Phlebolymphedema: Management of Dermal Changes and Wounds

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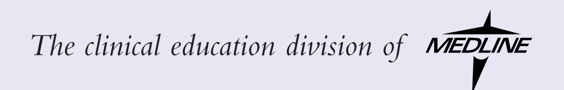

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INTRODUCTION

Lymphedema is an expression of saturation in the compensation mechanisms typical of the lymphatic system. It can be a result of accumulation of excess intercellular fluid in the legs and feet due to lymphatic obstruction that is the result of chronic venous insufficiency or because it has a functional or organic deficit. Many edematous conditions may, however, join together changing from one to another and getting intermixed features. Venous and lymphatic systems collaborate to maintain the micro-circulatory homeostasis of the tissues. "The presence of ANY edema, no matter what its cause, is a sign that the lymphatic system has been overwhelmed. It is also a sign that all the other defenses, whose activities must not be neglected, have also been overwhelmed". Foldi (1969). Research affirms that in cases of lower limbs with chronic venous insufficiency, treating the lymphatic problem can help with the care of phlebostasis. Phlebolymphedema compromises the microvascular and lymphatic systems, reducing cellular oxygen and nutrients and thereby affecting skin health and interfering with wound healing.

INTERVENTIONS

Our Treatment Center developed a protocol of care for lower extremity phlebolymphedema. Complex lymphatic therapy is essential to evacuate lymphostasis, which undermines the integrity of skin and impedes wound healing. Skin and wound care is the first thing that must be managed, followed by manual lymph drainage, short stretch compression bandaging, and decongestive exercises.

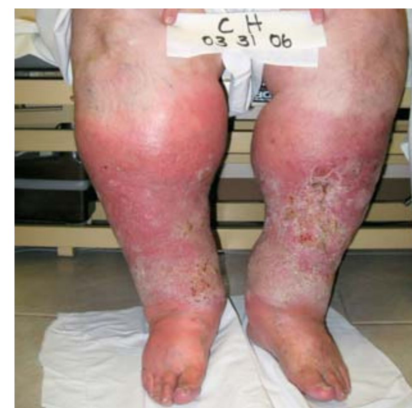
Cleansing is followed by applications of various advanced skin care products formulated with Olivamine*, a proprietary blend of antioxidants, amino acids, their co-factors (vitamins A, B3, B6, C and D3) and methylsulfonylmethane (MSM). If a wound is present, appropriate wound care is provided, including debridement, followed by the application of wound dressings. Frequently, an antimicrobial controlled release (for targeted antimicrobial protection) ionic silver dressing+ is applied to reduce the bioburden.

The dermatological manifestations of phlebolymphedema include; edema, stasis dermatitis, hyperpigmentation, lymphostasis, verrucose cutis, lipodermatosclerosis, and ulceration. These symptoms have been successfully managed with our interventions and protocols.

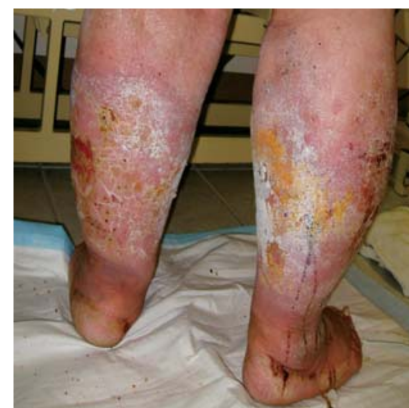
CASE STUDIES

The patient is a 37 year male (CH) who was referred for lymphedema management, due to swelling and drainage of his lower legs. He relays a several year history of this condition when the swelling and skin condition became unmanageable. He was embarrassed of the foul smelling wounds that constantly drained. His medical history is significant for obesity and multiple episodes of cellulitis. The patient goals were to decrease the swelling, reduce the pain, and to improve the skin so that he could resume daily functional activities. CH presents with induration, hyperpigmentation, papillomatosis and hyperkeratosis of the lower leg, ankle, foot and toes. Toenails are mycotic. An amber colored, thickened fluid exudes from the friable erythematous tissue. Volume measurements indicate that the right lower leg is13,254.00 ml and the left lower leg is 11,778.18 ml. The volume difference: 1475.82 ml. The right upper leg measures 18,914.90 ml and the left upper leg: 18,855.33 ml with a volume difference 59.57 ml. He describes a pain level "8", on a 0-10 pain scale, with 10 being most painful. He is independent with most activities of daily living. Assessment: Patient presents with clinical signs and symptoms consistent with Stage III bilateral lower extremity phlebolymphedema, which is characterized as an edema with poor skin texture, skin breakdown, and lipodermatosclerosis.

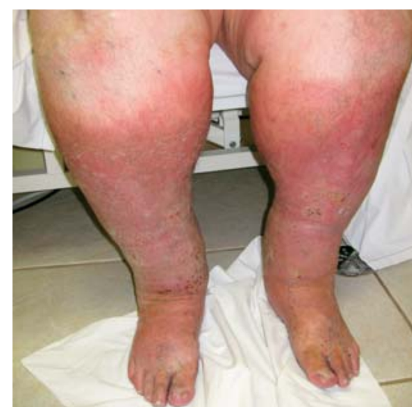
After nine treatments including manual lymphatic drainage (MLD), Olivamine products, compression bandaging, and vasopneumatic therapy, his skin condition improved and the lymphorrhea has resolved. Volume measurement in the right lower leg was 9553.43 ml, which is a reduction of 3700.57 ml; and the left lower leg was 9929.21 ml, which is a reduction of 1848.97 ml. The total volume reduction was 5549.54 ml. His pain decreased to "0" and there was no evidence of foul odor to the legs. His ADL status remained independent. His life long maintenance includes the use of knee high compression garments.



3-31-06 Bilateral frontal view

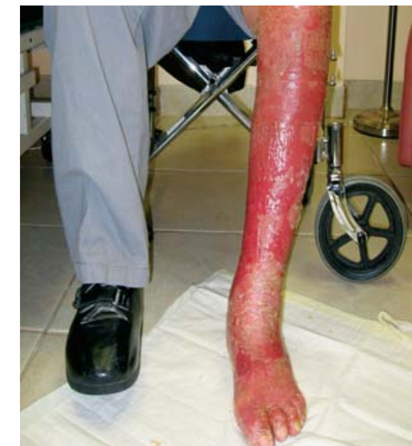


3-31-06 Posterior view

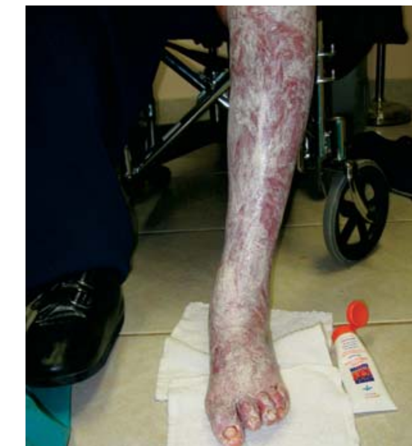


4-6-06 After nine treatments, frontal view

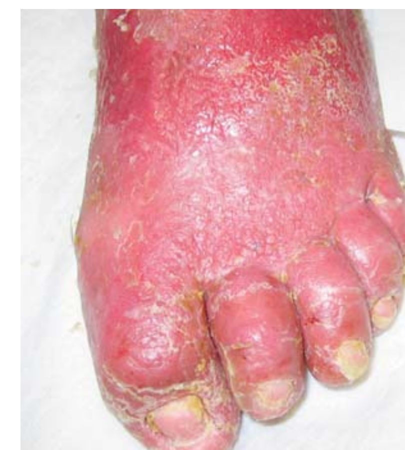
RO is a 65 year male that was referred to our clinic for lymphedema management and skin care. He lives with his spouse who assists with his activities of daily living. His past medical history includes diabetes with a right BKA. RO presents with fibrosis, hyperpigmentation, hyperkeratosis and dry flaky skin of the entire left lower extremity. His toenails are mycotic. His overall tissue health is poor with venous dermatitis with lymphorrhea. An amber colored fluid exudes from the friable area of this erythematous tissue. Assessment: Volume measurements indicate that the left lower leg was 4118.60 ml. The upper leg is fibrotic. Abdominal lymphotome is full, fibrotic, and the tissue has an "orange-peel" like texture. His clinical signs and symptoms are consistent with Stage III phlebolymphedema. This diagnosis requires life long management and because of his active participation in care, his prognosis is good. His overall goals include edema reduction, improved skin care to the lower extremity and abdominal tissue.



Notice the typical characteristics of Stage III phlebolymphedema: skin breakdown, edema, and lypodermatosclersosis



After the application of Olivamine* containing barrier cream



Detail of the foot, notice the mycotic appearance of the toes and the overall dry flaky skin

CONCLUSION

The integration of complex lymphatic therapy, advanced skin care, and wound care is a proven intervention for treating phlebolymphedema.

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