COLORADO HAND THERAPY

UPDATE

VOLUME II NUMBER 1 WINTER 2006

NEWS & EVENTS

Starla Maier-Walford, OTR, CHT

recently achieved advance certification as a hand therapist. Starla has earned the designation as a Certified Hand Therapist (CHT). In order to attain Certification Starla had to have a minimum of five years of clinical experience in direct practice in hand therapy and successfully pass a comprehensive test of advanced clinical skills and theory.

ALERT! THERAPISTS & PHYSICIANS

Don't miss the Second Annual

Hand & Upper Extremity Disorders: A Primary Care Perspective Conference

hosted by Hand Surgery Associates, May 19-21, 2006 at the Inverness Hotel & Conference Center. For more information or to register, contact Tracy Picon at 303.996.3399.

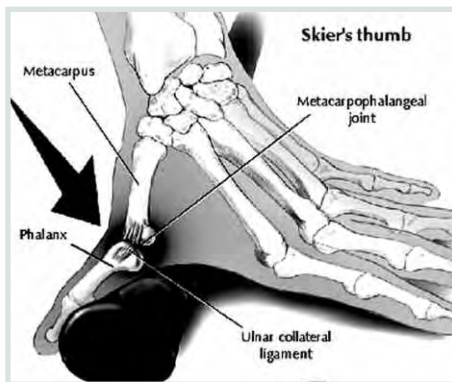
HAND THERAPY CLINICAL UPDATE:

ULNAR COLLATERAL LIGAMENT (UCL) INJURIES

CHRIS LUSCIA, OTR

The ulnar collateral ligament (UCL) of the metacarpalphalangeal (MP) joint of the thumb is the primary stabilizing ligament for activities such as turning keys and opening jars. Historically, injuries to the UCL were first described as repetitive injuries associated with British gamekeepers. This disability was related to repetitive action that led to instability and chronic laxity of the thumb. Hence, the name gamekeeper's thumb.

Today injuries to the UCL are most often associated with skiers and football players, but can happen to anyone who sustains a fall on their thumb in hyperextension and hyperabduction. The fall can stress the ligament to a point of either stretch or tear, and can be associated with or without an avulsion fracture.



Acute injuries to the UCL often present with tenderness and pain at the ulnar aspect of the MP joint along with swelling and bruising. Patients will also complain about a decreased ability to pinch objects between their thumb and index finger.

CONSERVATIVE TREATMENT

Grade 1 and 2 tears are treated non-operatively and involve a stretched ligament that is painful or a non displaced avulsion fracture. The primary focus of initial treatment is on pain reduction. A hand based thumb spica splint is fabricated with the interphalangeal joint free. Precautions are taken to prevent lateral stress on the MP joint. This splint is worn for up to 6 weeks. Modalities such as ultrasound, iontophoresis, direct icing and high volt galvanic stimulation may be started at this time to help decrease pain as well as swelling. Once pain has subsided, gentle, pain free, active range of motion may be initiated.

When the patient is asymptomatic, light therapy putty may be started to increase strength. The patient may also begin to wean themselves from their splint and

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ULNAR COLLATERAL LIGAMENT INJURIES — A SURGEON'S PERSPECTIVE

CARLTON CLINKSCALES, M.D.

Thumb ulnar collateral ligament injuries range from minor sprains to a complete rupture of the ligament. They occur in sports, at work and even at home. The mechanism of injury is a radial directed force. Radiographs should be obtained to rule out fracture or other injuries.

A grade I injury is a minor sprain without joint laxity. There is no loss of integrity of the ligament. Grade II injuries are more substantial. The ligament is stretched but not completely torn. There may be some laxity to the joint, but a solid endpoint. Grade I and II injuries should be immobilized in a cast or splint for 3 to 6 weeks followed by gentle progressive range of motion and strengthening exercises.

Grade III injuries represent complete rupture of the collateral ligament and result in gross instability of the joint. If the ligament is completely ruptured, it can become incarcerated behind the adductor aponeurosis of the thumb. In this position, the ligament will not heal on its own and must be repaired. Ligaments repaired within three weeks of injury attain the best results, but often successful repair can be accomplished up to 6 weeks later.

Surgery is outpatient, usually under regional anesthetic (Bier block). The ligament is exposed through a skin incision with care taken to protect overlying skin nerves. Once the extensor tendon is opened, the ligament is identified, extracted from its displaced position and reinserted into the bone with suture, a pull out button or a suture anchor.

Postoperatively, the thumb is immobilized for a few weeks, followed by splinting and therapy. A successful outcome depends on good surgical technique, a compliant patient and a qualified hand therapist. Results are generally very good. While some motion may be lost due to the injury, stability of the joint can be restored and good long term function achieved.

Dr. Carlton Clinkscales is a Board Certified Hand Surgeon and Partner with Hand Surgery Associates, P.C., Denver, Colorado.

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MEET OUR THERAPIST

SUE GENTILE, OTR, CHT

Sue received her degree in Occupational Therapy from Wayne State University in Detroit, MI. During her 19 years of working in hand therapy, she has worked in hand therapy clinics in Indiana, Illinois, Michigan, and Colorado. Sue was a senior staff therapist at the Indiana Hand Center in Indianapolis where she was a co-presenter for Hand Care '86, '92 and '02. She was also a contributor to the 3rd and 4th editions of *The Indiana Hand Center's Diagnosis and Treatment Manual for Physicians and Therapists*. Sue is an active member of the American Society of Hand Therapists and Denver Hand Special Interest Group. Sue is the only member of the Colorado Hand Therapy team to be an avid Detroit Red Wings fan!

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ULNAR COLLATERAL LIGAMENT (UCL) INJURIES

gradually increase functional use of the injured hand. Splint use may be continued for heavier activities for up to three months.

POSTOPERATIVE TREATMENT

Surgical intervention is indicated for complete tears of the ligament with an unstable joint or a large displaced avulsion fracture. Surgical options vary from surgeon to surgeon thus postoperative protocols are not universal.

Therapeutic intervention may start at ten to fourteen days after surgery when the bulky dressing and sutures are removed. At this time a custom fit thumb spica splint is fabricated that may be hand or forearm based and is worn full time except for showering. Scar management and edema control are also initiated. Once approved by the surgeon, gentle active range of motion exercises are initiated for the thumb and wrist. Care must be taken to avoid lateral stress to the thumb MP joint. At 6 - 8 weeks postoperatively the patient will start weaning themselves from their splint and begin using their thumb for light activities. If persistent stiffness continues, dynamic or static progressive splinting may be initiated. Hand, pinch and forearm strengthening is generally initiated at 8 weeks after surgery. Patients continue to wear their splint for heavier activities for up to 10 - 12 weeks. Activities requiring a sustained power pinch should be avoided for 14 - 16 weeks.

Patient's strength, motion and function will continue to improve for up to a year. It is not uncommon for a patient to loose some motion at their MP joint, but rarely does this impede their functional outcome. It is far more important for a patient to have a pain free, stable joint and sacrifice a small amount of motion.

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.

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