

Lower Extremity Lymphedema: Often Overlooked and Misdiagnosed

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Appearances can be deceiving. This is often the case with diagnosing the etiology of lower extremity edema. Not always is heart failure the ubiquitous diagnosis. Veno-lymphatic disease should always be considered in the differential diagnosis of leg edema. Inaccurate diagnosis can delay the patient access to advanced technologies, such as intermittent pneumatic compression therapy.

Background

77 year old J.P. has experienced many years of progressive leg swelling. Her legs always seemed disproportionately larger than the rest of her body. She has typical co-morbidities seen in “over weight” patients, including hypertension,



dyslipidemia and pre-diabetes. Her primary care physician associated her large legs to her dietary indiscretions, and often described them simply as swollen and edematous.

The status-quo continued until one day she presented to our Wound Center with 3+ pitting leg edema, and blistering of her left anterolateral calf. An arterial and venous doppler ultrasound was immediately obtained and showed no deep vein thrombosis or evidence of atherosclerotic occlusive disease.



Closer examination of her lower extremities confirmed characteristics consistent with the typical trophic skin changes of secondary lymphedema – hemosiderin staining, dermatoliposclerosis, skin atrophy with loss of hair, stasis dermatitis and hyperkeratosis. Note the absence of varicosities, which are often thought to co-exist with chronic venous insufficiency, but frequently are absent. The patient was afebrile and preliminary blood work showed no

leukocytosis or bacteremia. The erythema noted was consistent with severe stasis dermatitis and not a bacterial infection. Therefore, the patient did not require hospitalization for parenteral antibiotics.

The caveats in treating this patient are:

- Achieving rapid fluid balance through appropriate diuresis, and fluid restriction.
- Consistent extremity elevation
- Off-loading of symptomatic extremities using compression garments or multi-layer compression wraps.
- Optimization of the wound bed and peri-wound skin using absorptive and bacteriostatic topical wound products.

Material and Methods

A Unna Boot was applied at the time of the patient's first visit, with resultant rapid and effective reduction in edema, venous hypertension and dermatitis. The Unna Boot was removed after 72 hours and the extremity inspected.



Following initial Unna boot

The patient continued to follow her recommended lifestyle changes, particularly structured leg elevation and consistent use of knee-high tubular stockings, providing approximately 20-25mmHg compression. Her progress was followed weekly, not only by physical examination,

but also with closely monitoring her weight. The patient responded nicely to treatment, but even after her stasis ulcer had resolved, she still complained of leg heaviness, easily fatigability, and diminished functional capacity. These persistent symptoms were all attributable to her lower extremity lymphedema. Having met all insurance requirements, she was considered a good candidate to start intermittent pneumatic compression therapy. She was well motivated, capable of adhering to a routine, and very fearful of having future episodes of lower extremity ulceration and cellulitis. Insurance preauthorization for a 4-chamber intermittent pneumatic compression pump with bilateral thigh high leg garments was processed by Medical Solutions Supplier (medsolsupplier.com).

Within two weeks the patient was using her newly acquired pump three times daily, for sixty minutes each session, at a pressure of 50mmHg.

Results

Results were amazing as depicted in the photo below.

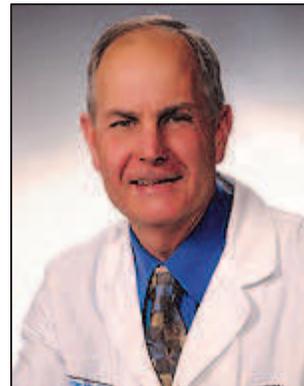


Conclusions

Establishing the diagnosis of lymphedema early in the course of treatment will avoid potential delays in qualifying the patient for beneficial intermittent pneumatic compression (IPC) therapy. The use of IPC therapy complements extremity off-loading through extremity elevation, gradient compression garments and a physical therapy regimen.

The patient should be closely monitored for response to treatment and to insure compliance with the designated care plan. IPC therapy is a dynamic treatment where adjustments can be made in frequency of application, session duration and operating pressure. Aggressively managed, lymphedema is quite treatable, and often times function status can be maintained, if not improved.

About the Author



W. Randall Russell MD, FACS serves as Director of the Wound Healing Center at Main Line Health's Lankenau Hospital in Wynnewood, PA.

Board Certified in 1989, he is a member of the American Board of Surgery, the Pennsylvania Medical Society and the Montgomery County Medical Society.

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