



# UPDATE

## NEWS & EVENTS

### FUNCTIONAL CAST THERAPY

BSN Medical has introduced Functional Cast Therapy utilizing Delta Cast tape to Colorado Hand Therapy. The theory behind functional casting is to provide rigidity to the injured area for support while allowing flexibility to the rest of the splint. The lightweight polyester splints are durable, removable and washable. CHT therapists have found the most common uses for functional casting to be ulnar gutter, wrist and thumb spica splints, posterior elbow/ long arm splints and humeral fracture braces.

**If you would like a demonstration of the functional casting, please contact Bobbi Owsley at 303-777-2393.**

## HAND THERAPY CLINICAL UPDATE:

# DUPUYTREN'S DISEASE

CHRIS LUSCIA, OTR

**D**upuytren's Disease is a common disorder seen in the hand clinic. Since there has been no treatment found to halt the progression of this disease, conservative therapy is not considered to be helpful. The longer and more severe the contracture a patient has prior to surgery the more difficult the road to recovery.

### EVALUATION & TREATMENT

Therapy is typically started three to five days postoperatively. The bulky dressing is removed along with any drains that may be present and wound care is initiated. If an open technique is used, the patient will require daily whirlpools and dressing changes



Dupuytren's Disease

until the wound is closed. If a closed technique is used, the hand is cleaned with saline and a light dressing is applied to the sutured areas.

Continued on other side

## DUPUYTREN'S DISEASE — A SURGEON'S PERSPECTIVE

ERIC N. BRITTON, M.D.



Table Top Test

Although not the first to describe Dupuytren's disease, Baron Guillaume Dupuytren is appropriately credited with exhibiting a palmar fasciotomy to medical students in 1831. Since that time the term "Dupuytren's disease" is used to describe progressive thickening and contracture of the fascial tissues in the palm.

Patients first notice a painless nodule or thin cord in the palm, generally at the base of the small or ring fingers. With time the abnormal tissue increases in size and the cords draw the fingers into a contracted posture. The "table top test" can be used to determine if medical evaluation is indicated. If the patient cannot

place the palmar surface of all fingers and the palm on a flat surface at the same time then they should be evaluated.

Dupuytren's disease is most commonly diagnosed in men in their 50's and 60's and in people of northern European descent. Dupuytren's disease is idiopathic. It is not caused by alcohol intake, tobacco use, or occupational exposure. One benefit of having Dupuytren's appears to be a decreased likelihood of developing joint complaints.

Historically, treatment for Dupuytren's has been entirely surgical. By open or minimal inci-



Post-op Dupuytren's Release

sion the abnormal tissue is released and excised to correct contracture of the fingers.

Presently there are FDA trials being carried out (in Denver) studying injection of an enzyme to melt the Dupuytren's cord and correct contractures. When collagenase injection is approved for general use it may offer patient's an effective treatment option for Dupuytren's that is much quicker, simpler and less painful than surgery.



Abnormal Tissue Excised

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Published by:



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(Continued from other side.)

## HAND THERAPY CLINICAL UPDATE: **DUPUYTREN'S DISEASE**

Active and passive range of motion of the digits and wrist are started at this time. Due to the extent of scar tissue that is typically present with this surgery, emphasis is placed on isolated tendon gliding exercises to promote full excursion of the flexor tendons. If significant flexion contractures were present prior to surgery, it is recommended that the patient perform gentle passive extension to protect the circulatory and nervous systems. It is important to consult with the surgeon to find out how much extension was achieved in surgery to give the therapist a better idea of the expected outcome. Coban or finger socks are commonly used to help control digital edema between exercise sessions. These socks should be removed while performing the exercises as they may restrict motion.

A hand based volar extension splint is fabricated for the involved digits to wear between exercises sessions and at night. If the patient has significant tightness in their extrinsic digital flexors, the splint should include the wrist. For patients that have difficulty with full extension after surgery, splints can be adjusted weekly as extension is gained.

with a scar pad such as elastomer or cica care to be worn at night under the splint for compression. Modalities such as iontophoresis with saline and ultrasound are also commonly used in therapy to help remodel the scar. A desensitization program is initiated to help decrease hypersensitivity and pain as well as increase tolerance to daily activities.

Strengthening is initiated at six weeks post-op. At this time the extension splint is decreased during the day but continued at night unless a loss of extension is observed. If the patient begins to lose extension it is recommended that splint use during the day continue until full extension is maintained. Static progressive or dynamic splinting may also be started at this time, but is often not necessary. Patient's are encouraged to continue with a home program for four to six months and are typically very pleased with the outcomes after surgery.

*Chris Luscia is a staff therapist at Colorado Hand Therapy's Porter and Rose clinics. He received his degree in Occupational Therapy from the University of Hartford.*

### CONTINUED THERAPY

Scar management techniques are initiated once the wound is completely healed. Scar massage with vitamin E oil is initiated with emphasis placed on firm pressure to the scar tissue to help breakdown adhesions and remodel the scar. The patient is then fitted

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