Manual Lymphatic Therapy

Increasing outcomes and decreasing lengths of stay in orthopedic populations with MLT

Purpose for the course

- To become familiar with the indications and contraindications for Manual Lymphatic Therapy in orthopedic populations.
- To benefit patient outcomes and add to the marketable skills of the therapists and the toolbox from which to draw the most beneficial treatments.
- To increase patient outcomes and decrease lengths of stay using MLT.
What does the lymphatic system do?

- An open loop system that absorbs excess fluid from extra-cellular tissue spaces. This fluid is designed to cleanse and filter the tissues as it goes. The fluid is eventually moved to the circulatory system and joins it in the function of absorbing fats from the intestines. This fluid is rich in white blood cells. Any excess fluid is then moved from the circulatory to the renal system to be excreted.
- The lymph system functions to filter harmful bacteria, make white blood cells, increasing immunity, maintain a fluid balance in the body, and assist in the digestion of fats in the intestines.
- A MAJOR component of the immune system.

Lymphatic System Anatomy and Physiology Overview

- Lying parallel to the circulatory system, it differs in that it is an open loop system, there is no central pump as with the cardiovascular system, and pumps at a much slower rate.
- Magically, we are created with all of our major areas of lymph nodes on the ventral side of our body. This is important, because we can protect all of them by curling up in a fetal position if we are to come under attack!

Lymph System Anatomy

- Superficial Lymphatics. Strings of pearls. Capillary-like vessels includes pre-collectors, collectors
- Deep Lymphatics. Lymph does not leave a body part or organ without being filtered by the lymphatics.
- Deep-trunks, ducts, then empties into the venous system around the clavicles. Cysterna Chyli
- Plane Barriers, (known as watersheds)
- Microcirculation and Lymph Transport System
- Lays parallel to the circulatory system
- Proteins, cell fragments, bacteria, viruses, waste, toxins, fats, and I
- Organic substances are moved through the body via the lymph system. (1, p.48)
Anatomy, cont’d

- There are 600-700 lymph nodes in the body.
- The areas most concentrated with lymph nodes are the neck, each axilla, each groin area, and the abdomen.
- The nodes serve to filter the lymph fluid, thicken the lymph fluid, to make more lymphocytes-which increases the body’s immunity, and to store matter that can’t be removed such as coal dust, dyes, silica, minerals, glass, etc.

Starling’s Law

- Ideally the body maintains the homeostasis/equilibrium of fluid exchange
- The capillary pressure/collod-osmotic pressure of the tissues to filter will stay equal to the blood’s oncotic suction power to reabsorb fluid into the bloodstream.
- This results in balance of the body’s fluid system. If there is not balance, the result is congestion, and edema (swelling), and other body systems respond.
Lymphatic Fluid

• Lymph fluid is rich in protein making the edematous area very thick and heavy feeling.

• Treatment is necessary to not only move the fluid out of the area, but also the protein. If it is not treated, over time, the lymphatic vessels will stretch out permanently and external compression and treatment will be necessary for a lifetime to maintain proper pressure in the valves to move fluid more normally.

How does it work?

• IMLT stimulates the immune system by increasing lymph function directly and blood circulation indirectly. Venous circulation is aided by the motion, and edemas can be reduced.

• Pain can be reduced by the inhibitory effect of the mechano-receptors-stimulating parasympathetic responses.

What can the techniques be used for?

• To move lymph fluid including protein, fat and toxins from one part of the body to another

• Decrease pain

• Stimulating immunity

• Clearing areas where toxins are held, i.e. cellulite

• Decreasing sympathetic responses, thus helping with depression, anxiety, stress, insomnia and muscle tension
Indications for therapy

- Orthopedic traumas, surgeries (see what other sources can be cited for complete list)
- Wounds
- Edema (if properly identified)
- Arthritis
- Anti-spasticity
- Pain
- Dermatological-acne, scars, cellulite, stretch marks,
- Orthopedic Conditions
- Sports Medicine, Fractures, Carpal Tunnel
- Tinnitus/Vertigo
- Dry Eyes, fibromyalgia, CFS/rheumatic conditions
- (verbally go over complete list in number 1 book)

Contraindications for Therapy (All Lymphatic Therapies)

- CHF
- Renal Failure (must be able to urinate)
- DVT or any major obstructions or serious cardiac conditions (groceries)
- Infection (Cellulitis) Infection and inflammation are not the same. Infection always has inflammation, but inflammation is not always infection. Signs and Symptoms of cellulitis: red streaking, fever, chills. Ask if the patient has had any recent cuts or abrasions. Pet scratches, etc.
- Active bleeding/internal or external
- Untreated cancers

Precautions

- Thyroid disorders (avoid anterior neck)
- Asthmatics where attacks are triggered by the vagus nerve (avoid work over the sternum)
- Pre-cancerous areas
- History of TB
- The abdomen during menstruation
- Hypotension, treated cancers, (certified therapists only)
- New sudden onset edema
- Edemas/lymphedemas for certified therapists only (find alternative source for addl prec. On p59)
What is Standard MLD/CDP Therapy?

- A complete program including skin care, hygiene, exercises, self massage instruction, MLD, compression therapy
- MLD affects the autonomic nervous system (p.29)
- Other names for MLD/CDP
- It is a systematic, rhythmic method of purposefully stretching the skin to produce an increase in the volume of flow of the lymph fluid through the filtering system of the body, resulting in detoxification of the body.

Special Applications in Long Term Care

- CVI—Allows the patient to be up, and functional, participating in activities, etc. instead of in their room with legs elevated
- Post surgery—great for hip and knee replacements. Assists in the evacuation of edema to allow greater ROM increases and hasten recovery
- Consider living situation when deciding about compression
- Post—mastectomy, Secondary diagnoses: previous cancers, prostate, ovarian.

The keys to performing proper Integrated Manual Lymph Therapy

- Pressure! Crucial to engage the lymphatics, not the musculoskeletal system. This therapy should NEVER be painful or cause erythema. We use the least amount of pressure necessary to engage the lymphatics. This feels like moving the skin to the point of a myofascial barrier.
- Rhythm—On two-three, off two-three is a good beginners rhythm. As you become more experienced, you will be more tuned in to the rhythms of your clients (include items in p61 book 1)
- Sequence—proximal to distal, opening the nodes and pathways that you are draining to first!
- Direction-stretching motion in the direction of the vessel’s origin
- These four facets must be applied correctly to increase the pumping action in the system
- Flat Hands, using as much surface area as possible even the palm. This differs from typical Swedish (get access to lymph charts) Develop treatment sequences.
Pay attention to any scar tissue that may affect lymphatic fluid flow, including the direction and rate of flow. Loosen up scar tissue within your scopes of practice, i.e. US and soft tissue techniques, scar massage, cross friction massage, etc. If the scar is deep, the lymphatics in that area are already damaged, so you do not have to be as wary of pressure in that area.

Overall increase in lymphatic circulation is important. Water activity is important due to the natural compressive force of the water on the limbs. Also, impressive is the fact that the pressure is greater at the bottom of the pool than at the top, so just with water walking, clients will get an increase in the natural flow from distal limbs to proximal body.

- Mini-trampoline jogging/bouncing
- Swiss Ball bouncing, rocking
- Jump-rope

Billing Codes

- 97001 PT evaluation (OT, ST, MT)
- 97530 Therapeutic Activities – Skin care instruction, teaching proper donning and doffing of compression stockings
- 97110 Therapeutic Exercises-Lymphedema exercises and instruction
- 97140 Manual Therapy-Lymphatic drainage massage
Codes

- Diagnosis codes: 457.1 lymphedema, lipedema
- Phlebolymphedema, 457.0 post-mastectomy lymphedema syndrome
- Treatment ICD-9 Codes
  - 729.5 Pain in limb
  - 729.81 Swelling in limb
  - 781.2 Abnormality of Gait
  - 719.7 Difficulty in walking
  - 457.0 Postmastectomy lymphedema
  - 457.1 Lymphedema other
  - 709.2 Scar conditions/fibrosis of skin

Medicare Specific Billing Guidelines

- Treatment must be reasonable and necessary to restore patient’s PLOFs
- Must document change in function! Again, not documentation of specific number of feet walked, or that they are now able to lift 5 pound weights 30 repetitions, but: Patient can now walk around her home without pain allowing her to care for her children.
- Client can now lift arms overhead without pain to complete household chores.
- Girth measurements, ROM, strength measurements are objective, but do not demonstrate change in function

Alternate forms of treatment for edema

- Lymphedema pump—often considered a method of last resort (outdated). Can create a dependency on the pump for treatment as it moves the fluid, but not the protein component of the lymph. Also increases the risk of genital edema
- Elevation
- Surgery
- Diuretics
- Bandaging
- Low compression support hose. “TEDS are for BEDS”
- Doubling up on lower compression hose to increase the pressure tolerated, but aid in the ability to don them
- Compression Garments
- Exercises, standard physical therapy, ROM
- Self massage
- Reid sleeves, Circ aids,
Why do we need to treat edemas?

- Short-term: We treat any decrease in ROM, pain, infection risk, venous and arterial obstruction, and decrease in functional activities such as gait, reaching, etc.
- Secondly, when the vessels are full of this protein-rich fluid, there is less oxygen in the vessels, decreasing the rate at which wounds, surgery sites and skin ulcerations heal. This also puts the patient at risk of cellulitis, or infection of the bloodstream.
- Long-term: We prevent any long-term change in function, skin ulcerations, hemosiderin pigmentation, fibrosis that can become irreversible.

Alternate Forms of Edema Continued

CVI-Chronic Venous Insufficiency

Vascular insufficiency: Signs and symptoms: achy feeling at the end of the day, better with elevation, darker in color when on the ground/floor. Staining of the LE’s, most common in LE’s. Skin ulcers and cellulitis are a common risk that is decreased with compression therapy.
Arterial insufficiency-pain with compression (contraindicated for MLD)
Myxedema
PMS, medication abuse
Combined forms
Review Questions
Resources

- Organizations for more information:
  - www.lymphedemahope.com
  - www.lymphnet.org
  - www.lighthouselymphedema.org
  - www.elymphnotes.org
  - www.breastcancer.org
- www.discountsurgical.com
- www.bandagesplus.com
- Pass around sheet for address info email, etc. for future marketing
- Contact for 135 hour course info
- Have book of manuals and forms for marketing to sell.
- Give students 10% discount on complete CDP course
Decreasing Length of Stay and Increasing Outcomes in Orthopedic Populations with Manual Lymph Drainage

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