#### Ulna shortening

Ulna impaction is caused by one of the two bones of the forearm known as the ulna being slightly long compared to the other bone known as the radius. As a result the end of the ulna tends to collide with the side of the wrist and cause pain, for example in a hammering type movement. This can be treated by an operation known as ulna shortening where a sliver of the ulna bone is taken out (effectively breaking the bone) and the bone ends joined together and fixed with a permanent metal plate.

#### Trapeziectomy

Osteoarthritis at the base of the thumb produces pain and loss of function with loss of pinch grip and key pinch. Pain is aggravated by heavy use of the hand and in later stage disease causes pain at night and sleep disturbance. Where conservative treatment fails the condition can be treated by removing one half of the joint (trapezium bone) and the thumb base is suspended using a tendon sling.

#### Wrist arthroscopy

Wrist pain can be difficult to diagnose and using a 'telescope' (arthroscope) to look inside the wrist can help with this diagnosis. Conditions such as torn cartilages (TFCC tear) can be treated through the scope at the time.

#### Wrist fusion

Osteoarthritis of the wrist can be treated by partial or full wrist fusion which relieves pain and stiffens the wrist. Wrist joint replacement may be possible in some cases.

### Rheumatoid arthritis

Rheumatoid arthritis is one of the forms of inflammatory arthritis that is normally treated in conjunction with a medical Rheumatology consultant. The disease can affect many parts of upper limb function and a detailed individual assessment needs to be made to establish treatment priorities. Some of the commoner operations include fusions (permanent stiffening) for painful joints, replacement of damaged joints by joint replacement arthroplasty (artificial joints) including knuckle replacement, and stabilization of collapsing joints using ligament reconstructions (swan neck and Boutonnière deformity of the fingers).

### Congenital hand conditions

Children can be born with a variety of anomalies of the hand, wrist and arm. These include webbing of the fingers (syndactyly), extra fingers and double thumbs (duplication, polydactyly) and bent fingers (clinodactyly) to name some of the commoner problems. There is much that can be done for many of these conditions and many of the operations are best done earlier in childhood.