Dupuytren's Contracture

What is Dupuytren's contracture?

Dupuytren's contracture is a condition of the hands and fingers. It is sometimes called Dupuytren's disease because not everyone with this condition develops contractures.

At first, there is a thickening of some tissues under the skin in the palm. If the disease progresses you may develop a contracture of one or more fingers. A contracture is when affected fingers bend (contract) towards the palm and you cannot straighten them fully. Typically, the ring finger is usually affected first. Then the little finger, and then the middle finger. It takes months or years for the condition to develop and progress to a contracture.

Dupuytren's contracture is not usually painful. The main problem is that if one or more contractures develop, you cannot use the affected fingers properly. The extent of a contracture varies greatly from mild to severe. Sometimes just one hand is affected. Sometimes it affects both hands.

Some people with Dupuytren's contracture have some thickened tissue under the skin in other parts of their body. For example, a thickening on the knuckles, on the soles of the feet, or on the penis.

The picture shows a severe contracture of the little finger and a mild contracture of the ring finger. You can also see some thickening of the tissues under the skin in the palm.

What causes Dupuytren's contracture?

The tissue called the 'connective tissue' in the affected palm becomes thick and abnormal. This is the tissue just under the skin but above the tendons. This forms into bands of thick tissue which, when it gets worse, pulls the fingers towards the palm. The abnormal tissue that forms is similar to scar tissue that forms following a wound.

The reason why this tissue becomes thickened is not known. There seems to be a genetic factor as it has a tendency to run in some families and it is more common in some countries - mainly northern European. It is more common in people with diabetes, epilepsy, and alcohol dependence - but most people with Dupuytren's contracture do not have any of these other conditions. In some cases it is thought that an injury to the hand may trigger the condition to start in someone who is genetically prone to develop the condition.
However, in most people with Dupuytren's contracture there is no known cause or associated illness or injury. It is not due to your type of job, vibrating tools, manual work, or other working environments.

**Who gets Dupuytren's contracture?**

Dupuytren's contracture is named after Baron Dupuytren who described the condition in 1831. He thought it was due to many years of holding onto the reins of a horse! This is obviously not the cause as it remains a common condition. Most cases occur in middle-aged or older people, but it sometimes develops in younger adults. It is more common in men than women, and is most commonly found in people of European descent. About 1 in 6 men in the UK over the age of 65 have some degree of Dupuytren's contracture.

**Do I need treatment?**

Treatment is needed only if the normal function of the hand is affected - or is likely to soon become affected.

Many people with Dupuytren's contracture do not need any treatment. In many cases the condition remains mild and causes little interference with the use of the hand. There may be just thickened tissue, or thickened tissue with a mild contracture. In these situations no treatment is usually advised. Also, in about 1 in 10 cases, the condition improves without any treatment. However, the condition does tend to worsen over time in some cases. The need for treatment can be reviewed from time to time.

Earlier surgery is more likely to be recommended to you if the bend (contracture) is affecting the first joint within the finger itself as it is much more difficult to correct this with the passing of time.

**Surgical treatments for Dupuytren's contracture**

As a general rule, a surgeon may recommend a treatment to straighten out the affected finger or fingers if:

- There is a contracture of 30-40 degrees or more at a joint between the palm and a finger (an MTP joint).
- There is a contracture of 10-20 degrees or more between one of the small joints in a finger.

There are three main types of procedure:

**Open fasciotomy**

Fasciotomy simply means cutting the thickened tissue. (Another word for the thickened tissue is called fascia.) Open fasciotomy means that to get to the thickened tissue, the overlying skin is cut open. This allows the surgeon to see the thickened tissue, and then to cut it. The skin is then stitched back together. It is a relatively minor procedure which can be done under local anaesthetic as a 'day case'.

**Needle fasciotomy**

This is sometimes called needle aponeurotomy or closed fasciotomy. What happens is that the surgeon pushes a fine needle through the skin over the contracture. He or she then uses the sharp bevel of the needle to cut the thickened tissue under the skin. In effect the needle acts like a 'saw' as the surgeon moves the needle to and fro to 'saw' through the thickened tissue. The procedure is done under local anaesthetic and can be done in an outpatient clinic.

Needle fasciotomy has received quite a bit of press coverage as it sounds like an easy, quick procedure with minimal intervention. However, it is not always suitable. This is
because:

- It is mainly suitable where the contracture is away from important nerves in the hand.
- It tends not to be suitable for severe contractures.
- There is a good chance it will not be of benefit in the long term. The contracture returns in about half of cases within 3-5 years following this procedure. (But, if it does return, the procedure may be able to be repeated.)
- As the surgeon cannot see the end of the needle once it is inserted, there is a risk of damage to nearby tendons, blood vessels and nerves which can cause long term problems.

Needle fasciotomy tends to be mainly suitable for older patients who are unsuitable for more definitive curative surgery, and in some cases where the contracture is in certain sites. Your hand surgeon will advise if it is an option for you.

**Open fasciectomy**

This means removing the abnormal thickened tissue. This is a more extensive hand operation. However, it gives the best chance of a long term cure. It is the most commonly done procedure to treat Dupuytren's contracture.

Remember, all surgical procedures (operations) carry a risk. There is a small risk of damage to nearby tendons, blood vessels and nerves during any of the above procedures, and of infection developing in the hand.

**Non-surgical treatments**

Non-surgical treatments that have recently been studied include injecting a treatment drug (an 'intralesional injection') into the thickened tissue. These aim to counteract the process that causes tissue thickening. Initial trials of injections with collagenase, steroids and 5-fluorouracil have been promising. Some doctors use one of these injections, particularly if the contracture is not too advanced. However, further research is needed to clarify the role of these treatments.

**References**

- Wheeless' Textbook of Orthopaedics; Dupuytren's Contracture
- Needle fasciotomy for Dupuytren's contracture, NICE (2004)

Comprehensive patient resources are available at www.patient.co.uk

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