HTA-CA

14th Annual Conference

From Research to Practice

OBJECTIVES FOR PRESENTATIONS

Management of Wrist Ligament Injuries (30)

Jeffrey Yao, MD

Objectives:

- Anatomy and biomechanics of the SLL
- Diagnosis of SLL injuries
    - Clinical Presentation
    - Imaging modalities
- Treatment Options
    - Conservative management

- Surgical Intervention and outcomes

Complications of Operatively and Non-operatively Treated Distal Radius Fractures: Early Recognition and Treatment

Igor Immerman, MD

Objectives:

1. Cite the most common complications seen with distal radius fracture treatment
2. Recognize early warning signs of carpal tunnel syndrome / complex regional pain syndrome associated with distal radius fractures
3. Recognize early warning signs of tendon injury associated with prominent hardware or malunion of distal radius fractures

---

Rehabilitation Following Wrist Injury

Kristin Valdes, OT, CHT

Objectives:

I. Therapy versus no therapy
   a. Clinical Practice Guidelines (World Health Organization)
   b. The effects of comorbidities on recovery

II. Evidence-Based Rehabilitation Strategies
   a. Edema control
   b. Plane of motion for exercises
   c. Functional activities

III. Sensorimotor Program
   a. Rationale
   b. Evaluation
   c. Home program

HAND TRAUMA

Brady Tyler Evans, MD

Objectives:

- Understand the anatomy of the hand relevant to trauma
- Classify common types of hand trauma
- Outline initial assessment and management strategies
- Review surgical indications and techniques for hand trauma
- Discuss rehabilitation and expected outcomes

Microsurgery of the Hand

Rudolf Buntic, MD

Goals:

- To deepen participants' knowledge of advanced microsurgical techniques in hand surgery and their applications
- To enhance clinical decision-making and treatment planning for complex hand injuries, with a focus on optimizing functional outcomes
- To promote interdisciplinary collaboration among surgeons, hand therapists, and other healthcare professionals for improved patient care

Objectives:

By the end of this presentation, participants will be able to:

1. Recognize Key Indications: Identify clinical scenarios in which microsurgical techniques are indicated for the hand, including replantation, flap coverage, and complex reconstructions.
2. Understand Surgical Techniques: Describe common microsurgical approaches and technical pearls relevant to the hand (e.g., vascular anastomosis, flap harvesting, nerve repair) and their implications for rehabilitation.
3. Assess and Manage Complications: Understand perioperative considerations, potential complications (e.g., vascular compromise, infection), and strategies to optimize outcomes following microsurgery.
4. Collaborate with Interdisciplinary Teams: Demonstrate effective communication and coordination with hand therapists, occupational therapists, and other professionals involved in perioperative care and long-term rehabilitation.
5. Incorporate Evidence-Based Practices: Integrate current research findings into clinical practice for microsurgical hand procedures.

Flexor Tendon Pitfalls

Shrikant Chinchalkar, OT, CHT

Learning Objectives:

Understand Flexor Tendon Healing and Rehabilitation

- Explain the evolution of flexor tendon repair and rehabilitation techniques over the past decades
- Describe the impact of early mobilization on tendon healing and function

Identify Zone-Specific Pitfalls in Flexor Tendon Rehabilitation

- Recognize common complications in different flexor tendon zones (I–V), including adhesion formation, joint contractures, and quadriga
- Analyze how variations in anatomy and injury location influence rehabilitation outcomes

Implement Effective Rehabilitation Strategies

- Apply tailored rehabilitation protocols based on injury zone to minimize complications
- Evaluate the role of different exercises, including synergistic wrist motion and true active flexion, in tendon gliding and adhesion prevention

Optimize Use of Protective Orthoses

- Differentiate between various orthotic approaches, such as dorsal blocking orthosis (DBO) and relative motion flexion orthosis (RMFO)
- Assess the impact of wrist positioning on tendon excursion and rehabilitation outcomes

Prevent and Manage Secondary Complications

- Develop strategies to address postoperative adhesion formation, flexion contractures, and paradoxical extension
- Recognize when surgical intervention, such as tenolysis, may be necessary for persistent complications

Apply Evidence-Based Practices in Hand Therapy

- Compare different rehabilitation approaches, including passive versus active flexion regimens
- Integrate recent research findings into clinical decision-making for improved patient outcomes

---

CMC Implants: Past, Present and Future

Amy Ladd, MD

Objectives:

- Discuss history of CMC implants and problems faced
- Discuss characteristics of implants
- Discuss role of osteotomy in early disease

Rehabilitation Following CMC Arthroplasty (30)

Kristin Valdes, OT, CHT

Postoperative Rehabilitation for Basal Joint Arthroplasty

I. Current Practice Patterns
a. Immobilization
b. Orthosis use
c. Range of Motion
d. Strengthening

II. Evidence for Rehabilitation Following CMC Arthroplasty
a. Home Exercise Program
b. Tele-rehab

III. Evidence-Based Rehabilitation
a. Length of immobilization following surgery
b. Fear of Movement
c. Expected outcomes

Arthroplasty of the Finger

Kevin Vogeli, MD

Course Objectives:

- Identify indications for MCP/PIP joint arthroplasty
- Become familiar with rehabilitation protocol for MCP and PIP joint arthroplasty
- Learn what to watch for during rehabilitation of MCP/PIP arthroplasty (complications and patient expectations)

Uncommon Compressive Neuropathies of the Shoulder (30)

Christopher Bayne, MD

Objectives:

1. Describe the anatomical course and function of the suprascapular and axillary nerves, highlighting key areas of potential compression.
2. Recognize the clinical presentation and diagnostic findings associated with suprascapular and axillary nerve compression.
3. Understand the role of imaging and electrodiagnostic studies in differentiating compressive neuropathies from other shoulder pathologies and how this informs rehabilitation strategies.
4. Explain the surgical treatment options for suprascapular and axillary nerve compression, including the goals of surgery, expected post-operative course, and implications for rehabilitation.

Tales from the Crypt: Lessons from 30 Years of Hand Surgery

Kyle Bickel, MD

- **Intro**: Brief personal history, including education, training, practice settings, clinical and academic activities and milestones.
- **Background**: The state of hand surgery 30 years ago. List of technologies and approaches that were then standard.
- **Progress**: Description of technologies that had not yet been adopted and which are now commonplace. Show how these new techniques and developments changed the practice of hand surgery.
- **Failed Innovations**: Discuss many of the new techniques and products that were tried and failed. Stress the importance of healthy skepticism and scientific rigor in the practice of medicine.
- **Cases that Changed Me as a Surgeon**: Seminal cases from my career.
- **Lessons Learned**: Discuss the many lessons learned over 30 years that can help all practitioners in their own patient care journey.

Principles of Wound Care and Tissue Healing

Shrikant Chinchalkar, OT, CHT

Learning Objectives:

- Understand the Principles of Wound Healing
    - Describe the stages of wound healing (inflammatory, proliferative, and remodeling phases) and their relevance in hand therapy.
    - Identify factors that influence wound healing, including patient-specific and external factors.

- Implement Evidence-Based Wound Management
    - Apply appropriate hand therapy intervention in inflammatory, proliferative and remodeling phases to maximize the healing process yet gain motion and strength
    -
- **Integrate Clinical Decision-Making in Hand Therapy**
    - Utilize clinical reasoning to determine the best rehabilitation approach based on wound healing progression.
    - Balance mobility and protection to optimize functional recovery while minimizing complications.
- **Prevent and Manage Wound-Related Complications**
    - Identify common complications such as hypertrophic scarring, delayed healing, and wound dehiscence.
    - Develop strategies to modify treatment plans when healing is impaired or complications arise.
- **Collaborate in a Multidisciplinary Approach to Hand Rehabilitation**
    - Communicate effectively with surgeons, wound care specialists, and therapists to ensure coordinated patient care.
    - Recognize when surgical intervention or specialist referral is required for complex wound cases.

Pain

Vivianne Tawfik, MD

Talk Synopsis:

- Discuss post-injury pain, central sensitization and complex regional pain syndrome
- Discuss symptoms and incidence of CRPS and central sensitization
- Discuss immune system dysregulation as one possible driver of the condition.

CRPS and Nerve Injury: Diagnosis and Treatment

Paige Fox, MD

Objectives:

- Learners will understand the potential connection between nerve injury and pain
- Learner will know ways to work up nerve pain including US, MRI and physical

exam
- Learner will be able to describe surgical and non surgical therapeutics for nerve pain

---

Point-of-Care Ultrasound for Atypical Hand Pain

Raymond Chou, MD

Objectives:

- Review how to use point-of-care ultrasound and optimize images to identify pathology
- Discuss a protocol for using point-of-care ultrasound to identify possible pathology when pain does not follow classic patterns on physical examination

---

Pharmacology for Hand Therapists

Jason Braley, PA

For each topic the following will be covered:

- History/development
- Medication examples
- Indications/contraindications, benefits/risks
- **Cortisone injections** – when they are indicated and not indicated, how long until effect should take, etc. Risks (fat atrophy, hypopigmentation, other impact on local tissues, timeframes from date of injection to surgery)
- **CRPS meds** (gabapentin, vitamin C, steroid dose pack) – when each might be used, side effects, etc. – Brief review of our surgical approach to CRPS, though this topic will be covered by Dr. Tawfik
- **NSAIDS** – when they are and aren't indicated, restrictions before and after surgery, effects on soft tissue, GI tract, potential to decrease fusion rates. Using this versus Tylenol, etc. Briefly discuss new non-opioid pain relievers.
- **Fluoroquinolones** – What types of antibiotics are included in this category, when they may be used, and potential for/incidence/timeframe for tendinopathy/rupture. If there is time, I will discuss some other medications which may cause musculoskeletal complaints, like statins.
- **DMARDS, biologics for RA** – Most common ones, utility, side effects. Needs to discontinue prior to surgery. Potential for slowing healing, potential for infection.
- **Chemotherapy drugs** – Potential for neuropathy, incidence of CTS and tendinopathy with certain medications (aromatase inhibitors).

- **Supplements** – Glucosamine, turmeric, CBD. What's the data? Supplements to avoid perioperatively due to potential impact on coagulation

---

Patient, Surgeon, Therapist Collaboration

James Chang, MD, Wendy Moore OT, CHT

Objectives:

- Describe principles and techniques of thumb pollicization including planning, surgical techniques and the importance of consideration for patient specific functional needs.
- Explain the rehabilitation process including early post-op care, splinting, adaptation and focus on strategies to maximize functional use.
- Gain insight into the lived experience of a patient undergoing thumb pollicization including the decision-making process, challenges and overall impact on their daily life.
- Understand the importance of a collaborative multidisciplinary team or surgeon, therapist and patient in achieving optimal outcomes.

Central Sensitization in Thumb CMC OA

Corey McGee, PhD, OTR/L, CHT

Objectives:

- Distinguish nociceptive and centralized pain
- Describe the prevalence of self-reported centralized pain symptoms in persons with CMC1 OA
- Describe the associations between self-reported symptoms of centralized pain and disability, pain severity, and concomitant psychiatric diagnoses
- When centralized pain symptoms are present, consider therapeutic approaches that target both nociceptive and centralized pain

---

Does an 8-week Course of Dynamic Stability Alter Thumb Mechanics in Thumb CMC OA?

Corey McGee, PhD, OTR/L, CHT

Objectives:

- Review what is known about the altered mechanics of CMC1 in the context of CMC1 OA

- Review the components of the dynamic stability program and what is known about their clinical impacts
- Discuss what is known about the impacts of the dynamic stability program on CMC1 mechanics
- Discuss the methods and findings of an 8-week CMC1 dynamic stability study designed to explore its sustained effects on thumb biomechanics using computerized tomography and 3D modeling of the CMC1 and MP1 joints
- Explore the clinical implications of these findings

How to Read Medical Literature: From Research to Practice

Deborah Kenney, MS, OTR/L

1. Understand how to choose the right type of medical literature for different purposes
2. Develop a process to quickly appraise any medical literature
3. Identify study types:
    - Primary vs secondary
    - Hierarchy of evidence using an evidence-based medicine and healthcare framework
4. Define steps important to critical appraisal of medical literature
5. Recognize common sources of bias in medical literature
6. Differentiate between statistical significance and clinical significance