

CASE STUDY:

Functional Gains With Lipo-Lymphedema Treatment

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I. Reason for Presenting Case

This case presentation illustrates the tremendous functional gains that individuals with lipo-lymphedema can achieve with proper diagnosis, education and treatment.

II. Diagnosis

“Eva” is a 59-year-old white female who was admitted into a long-term, acute care facility on April 18, 2005, for complex medical management of lipo-lymphedema of both legs. Transportation to the hospital required Eva to travel in an ambulance 18 hours from northern Illinois to Texas, thus demonstrating her commitment level to receive treatment.

At the time of admission, Eva’s weight was 507 lbs, height was 61 inches and BMI was 95.8.

III. Medical History

Eva’s past medical history included congestive heart failure, depression, diabetes, sleep apnea, hypertension, frequent hospitalizations secondary to wounds and/or infections, renal dysfunction, hypothyroidism, atrial fibrillation, obesity, gastroesophageal reflux disease and osteoarthritis. Eva sustained a hematoma on the posterior left calf that required surgical excision of a superficial blood clot, resulting in significant scarring. Eva reported that she sought help for her condition on multiple occasions over the last 20 years. Doctors did not diagnose the cause of her massive leg swelling and repeatedly told her that she needed to lose weight, despite her husband confirming that she ate very little. Eva recalls stating to a

doctor, “There’s something wrong with my legs.” The doctor’s response was, “Put a lock on the refrigerator and hit the road.”

On one occasion, amputation of her legs was also suggested. Eva reported that during excursions into the community, following the birth of her fourth child at age 35, she was often ridiculed for her condition. This resulted in her voluntary decision to remain homebound.

IV. Functional Limitations

Seven years prior to this hospitalization (due to her advanced condition), Eva no longer could travel by car and required ambulance transport. When hospitalized for an infection, an occupational therapist told Eva that she was reading an article about LE and suspected that Eva suffered from it, prompting Eva and her family to research this new diagnosis and to seek treatment from our facility.

Eva was homebound for over 20 years prior to this admission. She lived with her son, who provided her care with the assistance of her two daughters and sons-in-law. She required maximum assistance

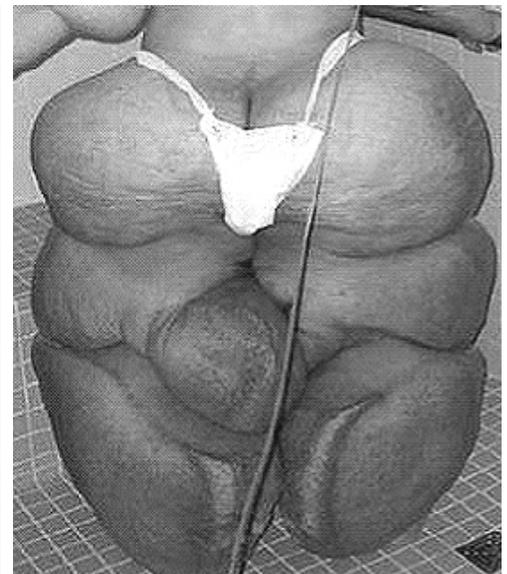
from male caregivers for transfers of her legs from supine to standing. Once in a standing position, Eva was able to ambulate 10-15 ft with a walker. Then, she required a 20-30 minute rest prior to walking back to bed. Once her legs were in a dependent position, she was able to transfer to and from sitting to a standing position with moderate assistance of one person. All other daily activities, including meals, were performed in bed with the family providing assistance for setup. Due to excessive weeping of her legs, Eva showered daily in a specially built handicap shower. Her caregivers handled her finances.

V. Treatment

The patient’s treatment consisted of two phases during the last eighteen months:

INPATIENT:

Eva was admitted on April 18, 2005, for inpatient treatment consisting of Lasix therapy with daily labs, strict input and output records (by urinary catheter), and daily weights. Her wound care consisted



of daily 20-minute soaks in .025% salicylic acid compresses to assist with exfoliation of dead tissue on her legs. She was placed on an 1800-calorie, low sodium, low fat, and diabetic diet. Initially, she ate only 30-50% of her meals and refused snacks. Nutritional counseling was provided to encourage Eva to eat six small meals a day and to drink plenty of water.

Lymphedema treatment consisted of Manual Lymph Drainage (MLD), skin care, and compression bandaging of both legs from toes to groin, 6-7 days a week. Treatments lasted 4-5 hours each day and initially required four people to complete the bandaging and skincare.

As leg volume reduced and her function increased, this reduced to two people. Despite the fact that Eva experienced pain in her legs with light touch, she tolerated compression bandages remarkably well. Eva was presented with 19 two-liter bottles of diet soda midway through her treatment program to visually demonstrate the amount of fluid she had lost to date. In addition, Eva received daily physical therapy 5-6 times per week to improve her functional mobility. The program consisted of therapeutic exercise, transfers, balance, home management training, safety and gait.

At the time of her initial evaluation, transfers required the assistance of 3-4 people due to the weight of each leg. Use of a Bariatric mechanical lift was attempted but this was discontinued because it caused her skin to tear. Eva gradually progressed in her transfers from supine to sitting, decreasing to a two-person assist for legs. Endurance for ambulation improved from 10 ft x 1 to 30 ft x 4 with a rolling walker requiring standby assistance; however, she was sent home with a Bariatric wheelchair for community ambulation. Prior to discharge, Eva was fitted for custom, below-knee alternative compression supports and biker shorts. At discharge, after 29 days of treatment, Eva had lost 110 lbs., experienced a volume reduction of 43% in the left leg and 39% in the right—a total loss of 67 L of fluid.

Note: Upon discharge from her inpatient stay, Eva decided to stay in Arlington, TX, to continue her lipo-lymphedema treatment with the same therapy staff. She moved in with her sister and brother-in-law who became her primary caregivers.

OUTPATIENT:

Treatment continued on an outpatient basis two times a week for three months, the frequency limited due to cost of Bariatric transportation, Eva remained in compression bandages 3-4 days at a time. This was not preferred, but it was the only alternative available to manage her reduction.

In late August 2005, she was able to perform car transfers with assistance. Therefore, treatment frequency was increased to 3 times a week until her discharge in April 2006. Treatments consisted of skin care, including bed baths of the legs and wound management with 50% assist of one, MLD, exercise, and application of short-stretch compression bandages to both legs (toes to groin). Initially, treatment sessions were 2-3 hours in duration, and decreased to two hours as the edema reduced. Compression bandages were applied with Eva in the supine position requiring maximum assistance of one person to lift her leg. As Eva improved, she was able to stand for bandaging of the upper thigh. Her caregivers were instructed in home application of compression once the difficulty of application decreased. Eva was instructed in a progressive exercise program, which began with isometric and gravity reduced/eliminated exercises facilitated by the use of satin sheets. This progressed to strengthening exercises in her available range of motion. Eva often focused on the amount of weight loss as a determinant for success. Because of this, we frequently redirected her focus to the functional gains she had achieved and set new short-term goals for achieving independence in mobility. This helped to keep her on track and keep her spirits up. When Eva felt discouraged at one particular point in her rehabilitation, we asked her to keep a journal noting how far she had come and how she felt about it. This served to inspire her and helped her stay committed to her program.

In December 2005, Eva was fitted with Class 3 custom flat knit (40-50 mmHg) thigh high compression stockings worn with biker shorts for daytime wear. Treatment continued to focus only on improvements in functional mobility, balance and gait following her 220 lb. weight loss.

At the time of her discharge on April 14, 2006, Eva had progressed to community gait with use of a 4-wheeled walker

(with a resting seat) and 2 liters of oxygen (previously 4 liters). She was able to ambulate in the house without an assistive device; however, she required the use of a quad cane on days when she experienced significant arthritic hip pain.

VI. Maintenance

Eva's current home exercise program includes general strengthening and pool exercises and/or walking on a treadmill. The frequency and duration depend on her tolerance. She is reassessed at our treatment facility every 4-6 weeks. Weight and blood pressure are monitored; girth/volume measures are recorded; and compression garments are adjusted/replaced as needed. Eva is now able to prepare her own meals, clean house, babysit her two-year-old granddaughter and climb into a truck. She has resumed responsibility for her finances. In the last four months, Eva has taken two trips by automobile. She goes to movies, restaurants and goes shopping two or more times a week. Recently she said, "For the first time in as long as I can remember, I'm not the largest person in the room."

VII. Conclusion

There is a significant need for an increase in the number of inpatient treatment centers to further meet the needs of people suffering from lipedema and lipo-lymphedema. The medical community needs to be educated about these diseases and their differential diagnosis from obesity. As therapists, we treat the symptoms of the disease. There is an urgent need for further research to determine the cause/s of these disabling conditions. Successful treatment of individuals with lipedema and lipo-lymphedema requires total dedication of the patient and staff as well as caregiver support. Finally, there may be a genetic component to lipedema and lipo-lymphedema. Therefore, it is vitally important to educate families about the signs and symptoms of both conditions so they may seek early intervention if symptoms are present.

(Before and after pictures can be seen on www.lymphnet.org) 

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