Manual Lymphatic Drainage Techniques (MLD) and Its Effects on Edema After Total Knee Replacement (TKR) Surgery

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PTA 236
In-Service Presentation
Barriers in the Healing Process

• One of the biggest challenges PTAs face in the clinic when treating a total knee replacement is edema. Edema increases pain and limits mobility which, in turn, reduces healing time.
**Lymphatic System**

- “Composed of a network of vessels that collects fluid and plasma proteins that leak out of capillaries and into the interstitial space. Lymphatic vessels return the lymph (fluid and plasma protein) back to the circulatory system through the veins. It also plays a vital role with the body’s immune system.” (ENotes) However, for the purpose of this presentation we will focus on the Lymphatic System’s capability of edema reduction.
Locations

• Lymph nodes are located all throughout the body.

• These locations include:
  – Neck
  – Axilla
  – Chest
  – Arms
  – Groin
  – Posterior knee
• “Manual lymph drainage (MLD) could possibly accelerate edema resorption after TKA surgery” (Clinical Trials.gov)

• “According to the University of Alberta, Edmonton, Canada, patients 7-14 days post TKR were treated with MLD for thirty minutes per day. Range of motion and edema girth measurements were taken at the end of the intervention. The study reported a significant decrease in all girth measurements as well as an increase in both flexion and extension in the knee joint.” (Efficacy)
• In order to perform (MLD) in the clinic one must be a licensed professional who is specially trained and certified in Manual Lymph Drainage
(MLD)Impact on Edema

1) Stimulating the lymphatic system via an increase in lymph circulation (NCBI)

2) Expedites the removal of biochemical wastes from body tissues (NCBI)

3) Enhances body fluid dynamics, thereby facilitating edema reduction. (NCBI)
Manual Lymph Drainage Technique

• **Knee:** “Place the fingers of both hands posterior to the knee. Perform a scooping motion on the lower extremity gently stroking from distal to proximal toward the posterior of the knee.” (Rules for MLD)

• **Groin:** “Place the hands on the anterior portion of the lower extremity superior to the knee. Perform a scooping motion gently stroking from distal to proximal toward the groin, rolling the hands from the thumb to the little finger toward the groin.” (Rules for MLD)
Who can benefit from MLD?

• Manual Lymph Drainage Technique is not reserved for any particular population. It can benefit patients of all ages post-surgery to combat edema. Applying this technique will reduce edema, which decreases pain and increases mobility. This, in turn, will lead to an acceleration of positive patient outcomes.
Measurement Tools used for Documentation

• Accurate circumferential measurements are taken in centimeters with a measuring tape. (MCCC)

• Measurements must be taken at designated landmarks. Mid-Patella, Mid-thigh, Mid-Calf. (MCCC)

• Measurements should be taken at the same time of day. (MCCC)
Where can I get certified?

- **Norton School of Lymphatic Drainage**

  This course is a basic certification program in the techniques and applications of Manual Lymph Drainage (MLD). This 5-day, 60-hour course (20 hours of online Home Study and 40 hours of live classroom instruction) exposes students to the methodology known as Vodder Technique, developed by Emil Vodder, Ph.D. The manual lymphatic drainage course is targeted at manual therapists such as medically-oriented Massage Therapists, Physical Therapists and PTAs, Occupational Therapists and COTAs, and Registered Nurses and LPNs/LVNs, and Certified Medical Assistants (CMAs), all of whom maintain clinical practices that encounter patients in need of edema management or general health level support. This course combines a comfortable balance of didactic and practical lessons with the aim of providing generous theoretical support as well as manual skills mastery.
Bibliography


Bibliography


• Norton School of Lymphatic Therapy : The Basic MLD Certification Course (2013) [http://www.nortonschool.com/mldcourse.html](http://www.nortonschool.com/mldcourse.html)