

Information leaflet: DE QUERVAIN'S TENOSYNOVITIS

What is it?

It is a painful condition that affects a couple of tendons of the thumb as they run through a tunnel on the thumb side of the wrist. It was described in the late 19th century by 'De Quervain'.

Is it called by any other names?

De Quervain's disease, Mother's wrist

What is the cause?

There are two tendons (Abductor Pollicis Longus and Extensor Pollicis Brevis) that pass through a tunnel known as the first dorsal compartment on the thumb side of the wrist (*see picture*). They help move the thumb away from the hand.



First dorsal compartment with tendons abductor pollicis longus & extensor pollicis brevis

In De Quervain's syndrome there is thickening of this tunnel resulting in narrowing of the area. The tendons get squeezed and the slippery covering over the tendons (synovium) become inflamed which causes pain. Many people have two small separate tendon tunnels and are predisposed to this problem.

There is no known cause, but a majority of patients will be around the age of 40. The condition is more common in females and on the dominant side. Mothers with small babies are prone to it. This may be due to repeatedly picking the small baby or could be related to hormonal changes due to pregnancy. The condition can occur after a direct impact to the thumb side of the wrist. There is little evidence that it is caused by work activities, but the pain can certainly be aggravated by repetitive use.

What are the symptoms and how is the condition diagnosed?

Patients with De Quervain's syndrome will complain of pain on the thumb side of the wrist especially with certain movements (grasping and pinching). The pain usually starts slowly and the area will be painful if you press it. The area may appear swollen due to inflammation of the slippery covering that surrounds the tendon (synovium).

There may be a lump due to the thickening (*see picture below*). Pain will increase with certain activities and can spread into your forearm. A 'creaking' or 'sticking' sensation may be felt on the thumb side of the wrist with movement. Certain provocative clinical tests will cause pain. The patient will feel pain when the hitchhiking position of the thumb is resisted.

The other commonly performed test is known as the 'Finkelstein test'. With the thumb bent into the palm, wrap the other fingers around it. Then tilt your wrist towards the little finger. This will cause pain.



Will further tests or investigations be needed?

The diagnosis of De Quervain's syndrome is made clinically. However an x-ray may occasionally be needed. Other conditions like intersection syndrome and basal thumb arthritis need to be ruled out.

What is the treatment?

1. Modify or avoiding repetitive activities that cause pain if possible. Anti-inflammatory tablets and local heat application may provide relief. A splint that supports the wrist and thumb can be used. This will keep the affected parts immobilized and provide rest to the thumb.
2. A local injection of a steroid injection into the tunnel will relieve pain in a good proportion of patients. The injection very occasionally causes some thinning or colour change of the skin at the site. Improvement is variable but can be temporary.

3. The need for surgery is indicated if the above treatments do not work. The standard surgery is open surgical release of the tendon tunnel. It can be carried out under local, regional or general anaesthesia, as a day case procedure. At surgery a tourniquet cuff is applied around the forearm so as to stop bleeding and make the operation safer and quicker. This tourniquet is needed for about 10-15 minutes and can be uncomfortable in a small number of patients, when the surgery is carried out under local anaesthesia.

After the operation, a sticky dressing is applied over the surgical wound. A bulky supportive cotton-wool dressing then goes on top of that. This supportive dressing is reduced after a couple of days. The small sticky dressing should be left for 10 -12 days, when the stitches will need to come out. The arm should be kept elevated after surgery for 1-2 days, as this will prevent the fingers swelling and causing discomfort. Light use of the hand should be possible from the day of surgery. Active movements of the finger are recommended soon after surgery.

What happens if it is not treated?

Some mild cases can recover over a few weeks without treatment. The condition is not harmful, but can be a painful and interfere with everyday activities. It will not spread to other parts of the body. Experience is that in most patients the symptoms are disabling, therefore they seek medical help.

What is the success of surgical treatment?

The operation has a generally successful outcome but in a small proportion of patients may not be successful.

What are the complications of surgical treatment?

1. The surgical scar may appear reddish for 2-3 weeks. It may be tender and there is a small possibility that the scar may remain unattractive.
2. Infection of the wound is possible but usually can be successfully treated with antibiotics.
3. Injury to the nerve (superficial radial nerve) can occur. This may lead to altered sensations / feeling over the thumb side of the wrist. If this nerve is damaged it may lead to significant pain and so, it is important that the nerve is cared for at the time of surgery. A very painful spot may form where the nerve was cut (neuroma) and a further operation may be needed to deal with this rare complication.
4. Clicking due to flipping over of tendons can rarely occur. This happens because the tunnel that holds the tendons is released.
5. Stiffness of the finger joints is possible, and hence it is very important that the fingers are exercised regularly. This usually improves with hand therapy.
6. Severe Complex Regional Pain Syndrome (CRPS) is a rare but serious complication after hand surgery. Unfortunately it is not possible to predict this problem but it needs to be monitored and treated (usually with physiotherapy) if it develops.



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7. Any surgical intervention has the risk of developing complications / setbacks which are unpredicted. These complications may have the potential to leave the patient worse than before surgery.

Is there anything I can do to improve outcome?

After surgery keep the hand up so as to help reduce swelling. I would advise against wearing rings on the operated hand for 4-6 weeks following surgery. Start exercising your fingers immediately after surgery (Make a fist, and then stretch your fingers out; bend your wrist forwards and backwards and touch each finger tip in turn with your thumb). This will help avoid finger swelling and stiffness.

Keep the wound dry. Once the wound has healed the scar can be massaged regularly with a soft, non-perfumed cream, for a couple of months. If the scar is tender to press, tapping along the scar and on either side of it, firmly with your fingertips, a few times a day may be useful. Try to become used to putting pressure through your hand and wrist again. It is quite normal for this to feel uncomfortable at first.

When can I do various activities?

1. Return to work depends on many factors including the nature of the job and hand dominance. Generally patients can return to a desk job within a few days and perform reasonable tasks with the hand. Manual work should be avoided for 4 weeks.
2. Driving should be possible within a few days of the operation.