Breakout 4 - OMT for Extremity Complaints
Thomas E Sabalaske, DO

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Please check where applicable and sign below. Provide additional pages as necessary.
Name of CME Activity: ACOFP Intensive Update and Board Review in Osteopathic Family Medicine
Dates and Location of CME Activity: August 20-23, 2015, Loews Chicago O'Hare Hotel, Rosemont, IL

Topic(s):
Table Trainer: OMM Case Reviews: Pre-test Session
Thursday, 8/20/15  7:00-9:00pm

OMT Breakout Session #4: OMT for Extremity Complaints
Friday, 8/21/15  2:45-4:15pm & 4:30-6:00pm
Saturday, 8/22/15  8:30-10:00am & 10:15-11:45 am

Basic OMT Demonstration Workshop
Friday, 8/21/15  7:30-9:30pm

Therapeutic Applications of OMT for Specific Disease Processes
Saturday, 8/22/15  7:00-7:30am

Saturday, 8/22/15  6:30-9:30pm

Name of Faculty/Moderator: Thomas E. Sabalaska, DO

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Please indicate the name(s) of the organization(s) with which you have a financial relationship or interest, and the specific clinical area(s) that correspond to the relationship(s). If more than four relationships, please list on separate piece of paper:

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*If you checked "Speakers' Bureaus" in item B, please continue:

1. Did you participate in company-provided speaker training related to your proposed topic?  
   □ Yes  □ No
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Signature: [Signature]  
Date: 7/13/15

Thomas E. Sabalaska, DO

Please fax this form to ACOFP at 866-328-1835 or email to joank@acofp.org as soon as possible.

Deadline: July 10, 2015
OMT of the Extremities
Board Review

Thomas E. Sabalaske DO
www.doctorsab.com

AOCFP Intensive Update and Board Review
August 2015

Objectives

- Brief anatomy review of the extremity articulations and tissues
- Review diagnosis and treatment of some of the more common conditions seen in family medicine and on the practical
- Establish principals for treating any dysfunction that is presented on the boards
Remember for the Practical

- RELAX!!!!
- If you are having difficulty, think of the anatomy involved and that can lead you to a solution using the available muscles, ligaments, fascia etc.
- Don’t be afraid to mention all treatment options
- **Recheck the dysfunction**

Shoulder Anatomy

**Three true joints:**
- Glenohumeral
- Sternoclavicuar – sellar joint
- Acromioclavicular – plane joint

**One pseudo joint:**
- Scapulothoracic
Shoulder Anatomy

Rotator cuff tendons (SITS):
- **Supraspinatus**
- **Infraspinatus**
- **Teres minor**
- **Subscapularis**

**Major function is to stabilize the glenohumeral joint and enable external rotation**
Spencer Technique

- Good for adhesive capsulitis

- Stretch the muscle group to test its range of motion, use muscle energy to work the muscle group to achieve post isometric relaxation

Spencer Stages

1. Extension
2. Flexion
3. Circumduction with compression
4. Circumduction with distraction
5. Abduction (with int/ext rotation)
6. Another internal rotator
7. Massage relaxer/lymph pump
8. Retest – as ALWAYS
Spencer Mnemonic

- Elephants – Extension
- Fly - Flexion
- Constantly - circumduction
- To – traction (and circumduction)
- Annoy - abduction
- Intoxicated – internal rotation
- People - pump

Shoulder Counterstrain Technique

- You can always attempt to counterstrain any tender points either anterior or posterior in the shoulder. While monitoring the point, simply approximate the origin and insertion of the muscle/tendon being treated. This works well for tendonitis.
Shoulder Muscle Energy

- Most asymmetries of motion and impingement syndromes of the shoulder are amenable to muscle energy to facilitate a better balanced position. Teaching home exercises enhances the benefit.

Elbow Anatomy

- One true joint – ulno-humeral (range of motion flexion – 160 deg Extension – 0 deg.)
- Two accessory joints
  1. Radiohumeral
  2. Proximal radioulnar
Nursemaid’s Elbow

- Subluxation of the radial head
- To reduce, place thumb over radial head, then supinate and flex the elbow affected (quickly before the child has time to resist).
- Another effective option is to pronate the wrist and flex and extend the elbow.
Anterior Radial Head

- Diagnose with decreased posterior motion
- Treatment – HVLA – Pronate pt’s wrist while flexing at elbow, grab radial head with a few fingers, and encourage posterior motion while hyper-flexing the elbow.

Posterior Radial Head

- Diagnose with decreased anterior radial head motion
- Treatment – Contact radial head with fingers, encouraging anterior motion while hyperextending the elbow joint.
Decreased pronation/supination

- Diagnose as above, often found in combination with other dysfunctions
- Treat with direct muscle energy in a "shaking hands with patient" position

Epicondylitis

- Diagnose with point tenderness on either epicondyle and associated muscle use pain (lateral – posterior forearm muscles; medial – anterior)
- Treatment – first treat all surrounding dysfunctions, then counterstrain (extend the elbow and pronate for medial; or supinate for lateral) and then educate
Carpal Tunnel

- Entrapment of the distal branches of the median nerve
- Gives parasthesias along first 3 ½ fingers and weak thumb abduction

**TESTS**
- Tinel’s tap
- Phalens/reverse Phalens test (more accurate)
Carpal Tunnel Treatment

- Remove harmful behaviors, habits and ergonomics
- Look for somatic dysfunction in upper thoracics, cervicals, and entire upper extremity.
- Muscle energy to wrist
- Flexor retinaculum stretch
- Home stretching/bracing

Metacarpal dysfunction

- Diagnosis pain and decreased motion of one or more of the metacarpals
- Wiggle it (just a little bit) – articulatory technique where you translate the metacarpal ant/post with the neighboring metacarpals
Fingers

- Gap and gently rotate any stiff or dysfunctional phalanges

Hip Joint Anatomy

- Femoroacetabular joint – ball and socket synovial joint
- Primary flexor – iliopsoas
- Primary extensor – gluteus maximus
- Held in place by 4 ligaments and surrounding musculature
Functional Hip Stacking Technique

- Patient supine
- Palpate anterior hip capsule area
- Take the leg indirectly – away from all barriers (flexion/extension, ab/adduction, internal external rotation, compression/distraction)
- Hold until release is felt, then slowly return

Lateral Trochanteric Counterstrain

- Patient prone or supine
- Palpate tender point
- Abduct the leg and adjust with mild flex/ext or rotation to maximally decrease the tenderness of the point
- Hold for 90 seconds, slowly return
Piriformis Counterstrain

- Patient prone
- Monitor tender point
- Flex patient’s hip and knee to 90 degrees, abduct and externally rotate to maximally decrease tenderness
- Hold for 90 and slowly return

Hip Musculature

- Don’t forget to simply use muscle energy to address any abnormal tension in any of the muscles of the hip to enhance function
Knee Anatomy

Three Major Joints
1. Tibiofemoral joint
2. Patellofemoral joint
3. Tibiofibular joint – synovial joint important for pronation/supination of feet

Major Knee Ligaments
- Anterior cruciate – prevents anterior tibial translation
- Posterior cruciate – prevents posterior translation
- Medial collateral (tibial collateral)
- Lateral collateral (fibular collateral)
Tibia on Femur dysfunction

- Treats abduction/adduction dysfunctions as well as torsions of tibia on femur
- Patient supine, physician contacts above and below knee and directly applies pressure through soft tissue barriers in rotation and varus/valgus
Counterstrain Patellar Tenderpoints

- Patient supine
- Foot/tibia internally rotated
- Physician grasps quad above knee and provides an inferior force, while palpating tenderpoint with other hand

Anterior Fibular Head HVLA

- Patient supine with pillow under knee
- Physician internally rotates patient’s foot/ankle
- Thrusts fibular head posteriorly while continuing to internally rotate ankle
Posterior Fibular Head HVLA

- Patient supine with hip and knee flexed
- Physician externally rotates ankle/foot with other hand in popliteal fossa
- Knee is flexed while applying anterior pressure on fibular head

Ankle Anatomy

1 major joint
- Talocrural (Tibiotalar) – hinge joint connecting talus to tibia/fibula
- Many minor joints and ligaments important for movement and shock absorption.
- Anterior talofibular ligament most commonly torn (always tears first)
HVLA Anterior Tibia on Talus

- Tibia resists posterior translation, ankle prefers dorsiflexion
- Patient supine, physician at foot of table
- Physician’s grasps patient’s heel and applies traction
- Corrective force with other hand posteriorly through distal tibia
HVLA Posterior Tibia on Talus

- Tibia resists anterior translation, ankle in plantarflexion
- Patient supine, physician at end of table
- Physician grasps foot with both hands, applies traction, dorsiflexion and mild eversion, and gives a gentle tug

Foot Anatomy

- Remember bones involved
- Plantar fascia – medial calcaneus extends out to phalanges
- Longitudinal arch (medial and lateral)
- Transverse arch
Foot conditions

- Pes planus – flat feet
- Hallux valgus – bunion
- Hammer toes – plantarflexion pip joints
- Plantar faciitis

Midfoot Thrust
(Hiss Whip)

- Patient prone, physician stands along side of dysfunction
- Physicians grasps the foot with thumbs crossed over dysfunctional bone, and applies downward thrust while inducing a whip-like motion of the foot and ankle
Metatarsal Articulation

- Patient supine, physician grasps foot and stabilizes one metatarsal while gently moving the adjacent metatarsal to increase mobility