P&P: **Subcutaneous *Lower Extremity Lymphedema Drainage Procedure***

Purpose: Increased comfort and improved symptom management by the provision of subcutaneous lymphedema drainage in end-stage palliative care clients~~,~~ living with severe lymphedema of lower abdomen, genitalia and/or legs for the client. Each case must be assessed on an individual basis in relation to the potential benefits and risks.

Policy:

1. **Note:** Prior to beginning the procedure, the nurse must have reviewed the "CarePartners lymphedema toolkit"
2. Lower extremity lymphedema drainage is for end-stage palliative care clients with lower extremity lymphedema refractory to conventional pharmacological and mechanical measures.
3. The client must be assessed for appropriateness, receptiveness and the ability to manage personal needs or have someone available to assist them as their mobility will be significantly impacted during the time that the drainage is in place.
4. A physician must order the procedure.
5. The ordering physician must discuss the client/caregiver the potential benefits, and the risks. The risks include potential fluid and/or protein depletion possibly resulting in hypotension, ↓serum albumin, ↑risk of cellulitis, potential for reduced mobility or potential for ongoing lymph fluid leakage. Benefits include improved comfort of the affected area, increased mobility, etc.
6. On each visit the nurse must assess the site for intactness, signs and symptoms of cellulitis / infection and measure and record amount of lymph fluid drained, measure leg circumference and obtain client's weight is possible. In order to potentially measure improvements in client's quality of life, assess pain, anxiety, depression and feeling of well-being pre and post procedure.

Background Information:

Clinicians using this procedure have reported lymph fluid drainage to range from only a few milliliters to 33 liters in 6 days. Pharmacological and mechanical measures should be tried first if appropriate; this includes elevation of limbs, massage, bandaging and aqua therapy.

Before starting thoroughly assess the client's general condition as well as the lymphedema itself. Assess the edema for specific characteristics such as soft, spongy pitting edema with a positive Stemmer's Sign, the inability to pinch the skin of the dorsum of the second toe between the thumb and forefinger. Ensure there is no or minimal evidence of fibrous development (as demonstrated by non-pitting signs), skin thickening, development of skin tags or increased skin turgour. The nurse and the palliative care or family physician should discuss the procedure before approaching the client and/or family regarding appropriateness and potential risks and benefits. Throughout the procedure physician participation is necessary.
Discussions with clients / family must include the reason for the procedure, and the patient's acceptance of limitations during drainage and potential outcomes

Procedure:

1) Assess the client's edema carefully as to appropriateness for the procedure
2) Leg measurements should be completed and recorded, prior to initiation of the drainage procedure and then daily; obtaining the client's weight may be appropriate at times however, not always – needs to be individualized.
3) Order a *Lower Extremity Lymphedema Drainage* Kit from the CCAC contracted pharmacy. This kit includes 4 – 19G. ¾ "sub-q needles, connecting tubing and a drainage bag that can be emptied from the bottom. (For Waterloo-Wellington order sub-q drainage kit from Heath Care Centre Pharmacy which will include 4-#19G ¾" sub-q butterfly, 2-lite 600 DeLuxe bags (CA68), 2 tubing (IV43), 10-chlorahexadine swabs (MS23), 4 IV3000 (IV32) Transpore tape (DU10) and 10 -10cmx10cm gauze pads (for after removal of needles). See attached supply lists for other regions. If drainage continues through puncture site,

appropriate dressing supplies need to be ordered. It has been shown that using "New Skin Liquid" or "New Skin Spray" can be very beneficial in stopping the leaking of lymph fluid from the puncture sites.

4) Obtain client's verbal consent and document on *Progress Notes.*
5) Determine # of sites to be used based on degree of edema in each limb and need to drain both legs. The most effective drainage occurs with bilateral drainage. However, if only one limb is affected, unilateral drainage is appropriate
6) Apply Emla cream as local anesthetic for the sub-q needle insertion site(s), if available / desirable – allow 20-30 minutes for numbing effect to occur
7) Assemble required supplies and attach tubing to area specific drainage bag
8) Perform hand hygiene and then don gloves
9) Cleanse the area(s) for insertion of sub-q needles with chlorahexadine swabs
10) Insert #19 butterfly sub-q needles, **bevel down**, in the dorsum of the chosen foot, and attach to tubing which is attached to drainage bag.
11) Secure with (10X12 cm) transparent dressing**. Do not loop tubing as this may impede drainage**
12) Remove gloves and perform hand hygiene
13) Drain via gravity
14) Assess and document amount of drainage daily and client's response to procedure
15) Teach family / caregiver to drain bag as needed – do not allow bag to get too heavy as there will be increased risk for accidentally dislodging the needle(s)
16) Ask family / caregivers to measure and record drainage between nurses' visits on client's data capture form
17) Encourage family / caregivers to document pain experiences and other relevant ESAS scores or concerns on this form as well
18) Change sites every 3-7 days or when leaking, reddened, or painful
19) Observe lymph fluid for changes in colour, blood in fluid, odour, etc.
20) Teach caregiver to monitor site for dislodging of needle, pain, redness, and signs and symptoms of infection. Refer to *Subcutaneous Lower Extremity Lymphedema Drainage Procedure CarePlan* for management and client / family educational goals
21) Assess for signs & symptoms of hypotension, fever, weakness – monitor BP & Temperature if signs present – report these findings to physician for further orders
22) Drainage procedure to be discontinued when drainage stops, if drainage becomes minimal or if discomfort occurs with continued drainage.
23) To discontinue drainage, remove needle(s) and apply a dry sterile dressing. It may be appropriate to apply compression bandaging, keeping legs elevated, etc. This needs to be determined in collaboration with the physician.
24) Complete the evaluation included in the *Subcutaneous Lower Extremity Lymphedema Drainage Procedure Toolkit* and fax to CarePartners at 519 -725 -1883 attention: Charlotte Koso
25) Evaluation results will be shared with contributors

References:

Clein J., Pugachev E., Reduction of edema of lower extremities by subcutaneous, controlled drainage: Eight cases, American Journal of Hospice and Medicine Vol21, #3, May/June 2004

www.bullitinboard@palliativedrugs.com 41 dialogue entries of experts sharing their experience and effectiveness of this drainage procedure for lymphedema July 19, 2007 to Jan. 29, 2008.

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