COLORADO HAND THERAPY

UPDATE

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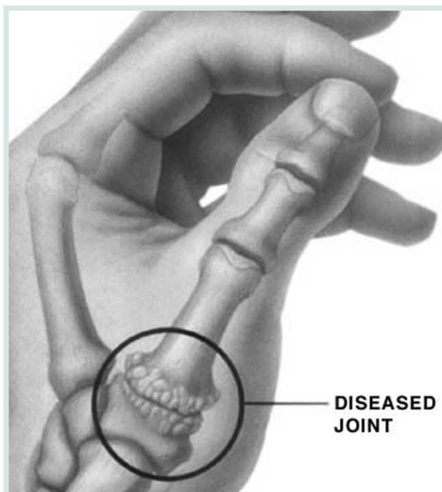
NEWS & EVENTS

Aurora Clinic To Move

Colorado Hand Therapy's Aurora clinic will move to a new location effective December 1st, 2005. Our new address is 1300 S. Potomac St., Ste. 116, Aurora. Call 303-777-2393 for more information.

For more information on the conservative and surgical management of CMC joint arthritis go to www.liveconferences.com – "A Royal Pain In The Thumb" by Susan Weiss, OTR/L CHT.



CARPOMETACARPAL JOINT

HAND THERAPY CLINICAL UPDATE:

CMC (Basal) Joint Arthritis

Sue Gentile, OTR, CHT

The term "pollex" was given to the thumb by the Romans and literally means, "that which is strong." The thumb can endure approximately half the workload of the prehensile hand, but is vulnerable to arthritic changes. Frequently affecting middle-aged women, symptoms include pain at the base of the thumb and thenar eminence, pain with daily activities, decreased pinch strength and disrupted functional use.

Conservative Management The treatment of 1st CMC joint arthritis is dependent on the stage of clinical findings, radiographic appearance of the joint and the amount of disability present. Conservative measures include the use of NSAIDS, local articular steroid injections, and static splinting to relieve discomfort in earlier stages. In addition to a splint that supports the CMC joint in palmar abduction and flexion, activity modification, education, and self help devices may help alleviate pain.

Goals for conservative treatment include decreasing pain, maintaining the 1st web space, educating the patient in the pathophysiology and progression of the disease, sustaining grip and pinch strength, and decreasing stressors to the joint. Should symptoms persist, an individual's quality of life and function can be compromised and surgical intervention may be indicated.

Postoperative Care Surgical intervention and surgical styles vary when the 1st CMC does not respond to conservative treatment. The common goal for both surgery and therapy is to decrease pain and increase function.

Postoperative therapy is individualized taking into account the disease process, extent of surgical procedures, physician preferences, and complications that may arise. Following an interpositional or suspension arthroplasty, a thumb spica cast is worn continuously for 4-6 weeks. If external pins are present, the patient is instructed to perform daily pin site care. Following suture removal scar management begins. This includes massage, ultrasound, and the use of a silicone scar pad at night. Because the superficial branch of the radial nerve is in close proximity to the 1st CMC joint, hypersensitivity should be addressed and a desensitization program initiated.

Therapy commences following cast

Continued on other side

The Thumb Carpometacarpal Joint: A Surgeon's Perspective

Charles Hamlin, M.D.

"On the length, strength, free lateral motion, and perfect mobility of the thumb, depends the power of the human hand." This quotation by Sir Charles Bell is as timely today as it was when published in London in 1833.

The thumb basal joint is unique in its ability to rock, glide and rotate, providing thumb opposition. For all its complexity, this critical joint responds well to a number of surgical solutions. How fortunate, given that the thumb basal joint is perhaps the most common site of degenerative arthritis in the human body.

Early published reports documented excellent results from removing the entire trapezium from its articulation with the first metacarpal. This remains a popular surgical approach often with a tendon interposed as a shock absorber, or a tendon used to suspend the first metacarpal and maintain length. Regrettably with removal of bone stock, one can see shortening and weakness, albeit with successful pain relief.

Other surgeons have favored minimal bone resection with interposition of tendon, cartilage or a new element, pyrocarbon, into the resected joint space. Advantages here include less risk of thumb shortening and greater options for surgical salvage with on-going wear of the joint.

Finally, one can preposition this important joint through arthrodesis, which also relieves pain. Loss of our elegant thumb rotation can be a significant price to pay, however, and thumb arthrodesis is often reserved for paralytic problems wherein the thumb is denied some of its abundant musculature.

No matter what the choice of the surgeon, however, surgical intervention for the arthritic thumb carpometacarpal joint is generally successful.

Dr. Charles Hamlin is a Board Certified Hand Surgeon and Senior Partner with Hand Surgery Associates, P.C., Denver, Colorado.

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MEET OUR THERAPIST

Mary Beth Wulf, OTR, CHT

Mary Beth Wulf graduated Magna Cum Laude from Mt. Mary College in 1986. She has practiced in the area of hand and upper extremity rehabilitation in both private practice and university settings since 1991. She received her certification in hand therapy from the Hand Therapy Certification Commission in 1993. In addition to her clinical experience, Mary Beth has been involved with the development of student programs and with the instruction and testing for kinesiology, anatomy and splinting. She has presented posters titled “Behind the Desk Workout” and “Sensory Re-education and Desensitization” at local and national conferences. She has published an article titled “Compliance in Hand Rehabilitation: Health Beliefs and Strategies”. As a therapist Mary Beth always thinks 2 to 3 steps ahead of the protocol. “We have a certain window of opportunity to achieve our results and providing progressive treatment can help minimize unnecessary limitations.”

(Continued from other side.)

CMC (Basal) Joint Arthritis

and/or pin removal. A custom-made thermoplastic thumb spica splint is applied for protection and pain management, and is worn between exercises and at night. Active and active assisted mobilization exercises to regain thumb and wrist range of motion are initiated. Evaluation of digital and upper extremity stiffness is noted and appropriate exercises instructed as needed.

Edema is carefully monitored and reduced through elevation, compression, and local modalities. At 6-8 weeks post operatively, the patient will begin weaning from the splint to activities of daily living with low load demands on the first CMC joint. The thumb spica splint may be changed to a short opponens or lighter weight splint when engaging in heavier activities or with acute pain flare-ups. Passive thumb range of motion may be added if within pain free range.

Pinch and hand strengthening is generally not initiated before 8 weeks post surgically and only when the patient is pain free and the joint deemed stable by the surgeon. Joint protection principles are reinforced through the entire course of rehabilitation.

Time frames of therapeutic interventions may be affected by additional surgical interventions. These include IP joint fusion, MCP capsulodesis and complete vs. partial trapezial removal.

In general, grip, pinch, and function continue to improve for up to a year after surgery.

With the proper guidance, patients affected by 1st CMC arthritis can get pain relief and better function, and an improved quality of life.

Sue received her degree in Occupational Therapy from Wayne State University in Detroit, MI. She received her Certification in Hand Therapy in 1991 and is the Team Leader at Colorado Hand Therapy's Aurora clinic.

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