The Pesky Elbow

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AOBFP- Family Medicine/OMT
AOBNMM- Neuromusculoskeletal Medicine/OMM
AOBNMM- Sports Medicine/OMM CAQ
• I have no relevant financial disclosures
Case

HPI
Physical Exam

• **General:** A&O x3 with no distress; appears well nourished, very fit
• **Skin:** no rashes, no bruising, dry skin
• **HEENT:** Normocephalic, atraumatic
• **CV:** regular rate
• **Resp:** Normal respiratory effort
• **Neuro:** intact sensation UE bilaterally
Physical Exam Elbow

• Tenderness to palpation medial epicondyle right humerus
• Mild edema noted medial elbow
• ROM restricted in pronation to 50°
• Strength 5/5 bilaterally with pain on right side with resisted elbow and wrist flexion
Physical Exam – Special tests

• Tennis Elbow/Lateral epicondylitis:
  – Cozen’s Test– Make fist, pronate, extend wrist and fingers against resistance
Physical Exam – Special tests

- **Golfer’s Elbow/Medial epicondylitis:**
  - Supinate Arm, extend elbow and wrist against resistance
Focused Medical Tent Osteopathic Exam

Findings:

• Hypertonic R upper trapezius
• Hypertonic L serratus anterior
• Hypertonic R pectoralis major
• Tender point right medial epicondyle
• Interosseous membrane strain between radius and ulna
Treatment:
Soft tissue - Trapezius and upper thoracic

• I DREAM OF GENIE

• Easy to do on a chair or on the bench
Pectoralis Major/Serratus

Myofascial Release Pectoralis Major

Muscle Energy Serratus Anterior Seated

https://youtu.be/iSyEOS3F3dE


Counterstrain- Medial Epicondyle


Flexion, Pronation, Adduction
Interosseous Membrane: Parallelogram Effect

• The wrist and elbow are connected through the:
  • Interosseous membrane between the Radius and Ulna.
  • Proximal and Distal Radio-Ulnar joints.

• Strain on wrist and forearm can easily strain the interosseous membrane.
Seated, Indirect, Respiratory Force: Radio-Ulnar Interosseous membrane

• Stack elbow to point of ease
  – Balanced Ligamentous Tension
• Maintain elbow and stack wrist
• Focus your attention mid-forearm on the interosseous membrane
• Test respiratory phases
• Hold for release
  – Do NOT unwind!

Treatment: Day of Presentation

• On golf course/club house:
  • OMT
  • KT taping

• After rounds completed:
  • Ice
  • Iontophoresis patch
Office Follow Up

- Golf swing/grip evaluation
- X-ray elbow if not improving
- MSK Ultrasound of elbow
- Home Exercise Plan vs PT

Office Follow-Up Osteopathic Exam Findings

- Hypertonic R upper trapezius
- Hypertonic L serratus anterior
- Left Ribs 4-5 exhalation dysfunction
- Left anterior innominate
- Hypertonic R>L Tensor Fascia Latae and IT band
- Anterior fibular head left
Case: Medial Epicondylitis

- Degenerative condition of common flexor tendon due to overuse and/or injury to the tendon

- **Hx:** 45-54y with chronic pain to the medial aspect of the elbow. Worse with flexion of the wrist.

- **Imaging:** Xray, MRI, US
address  top back swing  down swing  impact  follow through  finish
Treatment Medial Epicondylitis

- **First line:** Activity Modification with eccentric strengthening and stretching exercises.
- Evaluate biomechanics/grip
- Counterforce brace
- Iontophoresis
- OMT
- Injection
  - Prolotherapy, PRP, corticosteroid
- Percutaneous tenotomy or open surgical debridement

https://www.performancehealth.com/articles/the-one-tool-you-need-to-relieve-tennis-elbow-pain
Return to Play- Medial Epicondylitis

• Variable- should have no pain with normal ROM
Rehab Exercises

Standing Wrist Flexion Stretch
SET: 3 | HOLD: 30 sec | WEEKLY: 3x | DAILY: 3x
Setup
- Begin in a standing upright position with one arm in front of your body, palm facing the floor.
- With your other hand, bend your wrist down until you feel a stretch.
Tip
- Make sure to keep your elbow straight and try not to apply too much pressure; this should be a gentle stretch.

Standing Wrist Extension Stretch
SET: 3 | HOLD: 30 sec | WEEKLY: 3x | DAILY: 3x
Setup
- Begin in a standing position with one arm in front of your body, palm facing the ceiling.
- With your other hand, apply a gentle downward pressure on your fingers, bending your wrist and keeping your elbow straight.
Tip
- You should feel a stretch in your wrist. Try not to apply too much pressure; this should be a gentle stretch.

Standing Radial Nerve Glide
SET: 10 | SETS: 3 | HOLD: 5 sec | WEEKLY: 3x | DAILY: 3x
Setup
- Begin standing upright with your arms at your side.
Movement
- Gently drop your shoulder keeping your arm straight. Rest your arm inward and turn your palm away from your body, then bend your wrist. Slowly raise your arm out to your side, then gently bend your neck away from your raised arm. Hold briefly, then return to the starting position, and repeat.
Tip
- Make sure to move slowly and keep an upright posture. Only move through a pain-free range of motion.

Tennis Elbow Self Massage
SET: 3 | HOLD: 30 sec | WEEKLY: 3x | DAILY: 3x
Clinical Notes:
- You may also use a tennis ball, golf ball, or lacrosse ball to perform this.
Setup
- Begin sitting in a chair with your arm bent and supported by a table.
Movement
- With the arm supported, place two fingers at the outside of your arm just above your elbow and massage in back and forth motion using a gliding motion.
Tip
- Make sure to keep your supported arm relaxed during the massage.

Seated Isometric Wrist Flexion Supinated with Manual Resistance
SET: 10 | SETS: 3 | HOLD: 5 sec | WEEKLY: 3x | DAILY: 3x
Clinical Notes:
- Perform at various ranges of motion
Setup
- Begin with your palm facing up and fingers straight with your opposite hand gently on top of your palm.
Movement
- To bend your wrist up, resist the movement with your top hand. Passively, then return to the starting position.
Tip
- There should be no movement with this exercise.
Rehab Exercises

Seated Isometric Wrist Extension

**Clinician Notes:**
Perform at various ranges of motion.

**Setup:**
Begin sitting upright with your arm resting on a table, palm down, and your other hand on top of your involved hand.

**Movement:**
Try bending your wrist upward, resisting the movement with your other hand. Then relax and repeat. There should be little to no movement.

**Tip:**
Your fingers may lift off the table, but make sure to focus on trying to bend at your wrist. Keep your shoulder relaxed during the exercise.

Wrist Flexion with Resistance Band

**Clinician Notes:**
May be performed with TheraBand or dumbbell.

**Setup:**
Begin in a standing upright position with your arms straight in front of you, holding a flex bar in both hands, palms facing down.

**Movement:**
With one hand, slowly bend your wrist downward, rotating your palm toward your body, slowly return and then repeat.

**Tip:**
Make sure to focus the movement just on your wrist, and keep the end of the bar stable with your other hand.

Wrist Extension with Resistance Band

**Clinician Notes:**
May be performed with TheraBand or dumbbell.

**Setup:**
Begin in a standing upright position with your arms straight in front of you, holding a flex bar in both hands, palms facing down.

**Movement:**
With one hand, slowly pull up against the bar to rotate your palm up away from your body, slowly return, and then repeat.

**Tip:**
Make sure to focus the movement just on your wrist, and keep the end of the bar stable with your other hand.

Forearm Supination with Resistance

**Clinician Notes:**
May be performed with dumbbell.

**Setup:**
Begin sitting with your forearm resting on your thigh, holding one end of a resistance band that is anchored under your feet. Your palm should be facing up with the band running between your thumb and index finger.

**Movement:**
Strongly rotate your wrist so your palm faces downward, then rotate it back to the starting position and repeat.

**Tip:**
Make sure not to bend your wrist as you rotate your arm, and keep your shoulder relaxed.
Rehab Exercises

Forearm Pronation with Resistance

**REPS:** 10  |  **SETS:** 3  |  **WEEKLY:** 7x  |  **DAILY:** 1x

**Clinician Notes:**
May be performed with dumbbell

**Setup**
- Begin sitting with your forearm resting on your thigh, holding one end of a resistance band that is anchored under your foot. Your palm should be facing down, with the band running between your thumb and index finger.

**Movement**
- Slowly rotate your wrist so your palm faces upward, then rotate it back to the starting position and repeat.

**Tip**
- Make sure not to bend your wrist as you rotate your arm, and keep your shoulder relaxed.

Standing Shoulder Row with Anchored Resistance

**REPS:** 10  |  **SETS:** 3  |  **HOLD:** 2-3 sec  |  **WEEKLY:** 5x  |  **DAILY:** 1x

**Setup**
- Begin in a standing upright position holding both ends of a resistance band that is anchored in front of you at chest height.

**Movement**
- Pull your arms back against the resistance, bending your elbows, then slowly return to the starting position and repeat.

**Tip**
- Make sure to keep your back straight and think of squeezing your shoulder blades together as you pull your arms back.

Putty Squeezes

**REPS:** 5-10  |  **SETS:** 3  |  **HOLD:** 10 sec  |  **WEEKLY:** 5x  |  **DAILY:** 1x

**Setup**
- Begin sitting with your hand in a comfortable position, holding putty in your palm.

**Movement**
- Gently squeeze the putty using all of your fingers equally, and repeat.

**Tip**
- Make sure to keep the rest of your arm relaxed during the movement.
AOASM 2020
American Osteopathic Academy of Sports Medicine
APRIL 29-MAY 3
Preconference: April 27-28

Disneynland®
B. Superficial Front Arm Line

Medial third of clavicle, costal cartilages, thoracolumbar fascia, iliac crest 1

Pectoralis major, latissimus dorsi 2

Medial humeral line 3

Medial intermuscular septum

Medial humeral epicondyle, 4

Flexor group

Palmar surface of fingers 5

Carpal tunnel 6

7

8
Spiral Line

Table 6.1 Spiral Line: myofascial ‘tracks’ and bony ‘stations’ (Fig. 6.2)

<table>
<thead>
<tr>
<th>Bony stations</th>
<th>Myofascial tracks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occipital ridge/mastoid process atlas/axis TPs 1</td>
<td>Splenius capitis and cervicis</td>
</tr>
<tr>
<td>Cervical/upper thoracic SPs 2</td>
<td>Rhomboids major and minor</td>
</tr>
<tr>
<td>Medial border of scapula 5</td>
<td>Serratus anterior</td>
</tr>
<tr>
<td>Lateral ribs 7</td>
<td>External oblique</td>
</tr>
<tr>
<td>Iliac crest/ASIS 11</td>
<td>Abdominal aponoeurosis, linea alba</td>
</tr>
<tr>
<td>Lateral tibial condyle 13</td>
<td>Tensor fasciae latae, iliobibial tract</td>
</tr>
<tr>
<td>1st metatarsal base 15</td>
<td>Tibialis anterior</td>
</tr>
<tr>
<td>Fibular head 17</td>
<td>Peroneus longus</td>
</tr>
<tr>
<td>Ischial tuberosity 19</td>
<td>Biceps femoris</td>
</tr>
<tr>
<td>Sacrum 21</td>
<td>Sacrotuberous ligament</td>
</tr>
<tr>
<td>Occipital ridge 23</td>
<td>Sacrolumbar fascia, erector spinae</td>
</tr>
</tbody>
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