Dupuytren’s Disease:

During your routine activities you may have noticed a friend or relative’s inability to fully extend their finger. In fact, as you think back on it, it seems to have been there a long time but recently getting worse. Perhaps, you have noticed this in your finger. Moreover, you notice a growth in the palm that seems to be tethering the fingers. What causes this loss of motion, unusual growth and what can be done about it?

A common cause of loss of ability to fully extend the fingers is Dupuytren’s Disease.

What is Dupuytren’s disease?
Dupuytren’s disease is caused by a thickening of the collagenous tissue that exists just beneath the skin in the palm. This tissue is known as fascia, specifically the superficial palmar fascia. The fascia exists to toughen the palm tissue and to anchor the overlying skin to the deeper tissues in the hand to keep the palm skin from sliding around or being mobile like the skin is on the back of the hand or at the tip of the elbow. The fascia exists in the palm as well as into the fingers and thus abnormal thickening can therefore extend from the palm to the fingers. The fascia can form thick cords, or rope like structures under the skin, as well as lumps and pits that with time may contract or shorten and thus bend the fingers into the palm. This is then termed a Dupuytren’s contracture. The diseased tissue, the fascia, can adhere itself strongly to the overlying skin but does not affect the tendons deeper in the palm.

The cause of Dupuytren’s disease has alluded physicians and scientists since its description in the 1800’s. It is clear however that certain people are predisposed to the condition due to genetically inherited traits. In fact, it commonly runs in families and is much more common in those with northern European ancestry. Some physicians have proposed that hand trauma might stimulate the process leading to the thickening of the fascia, but the theory is unproven.

What are the symptoms of Dupuytrens?

Patients with Dupuytren’s disease have lumps, pits and cords in their palms. The lumps feel firm and are stuck to the overlying skin. The cords are like small ropes of tough material under the skin running in the same direction as the fingers. The cords are most commonly found in line with the ring or pinky finger. The cords can become so defined that they are mistaken for tendons. As the cords contract or shorten with time they can pull the finger into a flexed posture causing the finger to be in a bent position that cannot be corrected even with significant effort.

The lumps, pits and cords do not typically cause pain. Sometimes in the early phases of the condition the lumps can be sore as they are prominent in the palm and act like a rock in a shoe, being bumped during routine daily activities.
While early in the condition, Dupuytren’s disease does not typically cause any dysfunction or impairment in completing daily tasks. More commonly it causes alarm and angst as a growth is noticed in the hand that was not there previously. As Dupuytren’s disease progresses, causing the fingers to sit in a more flexed posture, it can affect a person’s ability to do simple tasks. Those with the condition most commonly have difficulty with wearing gloves, getting the hand in and out of pockets, and shaking hands. Some with the condition will go for many years with little to no progression of the initial growth of the lumps, pits and cords, while other patients will experience rapid progression in the degree of flexion of the fingers. However, the earlier in life the condition starts, the more common it is to have a more severe form of the disease or progression of the contractures.

Treatment Options

Treatment for Dupuytren’s disease, first and foremost, is based on the patient’s symptoms. If the patient perceives little to no impairment from the flexion than nothing needs to be done. Some patients have learned to live with significant flexion deformities of the fingers. However, most patients do not tolerate significant loss of motion of the fingers and desire to have some intervention to regain hand function. When the fingers are only slightly bent, observation with regular follow-up is warranted. If the disease is more progressed, or the fingers are more flexed, many treatment options are available. The common treatments include removing the palmar fascia through zig-zag incisions, division of the cords or ropes mechanically with a needle, or the newest advance is division of the cords or ropes by enzymatic methods. The particular degree of contracture and other elements of the hand exam as well as the patient’s needs help determine the appropriate treatment method. In the end, the goal of any of the treatments is to improve the flexion contracture, or bent posture of the hand or finger and ultimately hand function. Moreover, even in the face of excellently performed treatment, therapy, and patient effort, the condition may recur.

The surgical treatment.

Surgical treatment, or excision of the palmar fascia, is the standard treatment. It has been highly effective, but does incur the risk of damage to the nerves and arteries and the surgery requires a large incision to adequately protect the vital structures and excise the diseased tissue. It also typically requires significant wound healing and therapy afterwards.

The needle treatment.

The needle treatment, or formally known as needle aponeurotomy, has been around for many years and is becoming more popular. It affords the patient the chance to have the release of the contracted tissue done in either the operating room or clinic setting without incisions. A needle is introduced through the skin and the tip of the needle is used to divide the cord.
The enzymatic treatment.

A compound utilizing an enzyme that divides collagen fibers has been developed and tested in patients with Dupuytren’s disease. It has recently been approved by the FDA and found to be safe and effective. The advantage of the enzymatic treatment is that it avoids surgery and can be done in an office. Most insurance plans cover the bulk of the treatment cost.

Things to Remember:

- Lumps in the palm without contracture do not need surgery and do not signify that surgery will be needed in the future.
- If correction of the contracture is performed, by whatever method is chosen, it is more successful when the contracture is mild and when it is at the first joint of the finger. Contractures of the middle and end joints of the finger do not respond as well to treatment.
- Splinting prior to intervention has not been shown to be effective. However, splinting and hand therapy are important adjuncts to a successful outcome after a release has been performed by surgery, needle or enzymatic treatment.
- Despite excellent treatment, therapy and patient effort, the condition can recur.

John Flint, MD, is an orthopaedic surgeon specializing in the treatment of degenerative, over-use and traumatic injuries of the hand, elbow and shoulder.