

Mr. James Henderson

MA, MB, BChir, MRCS, MD, FHEA,
EurDipHandSurg, FRCS(Plast)

Consultant Plastic, Reconstructive & Hand Surgeon
Honorary Senior Lecturer, University of Bristol

www.jameshenderson.net

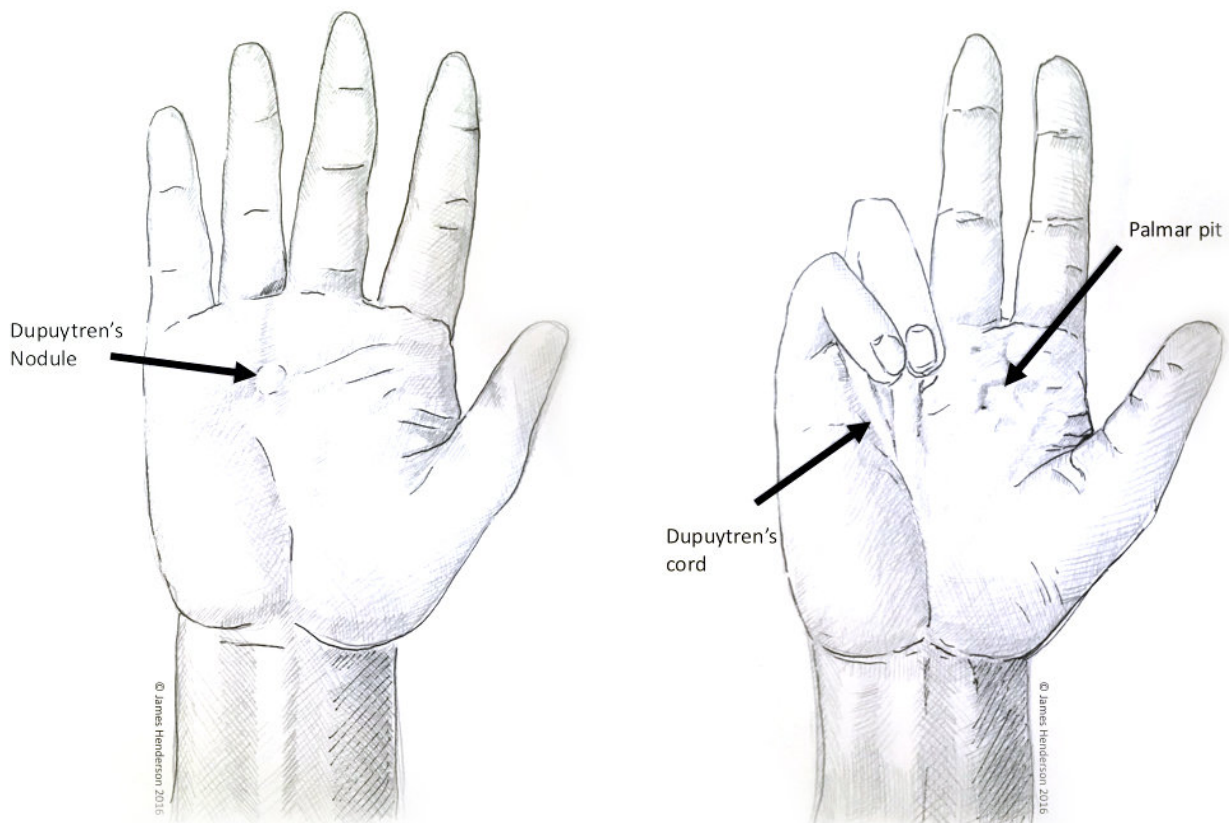


Dupuytren's Contracture

Named after Baron Guillaume Dupuytren, who treated a soldier in Napoleon's army for a contracture, Dupuytren's is a gradually progressing condition whereby cords under the skin slowly pull the fingers into a curled up position. Thickening on the back of the fingers ("Garrods pads") may occur. The condition is not generally painful, and carries no direct risk to health.

The cause of the condition is unknown, but it is mainly genetic and runs in families. Smoking and alcohol, manual work and certain medications have been suggested to contribute, but their role is minor if anything.

The ring and little fingers are the most commonly affected, but it can occur anywhere in the hand, and can be associated with similar contractures elsewhere in the body.



The contractures can be very disabling, and never improve spontaneously. Splinting or stretching are not of benefit. Even after treatment, the process that causes the contractures continues, and many patients need further treatment, although we hope that this will not be for many years, if at all.

The problem occurs in the fascia of the palm of the hand. The fascia is a strong network of fibres that anchors the skin of the palm to the deep structures, so that it doesn't slip or slide when we want to grip an object. This can be seen quite easily by comparing the relatively immobile skin of the palm with the very mobile skin on the back of the hand. Fascia is made of fibres of the protein collagen.

Treatment

The treatment of Dupuytren's contracture will depend on its severity and the wishes of the patient. All the treatment techniques aim to divide the affected fascia in the palm or fingers, and for a longer lasting solution, the fascia is removed, to try to prevent recurrence. I can offer a wide range of treatment options, and will discuss these with you.

Needle Fasciotomy

Some mild cases can be treated by simply dividing the cord in the palm with the sharp point of a needle. This minimises the trauma to the hand, and for some contractures can be very effective. Of course, because there is no attempt to remove the affected fascia, the disease will eventually recur. This treatment may be appropriate for patients with a very mild condition, or a single cord in the palm, as well as those unwilling or unable to undergo a larger procedure.

Limited Fasciectomy

An '-ectomy' means 'taking something out' rather than just dividing it ('-otomy'). A limited fasciectomy can be performed under local anaesthetic, and involves a small operation to remove a section of the diseased fascia. This is done with the aim of preventing or delaying the recurrence of the disease.

Fasciectomy

For more extensive Dupuytren's disease, an attempt is made to remove all of the affected tissue. This typically involves a cut from the palm up along the finger(s). The nerves, arteries and tendons of the finger are identified and carefully protected, and all the affected tissue is removed. The aim of this operation, in addition to allowing the finger to straighten, is to prevent recurrence of the contracture. It is impossible for any surgeon to completely eradicate recurrence with any currently available treatment.

Joint Release

Due to an unfortunate quirk of nature, the middle knuckle of the finger develops a problem if it is held curled up for too long, and this is a common problem with severe Dupuytren's contractures. The ligaments that stabilise the joint become shortened after a period, and the joint cannot be extended even if all the affected Dupuytren's disease tissue is removed. The solution to this problem is to carefully release the ligaments of the joint, elevating them from the bone whilst protecting the nerves, arteries and tendons that overlie them. The joint can then be straightened.

This procedure is relatively straightforward, although in severe cases the tendons, nerves and arteries have also become shortened, and this can limit the amount of straightening possible in the finger.

Skin Graft

Some patients find that the Dupuytren's disease involves the skin of their palm or finger—nodules, and pits can develop. It may not be possible to save the skin and still treat the disease adequately. In this situation, the skin involved can be carefully removed and replaced with a skin graft. I usually take the skin from higher up on the same arm depending on the amount needed and patient preference.

Collagenase (Xiapex®)

In the past couple of years, Xiapex® (aka Xiaflex®) has become a treatment option. This is an enzyme called collagenase, which is isolated from bacteria in culture. The enzyme breaks down the collagen in the Dupuytren's cords, which can then be broken by manipulating the finger. This means that Dupuytren's disease can be treated without surgery. I have found this to be a very effective treatment, but it cannot solve every problem, and I still recommend surgery for many patients.

Collagenase treatment still leads to a lot of bruising and swelling in the hand, and the skin often tears during manipulation, because it is too tight to allow the finger to straighten otherwise. This usually heals up extremely well but needs to be expected.

In 2020 there has been a worldwide supply problem with Xiapex, though I hope that this will be resolved.

Scars

I design my scars to look like zigzags, because all scars shorten as they heal. The scar is planned so that as it shortens it won't make the finger bend again. In time the scars heal to be almost invisible for most patients. Skin grafts are usually rectangular or oval in shape, again planned to limit disease recurrence and prevent contractures. I usually use dissolving stitches, so you don't have to worry about having them removed.

Physiotherapy

After surgery or collagenase treatment, I regard expert physiotherapy as an essential part of the treatment, and I work with a team of specialist hand physiotherapists who will provide the necessary splinting and exercises that will enable you to recover as quickly as possible, whilst preventing scar problems or stiffness. The physiotherapy can be hard work, and you will need to attend regularly. This enables us to routinely obtain excellent results after Dupuytren's surgery.

Time off work and activities

It generally takes 2–4 weeks for patients to return to driving and non-manual work. The wounds are usually healed in two weeks. Patients with skin grafts may take a little longer to get back to work.

Risks of surgery

Cold intolerance—After any hand surgery it is normal for patients to report that their hand is more sensitive to the cold. This resolves gradually over several winters, but can be annoying.

Nerve injury—It is extremely unlikely that you will suffer a permanent nerve injury if I do your surgery for you, but there is a small risk of a nerve to the finger being divided. This can lead to numbness in the finger, and a painful neuroma (nerve scar) can result. The nerves do have to be carefully followed and protected during the surgery, and this can lead to temporary numbness after surgery. The risk is less than 1/300.

Artery injury—There are two arteries to each finger, and it is very unlikely that they would be injured. In operations for recurrent Dupuytren's disease, if one of the arteries was damaged by the surgeon who did the first operation, then any damage to the remaining artery could put the entire finger at risk.

Failure to fully correct the position of the finger—Although it is usually possible to fully correct the position of a finger, sometimes it is better to accept a small degree of deformity. Releasing tightened ligaments can lead to scarring that may make the finger stiff. This may require intensive physiotherapy afterwards, and splints can be required at night for up to a year,

Recurrence—It is not possible to cure the process that causes the contracture. Surgery or collagenase can remove or divide the diseased tissue, and can straighten fingers, but inevitably the process will recur. It is said that half of all patients will require further treatment within five years. I can take an approach with my surgery to try to reduce recurrence by removing as much involved tissue as possible.

Wound breakdown—The wounds that I make on your hand are specifically designed to heal as well as possible and to avoid scar problems or contractures. However as hands need to be mobilised after the surgery to prevent stiffness, wound breakdown can occur. If a skin graft is needed, this is particularly fragile, and needs to be protected as it heals.

© James Henderson 2016,2020