Osteopathic Approach to Immunity and Infectious Disease

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Disclosures

• None
Objectives

• Describe an “Osteopathic Approach” utilizing osteopathic principles and practices.
• Review anatomy & physiology of lymphatic system
• Explain the effects of somatic dysfunction on lymphatic system, blood circulation, and respiration.
• Review the historical importance of osteopathy and the lymphatic system.
• Discuss contraindications to OMT use.

Therapeutic Techniques
“I’m not here to teach a bunch of parrots”

Andrew Taylor Still, MD, DO:
- “It is not necessary to do what I do if you can obtain the same results.”

Alan Becker, D.O.
- “Design the treatment as you go.”

“Know that you’re right And do your work accordingly”

OMT for Lymphatics Include:

- Chapman’s Reflexes
- Thoracic Pump (of Miller)
- Pedal Pump (of Dalrymple)
- Osteopathy in the Cranial Field
- Muscle Energy to the Thoracic Inlet
- Rib Raising
- Splenic/Liver Pump
- Extremity Pump
- Cervical myofascial mobilization
Thoracic Inlet Release

- Will be shown in lab…
- Is used as a part of an integrated approach for URIs, lymphadema, of the upper extremities and even mastitis.
- Treat the thoracic spine and cervical spine prior to treating the operculum or thoracic inlet (outlet)
OMT for Blood and Lymphatic Circulation and ANS Include:

- Chapman’s Reflexes
- Thoracic Pump (of Miller)
- Pedal Pump (of Dalrymple)
- Osteopathy in the Cranial Field
- Muscle Energy to the Thoracic Inlet
- Rib Raising
- Splenic/ Liver Pump
- Extremity Pump
- Cervical myofascial mobilization
- Strain Counterstrain OMT

OMT TO THE LYMPATICS AND MICROCIRCULATION SYSTEM

- Sequence of treatment is important.
  - Start at thoracic inlet
  - Then cervical myofascial release, both shoulder girdles, respiratory diaphragm, rib raising, chest pump, bilateral lower extremity release, dorsal pedal pump.
  - Then indirect release Around the wound.
Is used as a part of an integrated approach for URIs, lymphedema, of the upper extremities and even mastitis.

- Treat the thoracic spine and cervical spine prior to treating the operculum or thoracic inlet (outlet) lymphatic and blood circulation as well as mechanical function.
- Rebalances the ANS-Sympathetic Chain, & Vagus
A.P. Davis, MD, DO 1898

Treating the Cervical Lymphatics and Sympathetics

Treating the Cervical Muscles
Thoracic OMT

Treating Sympathetics and Lymphatics- can be supine or…
General treatment of thoracic spine and rib cage

Suboccipital Tension Release
- **Rib raising**
  - Promotes venous and lymphatic drainage, and impacts the SNS ganglia, vasomotor tone.
  - Pt supine, operator’s cupped hands under thorax with finger tips placed 1-2 inches lateral to the spinous processes
  - Use an upward, lateral motion of the wrist and hands, operator lifts the rib angles, to cause expansion of the thoracic cage.
  - Repeat on the other side.
- **Anterior chest wall (sternal) lymphatic pump:**
  - Pt. supine and operator places one or both hands together on pts. sternum or anterior chest wall
  - Pt. inhales fully
  - On exhalation, apply a gentle posterio-caudad pressure to the sternum
    - Pressure may be vibratory
  - Momentary resistance to inhalation accentuates the negative intrathoracic pressure which further assists air flow and fluid return
Lymphatic Pump

Release of Thoracics, Ribs, and Shoulder Girdle Lymphatics
OMT to Liver (or Spleen)

**Abdominal Diaphragm Release**

- Doming of a flattened diaphragmatic muscle will increase the pressure gradients that it is able to produce between the thoracic and abdominal regions that are decreased during times of intrapulmonary inflammatory processes, impaired chest wall excursion, etc.

- There are three major openings in the abdominal diaphragm, and each of those important structures can be affected by a change in resting tone of the diaphragm:
  - Aorta and cysterna chili – impaired blood flow and lymph flow
  - Esophagus – esophageal reflux and hernia’s
  - Inferior vena cava – impaired venous return
Diaphragm Release OMT

Still Thoracic Diaphragm OMT
Littlejohn Iliopsoas Diaphragm Pump (Oscillatory Technique)

Shoulder Shake
Direct MFR (Right) Shoulder

- **Pedal Pump**
  - Patient lies supine. Physician standing at the foot of the bed.
  - Physician passively dorsiflexes the patient’s ankles repeatedly to create a fluid wave motion throughout the patient’s entire body.
  - Next repeat using plantar flexion
Indirect Fascial Release for Wounds

- Treat AROUND wound gently, NOT straining the tissues, but relaxing the tissues.
- Focus on tissues closer to the heart first.

**Pedal Pump**
1. Pt supine, physician standing at the patient's feet
2. Contact the patient's feet and dorsiflex.
3. Introduce a force which dorsiflexes the feet. Continue the force along the longitudinal axis of the body. The force should send a wave of motion cephalad, which will be followed by a rebound wave moving caudally.
4. Use an osseous landmark or dermal dysfunction to appreciate the wave motion.
5. As the rebound wave returns to the feet, reapply the dorsiflexion force thereby creating an "oscillatory wave".
Suggested Lymphatic Treatment Sequence

- Lymphatic OMT is given -After First providing OMT to the primary areas of somatic dysfunction.
- Treat: Thoracic inlet, Cervical spine, Thoracic diaphragm,
- Pelvis
- Then extremities –proximal to distal.

Pulmonary Issues Related to OMM

- The initial and subsequent assessments will allow sequential treatment techniques to follow logical, patient specific paths.
- To perform an adequate assessment, the hands will tell the story the eyes miss. Use them to help confirm observations.
- Special attention to observation and palpation of the entire thoracic spine and rib cage, with key attention to thoracic inlet, rib1 dysfunctions, thoracic spine SDs will pay dividends.
A.P. Davis, MD, DO 1898

Treating the Cervical Lymphatics and Sympathetics

Treating the Cervical Muscles
Release of Thoracics, Ribs, and Shoulder Girdle Lymphatics

OMT to Liver (or Spleen)
Lymphatic Treatment Sequence

1. Remove Obstruction to Flow
   - Correct somatic dysfunction
   - Open fascial pathways

2. Maximize Thoraco-Abdomino-Pelvic Respiratory/Circulatory Pump Internally
   - Remove somatic dysfunction esp chest cage
   - Redome diaphragms / maximize respiration

3. Externally Augment the Pumps
   - Change pressures (raise ribs, add pumps)

4. Stimulate Local Lymph Drainage
   - Move fluids towards heart (effleurage-visceral OMT)
Interpret Research Correctly!

Excellent health statistics ... smokers are less likely to die of age-related illnesses!
References


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More References