

Chapter 8

The Hand

De Quervain's Disease

This disorder, named for the doctor who first described it, is otherwise known as *stenosing tenosynovitis of the abductor pollicis longus and the extensor pollicis brevis*. This long name, which means inflammation of the area around two specific tendons, is quite a mouthful for a small disease process. No wonder physicians put proper names to conditions, to avoid having to pronounce every specific medical word.

De Quervain's disease affects the two tendons that lift the thumb. Folks with this condition feel pain on the radial side of the wrist below the thumb, especially in lifting the thumb up and away from the hand (Fig. 31). If you feel around this area, you should find a soft area on the radial side of the wrist. Now, move back ever so slightly to a prominence on the radius just before this soft indentation. This is the spot where these two tendons run through a tunnel. Yes, another tunnel! In fact, these tendons occupy and glide through several little tunnels at this point.

Inflammation causes pain here radiating often to the base of the thumb. Medications and injections usually help, surgery being necessary only if other treatments fail. Surgical release of the tunnels, in an outpatient procedure under local anesthesia, will relieve pressure on the tendons, usually relieving all the pain. This particular operation is quite successful with very few failures.

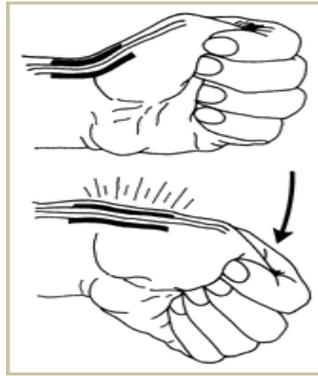


Fig. 31: DeQuerain's Tenosynovitis pain pattern
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Dupuytren's Contracture of the Palm

Dupuytren's contracture, another disorder named for its original describer, is a thickening and contraction of the skin of the palm, usually just off center toward the ring and pinky finger side of the palm. Its cause is also unknown. This condition comes on gradually over a very long time and may not require surgery, even though it can cause enough thickening and contraction of the skin of the palm to pull the ring finger downward. Most folks with a Dupuytren's Contracture will only become aware of it when they can no longer place the palm flat on an even surface. As the contracture begins to pull the finger towards the palm, thickening can be seen at the base of the ring finger (Fig. 32). In more severe cases, the ring finger may bend 90° at the knuckle nearest the palm, the *metacarpophalangeal (MP) joint*, with the next joint, the *proximal (PIP)*

interphalangeal joint, also beginning to flex toward the palm as well. In the most severe cases, the pinky finger will be pulled down in the same way as the ring finger.

Surgery is indicated only if function is impaired. The operation calls for meticulous dissection and release of the scar tissue, sometimes involving a skin graft.

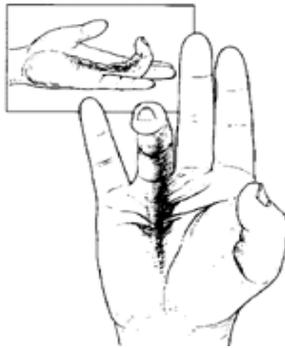


Fig. 32: Duyputren's Contracture pulling the ring finger to the palm.
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Trigger Finger

Trigger finger, a common disorder of the hand, is a much easier name to remember than the technical term *stenosing tenosynovitis*, which means inflammation and thickening of the tendon and its lining. For unknown reasons, the lining of the long flexor tendon to a finger becomes inflamed, and the tendon thickens just before it enters the base of the finger—still another sheath or tunnel through which the tendon must slide.

If the tendon grows larger than the sheath's entrance, it can't slide easily into it when the finger position changes from flexion to extension (Fig. 33).

Initially, the patient may be aware of a popping or snapping sensation, without pain, but as the thickening increases, pain may occur. In some cases, pain at the base of the finger may be the only complaint, the trigger effect coming on later. By the trigger effect, I mean that a flexed finger that one can not extend easily, and when applying enough force to straighten it, the finger seems to pop suddenly into extension.

The fingers most commonly subject to this condition are the middle and ring fingers and thumb, although I have seen it in index and pinky fingers as well. Treatment in the form of anti-inflammatory medications, injections of refined steroid, and stretching exercises will usually help. If the problem persists, outpatient surgery to release the tunnel under local anesthesia and allow the thickened tendon to slide easily is generally very successful.

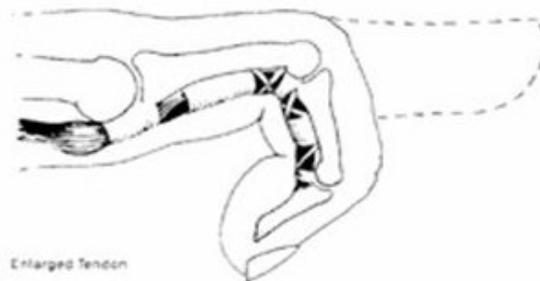


Fig. 33: Trigger Finger - Notice the thickening of the tendon on the left just before it enters the finger. As the finger is straightened out, the tendon will snap as it drawn into and through the tunnel
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Carpo-metacarpal Arthritis of the Thumb

The name of this condition, *carpometacarpal arthritis of the thumb*, tells us two things: there is inflammation in a joint (*arthr-* and *-itis*), at the joint where the long, *metacarpal*, bone at the base of the thumb meets one of the *carpal bones*, the *trapezium* (Fig. 34). This disorder is very common, especially in

women age 40 or older. Pain, usually directly over the joint with radiation into the thumb, occurs in pinching as grasping a key to turn it in a lock, turning a tight doorknob, or opening a jar. As the arthritic condition progresses, swelling and deformity may appear, and, in the worst cases, the base of the thumb may start to slide outward over a flattened trapezium, moving the thumb's metacarpal bone closer to the index finger.

For some patients, the pain, deformity, or both can be quite debilitating despite conservative management by medication and cortisone injections. When all else fails, surgery can be considered to replace the trapezium with a rolled-up tendon or fusion of the metacarpal bone to the trapezium. Recuperation after this surgery is usually at least 6-8 weeks or even 3 months, but the relief of pain and restoration of function are quite good.

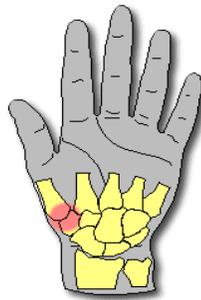


Fig. 34: Location for Carpo-metacarpal arthritis
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Mallet Finger

A *mallet finger* is the result of rupture of the extensor tendon that straightens the finger's outermost joint, the *distal interphalangeal (DIP) joint* (Fig. 35). The typical injury happens when one jams one's finger downward, causing the tip of the finger to droop in a deformity that looks like a small

hammer, hence the word *mallet*. Sometimes, only the tendon ruptures, but occasionally a piece of bone is pulled off with it. Appropriate treatment calls for a splint to keep the finger extended for 6 weeks. If the pulled-off piece of bone is large enough, it may make the DIP joint unstable and crooked, necessitating a surgical repair.

Many of these injuries go unrecognized because initial swelling masks the deformity, but as the swelling subsides the deformity becomes more obvious. Little functional disability accompanies an untreated mallet finger, except that the drooping may be a nuisance for a while until the patient becomes used to it. I know a hand surgeon who has two fingers with such a deformity, neither one ever having been treated. As an internationally known surgeon specializing in the arm and hand, he gets along very well in spite of these pesky conditions.

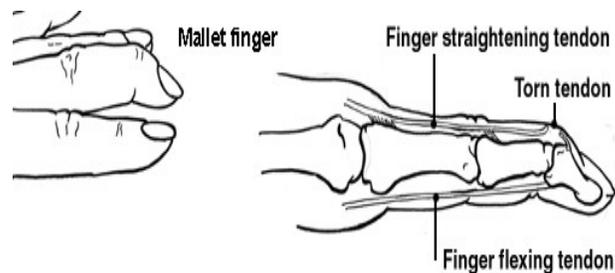


Fig. 35 Mallet finger
www.patient.co.uk/showdoc

