November 2009

Treatment News

From Humboldt Hand and Foot Therapy, INC

1775 Harrison Ave, Eureka, CA 95501 ~ Phone (707)441-1931 Fax (707)441-1940

OSTEOARTHRITIS OF THE TRAPEZIAL JOINT

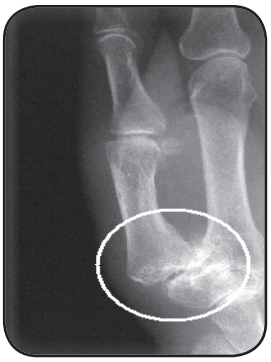
Trapeziometacarpal (TM) joint with osteoarthritis (OA) has a specific classification based on radiographic findings. These findings are as follows:

Stage I: painful synovitis (inflammation of the synovial membrane) with effusion and hypermobility.

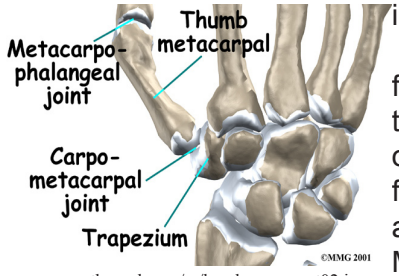
Stage II: radiographs show classical OA changes of joint space narrowing, osteophytes or joint debris less than 2 mm in diameter. Often there is less mobility and only minimal crepitus.

Stage III: advanced OA with marked crepitus but without scaphotrapezial (ST) joint disease.

Stage IV: advanced OA of the TM joint with radiographic OA changes in the ST joint.



www.drruns.com

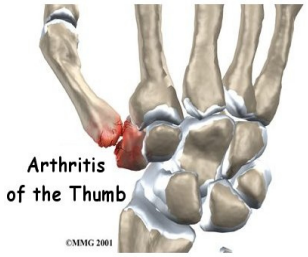


www.eorthopod.com/.../hand_cmc_anat02.jpg

OA most commonly affects the two distal joints of the fingers and thumb CMC joints. The thumb CMC joints tend to be the most symptomatic. However, osteophytes can occur at the MP joint where they can cause triggering of the flexor tendons. Osteophytes can also be found at the wrist and intercarpal joints which can limit motion and cause pain. Men and women have the same distribution of osteoarthritis, however women have more severe symptoms.

One contributing factor to a painful thumb joint is generalized ligamentous laxity with consequential joint hypermobility. Recent studies document hypermobility, especially in the thumb CMC joint, which may result in a variety of overuse lesions and osteoarthritis.

In the patient with moderate symptoms of osteoarthritis, asking them to point where they are having pain will often reveal them pointing to the base of the thumb. In addition, upon visual inspection of the CMC joint, a squaring (or a shoulder) can be observed at the base of the thumb. If this is noted, a further physical examination is usually not indicated secondary to prolonged pain and swelling. If no visual anomaly is noted, a grind test of the CMC joint can be performed. This test is done by palpation over the CMC joint while compressing and rotating the 1st metacarpal in the CMC joint. Distraction of the joint at the end of the grind test is also performed to demonstrate capsular tenderness. In addition, a Finkelstein's test is also indicated for localizing the pain in the first dorsal tendon compartment and for identifying de Quervain's tenosynovitis.



www.eorthopod.com/public/patient_education/65

The first line of treatment, once a diagnosis of trapeziometacarpal OA is confirmed, is the utilization of a custom fabricated thumb spica splint. Depending of the severity of symptoms, the splint may consist of a thumb MCP/CMC stabilization or a CMC stabilization only. However, it is important to be aware that the MCP joint is subject to greater forces when not splinted, secondary to the restriction at the CMC joint. Consequently, nonstabilization of the MCP joint requires a healthy MCP joint. Many thumbs that exhibit CMC OA also have MCP issues such as hyperextension. Effective splinting for CMC arthritis may reduce the need for surgery. However, for active adults who wear a stabilization splint, nonadherance to splint usage is evident. This is secondary to the splint being too restricted, especially for writing, knitting and sports.

It should also be noted that many individuals with CMC osteoarthritis have poor thumb mechanics and muscle imbalance which put this joint in a poor position and can

Humboldt Hand and Foot Therapy

specializing in the care of the hand, upper extremity, foot and ankle.

Services Offered:

- Evaluation
- Rehabilitation
- Custom splint
- Custom orthotics
- Personal Training
- Pilates exercise classes
- Balance programs

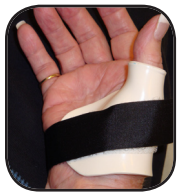
Frequently Seen Diagnoses:

- Tendon and nerve lacerations
- Fractures
- Arthritis
- Cumulative Trauma
- Crush Injuries
- Amputation
- Tendon transfers
- Joint replacements
- Fusions
- Balance training
- Conditioning
- Strengthening
- Rotator cuff injury
- Frozen shoulder
- Plantar fasciitis
- Tendonitis of the ankle

Treatment May Include:

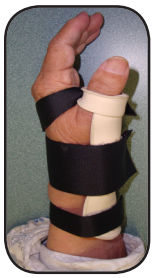
- Home programs
- Range of Motion
- Strengthening
- Edema control
- Scar remodeling
- Desensitization

For more information or to make a referral, please call: (707)441-1931



eventually cause more rapid deterioration of the CMC joint. MCP hyperextension should be avoided since this causes increased CMC joint stress. For individuals with MCP hyperextension, inclusion of this joint in the brace is helpful.

Splinting material can be either hard orthoplast or a neoprene that has extra force to hold the MCP joint in flexion by means of a special strap. For patients whose symptoms are not improved with a hand-based splint, a longer thumb spica that includes the wrist may offer symptom relief since the trapezial joint is part of the wrist. In addition to splinting, a treatment course of iontophoresis to the CMC joint can be effective in decreasing inflammation and pain. Once symptoms have decreased, a specific thumb stabilization program to strengthen the surrounding musculature may also be beneficial for the long term health of the joint.



Patient education regarding proper thumb use is an important part of the treatment program. Topics such as joint protection techniques, proper thumb ergonomics and exercises to stretch out or maintain the web space, in addition to a thumb stabilization program should be discussed.

For the older population that are having painful experiences in opening jars or small bottle caps, utilization of assistive devices can greatly reduce the frequency and duration of the individual's pain. In addition, glucosamine/chondroitin sulfate should be recommended.

Other Thumb Pain may be due to **Carpal Tunnel Syndrome** or **Trigger Thumb.** Pain associated with a trigger thumb is experienced at the MCP joint on the palm side of the hand. When the thumb is actively flexed towards the palm, a snap or pop is felt and sometimes the thumb will painfully lock down requiring manual relocation. The interesting thing about a trigger finger is that when the individual passively pushes the digit towards the palm in a relaxed state no popping is experienced. This is because the tendon which has a nodule on it does not glide and get hung up. Carpal Tunnel syndrome will be discussed in a future newsletter.

References

Hunter, J., Mackin, E., & Callahan, A. (Eds) (2002). Rehabilitation of the Hand and Upper Extremity (5th ed.). In D. J. Bozentka (Chapter author) *Therapist's Management of Osteoarthritis in the Hand* (1651-1661). St. Louis, Missouri: Mosby, Inc.

Check out our new Pilates program!

Monday and Wednesdays at 5:30-6:30 p.m.
Call for the details

HUMBOLDT HAND & FOOT THERAPY, INC.

1775 Harrison Avenue
Eureka, CA 95501

(707)441-1931
(707)444-1940 Fax