*nhs*Managers.net | Briefing | 24 October 2022

Medicine for Managers

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Dupuytren's Contracture

The Baron Guillaume Dupuytren ensured his place in medical history when the condition, where one or more fingers of the hand become bent towards the palm and cannot be straightened, became forever linked with his name after he published the description of the condition and its treatment in the *Lancet* in 1831. It most commonly occurs in older men of North European descent.

The palmar aspect of the hand is covered by a sheet of fibrous connective tissue called the palmar fascia and which holds all the structures of the palm in place. The disorder occurs when localised scarring occurs within the fascia and involves the tendons which flex the fingers.

The condition is usually slowly progressive and as the scarring becomes more mature, the fibrous nodules become thickened and shortened with increasing immobility through increased fixed flexion of the fingers associated with puckering of the skin of the palm. The little finger and the ring finger are most commonly affected but the middle finger may become involved. The index finger and the thumb are usually spared. Once established it becomes impossible to lay the palm on a flat surface such as a desk.

In the early stages of the condition patients may notice a lumpiness on the ulnar (little finger side) of the palm which is painless.

As the condition progresses the patient will notice that it is no longer possible to fully extend (straighten) the affected finger(s) and can increase the difficulty of performing certain functions using the hand.

The thumb and index finger are not usually affected and so many people with the disorder do not experience much inconvenience or disability with fine motor activities such as writing.

However, as the contracture progresses, it gradually limits the ability of the individual to open the hand, grasp large objects or to get the hand into narrow places.

The cause of Dupuytren's contracture is not known. It was suggested that it was associated with hand injuries or activities associated with using a heavy hammer or a vibrating instrument. However, no evidence has been found to substantiate the suspicions.

There are a number of factors which increase risk of the disease:

- Age, most commonly in men over 50
- Sex, men more commonly than women
- Geography. People living in Northern Europe
- Family History, running in families
- Tobacco and alcohol are associated with increase in incidence
- Diabetes

Diagnosis of Dupuytren's contracture is usually fairly straightforward, based on the look and feel of the hand. Puckering of the skin of the palm and inability to straighten the fingers provide clear diagnostic features.

The management of the condition depends on the degree of severity and incapacity and the general medical condition of the patient.

Some cases will respond to stretching exercises under the care of a physiotherapist. Once, however, the fingers have become fixed in a flexion deformity (such as that illustrated) there is no alternative to some sort of intervention.

Although some people with the disorder are not significantly impaired by it, and therefore do not need treatment, many are significantly incapacitated and the treatment involves breaking apart the fibrous cords that are pulling the fingers towards the palm. There are a number of ways in which it can be done:

Needling is a technique where needles are inserted through the skin and break the cords of tissue causing the contraction. It is simple, requires no incision, and needs little post-operative treatment.

Surgery is the most commonly used option, particularly with more severe cases. The operation removes the scarred tissue in the palm causing the disease.

The advantage of surgery is that it achieves a more complete and long-lasting outcome. Following surgery the fingers are maintained straight using a tight bandage and splint. The operation can restore function and may be very successful although it does not always achieve complete straightening of the fingers. In some cases the deformity may be treated by using low energy radiation which can be effective.

Collagenase. A newer technique involves injecting collagenase into the area of scarring.

The scar, which is composed of collagen, may be broken down by the collagenase enzyme allowing some movement which can be improved by physiotherapy.

Dupuytren's contracture is common and notable sufferers include Ronald Reagan and Margaret Thatcher, Samuel Beckett, David Gower and Graham Gooch and actors David McCallum and Bill Nighy.

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