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Case Study #1

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July 16, 2009

Case Study
Ms. O. - Bilateral Lymphedema of the Lower Extremities

PERSONAL:

Age - 69 years old
Gender- Female
Occupation- Caregiver, Retired Housekeeper

HISTORY:

Pertinent medical history- Seizures, gallbladder removal

Subjective complaint- Ms. O. reports that the legs had been itching 2 months prior to onset of swelling. She states that the itching was more prominent at night and she would scratch the legs in her sleep. She states that she had noted redness in the legs with an onset of a gradual increase in discoloration and swelling. She denies pain in the lower extremities but noted increased difficulty with ambulation, dressing, and other self-care activities. She did not see her physician until her sister noted the swelling and discoloration in the legs and took her to her physician.

Symptoms: Discoloration of the lower extremities, swelling, itching, limited mobility, drainage of the lower extremities (“constant, clear fluid”)

Diagnosis: Lymphedema of Both Lower Extremities

Medication: Dilantin (100 mg/ 3xper day), Carbitrol (300 mg/2 in am and 2 in pm), Tylenol
Gallbladder surgery 3 years ago

Other Treatment Procedures: Exercises, MLT (January 7, 2009 thru February 23, 2009), Compression Bandaging (January 26, 2009 thru February 23, 2009)

EVALUATION/ASSESSMENT:

Weight: 235 lbs. Height: 5 ft. 4 inches

There is a foul odor from both legs due to the open areas that are draining.

MLM and other findings: Results of the Manual Lymphatic Mapping demonstrated abnormal lymphatic pathways of both lower extremities. At the right lower extremity, the lymphatic pathway did converge at the inguinal nodes but were limited in the distal lower leg. There was pooling of lymph at the posterior ankle with minimal direction of flow. Due to the fibrosis of the anterior aspect of the right lower leg, there were limited pathways that routed posterior and to the medial aspect of the knee at small areas and initially to the popliteal nodes. There is deformity of the right ankle. Dark discoloration is noted at the right lower extremity anteriorly and posterior and at the dorsal aspect of the right foot. There is a faint pedal pulse. The skin is very dry and scaling with flaking eschar along the dorsum of the foot and anterior aspect of the right leg. The skin is red but there is no increase in temperature. There is 2+ pitting edema at the dorsum of the right foot. The classic appearance of the right foot is that of an "elephant foot." The thigh is soft and palpable. Patient demonstrated limited knee flexion and extension and was unable to perform a straight leg raise with the right leg. She had limited dorsi- and plantar flexion of the right ankle.

In the left lower extremity, there were breakthrough pathways of lymphatic flow to the posterior aspect of the knee and then superiorly to the inguinal nodes. Areas of the lower leg demonstrated fibrotic tissue when prevented lymph flow thru normal pathways. The left lower leg noted to have discoloration and was dry, scaling with peeling eschar at the dorsum of the foot, lateral malleoli and anterior lower leg. Redness was less in the left leg but at the scratch mark just distal to the left knee. She demonstrated good ankle and toe range of motion. She had knee flexion and extension that was WNL's and could perform straight leg raises without difficulty.

Following treatment, the redness in the right lower extremity did decrease and ROM at the knee did improve. There was increased flow of lymphatic fluid that diverged from the inguinals to each affected side. The fibrotic tissue at the lower legs caused stagnation of lymphatic fluid with redness and tenderness in the legs.

Subjective: Ms. O. denied any pain in the lower legs bilaterally. She reported a sensation of fullness in the lower extremities and at the posterior aspect of the knees. She stated that she was unable to lift her legs due to the heaviness she felt in the legs. She reported that she had difficulty wearing shoes because her "feet wouldn't fit in the shoe" and had to slit the sides of the slippers. She reported severe itching in the lower extremities that woke her at night. She stated she had to wear gloves to bed to prevent scratching and waking up with open areas on her legs. She did report throbbing in the legs following standing for period of time greater than 15 minutes or walking 25 to 50 feet.

LDT TREATMENTS:

Average Length of sessions: 1.5 hours

Number of sessions/total treatment span: 15 treatment sessions

Treatment sessions: January 7, 2009 thru February 23, 2009

Compression Bandaging was begun on January 26, 2009 for 7 treatments. Ms. O was in the upright standing position for bandaging. Aquaphor was applied to both lower extremities to reduce the risk of infection. Translast classic was placed on the toes and foot. Tricofix stockinette was placed on the leg with foam padding at the posterior knee and right ankle. Artiflex 10 cm. x 3 m. (x2) was used around the foam padding and layers of Rosidal soft 10 cm. x .4 cm. x 2.5 m (x2) to add compression, Short stretch bandages: Rosidal K 10 cm. x 10 m. (x2) and 12 cm. x 5m (x1) completed the bandaging with silk take to secure the bandage

OUTCOMES:

Objective: There was a decrease in circumferential measurements of the lower extremities. The foul odor has disappeared as the wounds have healed and are closed on the left leg but the right leg as small superficial open areas (x3). The right ankle remains deformed but there are now folds of skin at the anterior ankles bilaterally where it was previous pulled tightly and was shiny. The legs remained discolored but the color has improved. Pedal pulse is now present strongly in both feet. Fibrotic tissue has softened in both lower extremities. There is no pitting edema in the dorsal aspect of the feet. She is now able to ambulate up to a distance of ½ mile without increased symptoms. She is able to wear her shoes comfortably 75% of the time.

Subjective: Ms. O reported that she is able to stand for longer periods and walk for a longer distance without throbbing in the lower extremities. She is able to sleep thru the night, as the lower extremities no longer itch. She stated that she continues to use the Aquaphor to the lower extremities. She reported that she is now doing her own grocery shopping and is able to “walk thru Wal-mart instead of riding”. She continued to report a sensation of heaviness in the lower extremities.

Improvement: Reduction of limb volume

Initial limb volume - final limb volume

Right lower extremity: 834.29 mls. in reduction of fluid

Left lower extremity: 534.70 mls. in reduction of fluid

Ms. O reported that she could not continue the compression bandaging at home because she did not understand how “to do it” and her sister refused to help. She was fit and placed in Juzo silver thigh high compression stockings with the closed toes to control swelling in the lower extremities.

Outcome immediately after sessions: There is a decrease in redness with less swelling in the lower extremities. She has increased knee flexion with increased dorsi-flexion of the ankles. The lower extremities are less tight to palpation but there is occasionally an increase in leakage from the right lower leg. Discoloration improved slightly. Ambulation improved slightly following each treatment. She reported that it was easier to move the legs during ambulation and to rise from a chair.

Following treatment: Weight: 226 lbs.

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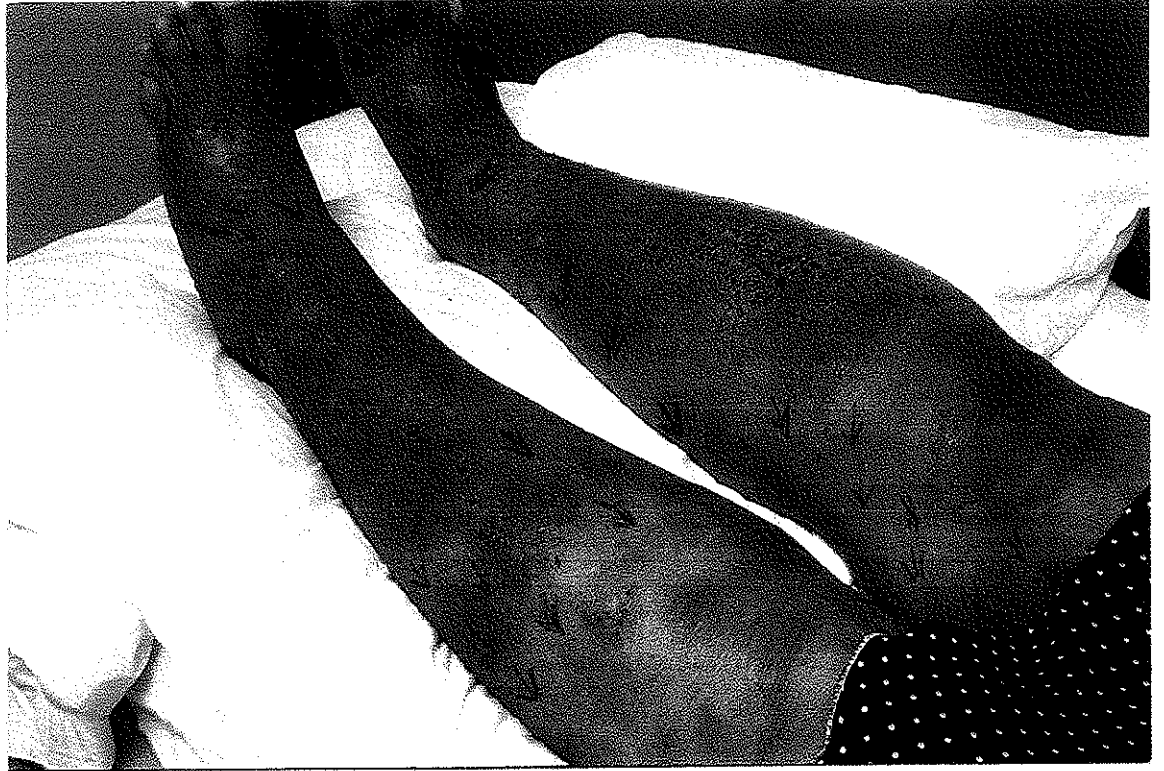
Ms. O did demonstrate mild comprehension difficulty. She reports that she did follow thru with treatment at home but this was questionable. She continued to apply the Aquaphor and the lower extremities did continue to improve gradually. She had difficulty processing information. She does try to be compliant. She has been compliant with attending therapy but has not been able to continue with compression bandaging at home. She was able to don and doff the stockings with difficulty but she did persevere.

Psychosocial issues: Ms. O. continued to report that she wants the right leg to look like the left leg. She states that she is very embarrassed concerning her legs. She continues to wear long dresses but does enjoy socializing. Her sister was present for two treatment sessions and was not very supportive. She told Ms. O. that her legs "looked ugly" and she would not help her wrap her legs at home. Ms. O. stated that she would continue to do what she could to help control the swelling in her legs and would return if the legs became more edematous.

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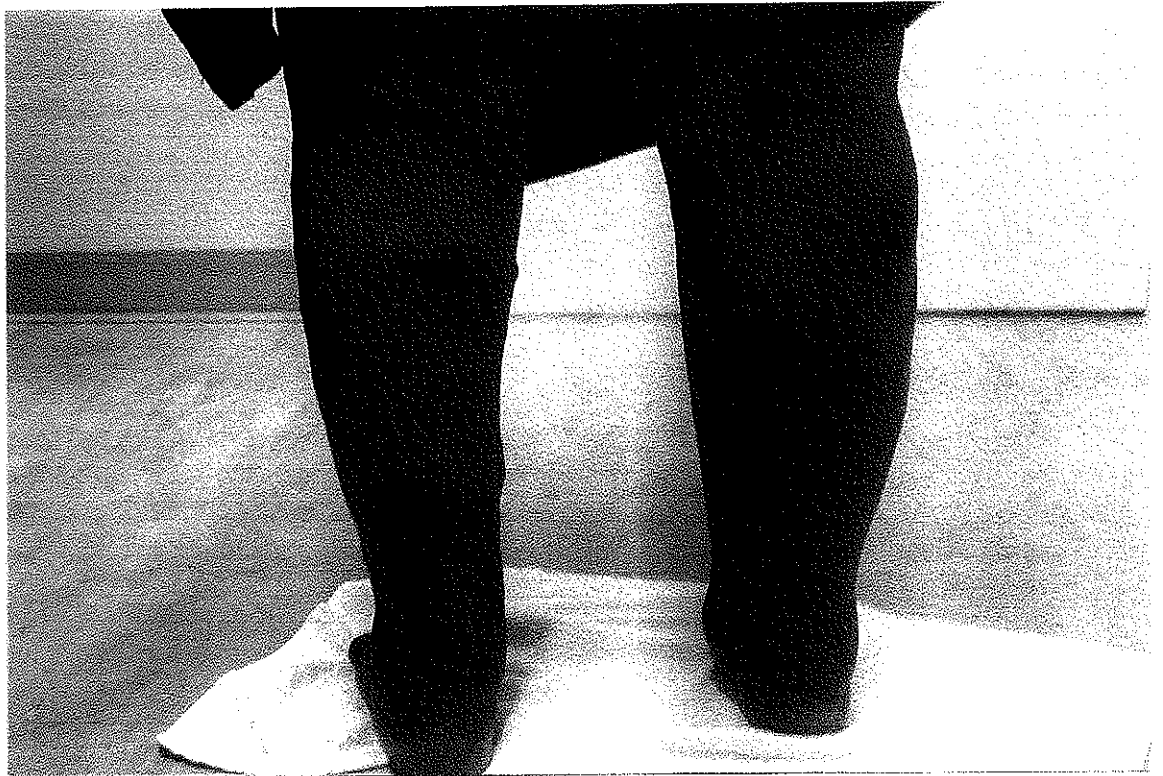
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2-23-09





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Lymphedema measurement chart

Name: <u> </u>		Date: <u> </u>		Left		Right		Left		Right	
Affected	LEG	1st week	2nd week	3rd week	4th week	CM Mark	Initial	Final	Initial	Final	Non-affected limb
Limb Measurement		Date:	Date:	Date:	Date:		Date:	Date:	Date:	Date:	
1	0	1-7-09	1-23-09	1-27-09		1	1-7-09	1-16-09	1-7-09	1-16-09	1-23-09
2	4	32.0	31.0	29.3		2	27.5	27.0	27.5	27.0	26.9
3	8	31.5	30.8	29.4		3	27.5	27.0	27.5	27.0	26.8
4	12	32.5	33.0	31.8		4	31.0	30.7	31.0	30.7	30.3
5	16	36.4	35.7	36.2		5	33.6	33.0	33.6	33.0	32.6
6	20	43.8	41.0	37.6		6	36.3	35.7	36.3	35.7	35.2
7	24	45.5	43.0	40.3		7	39.4	39.0	39.4	39.0	38.8
8	28	49.0	46.0	43.0		8	39.8	39.0	39.8	39.0	38.6
9	32	49.3	45.0	39.5		9	39.5	38.7	39.5	38.7	38.5
10	36	43.2	41.3	38.5		10	39.0	38.4	39.0	38.4	37.6
11	40	42.7	42.5	44.3		11	43.7	43.0	43.7	43.0	42.8
12	44	42.7	46.0	48.0		12	47.0	46.2	47.0	46.2	45.9
13	48					13					
14	52					14					
15	56					15					
16	60					16					
17	64					17					
18	68					18					
19	72					19					
20	76					20					
Total		19,154.06	18,539.30	16,155.37		Total	15,256.49	14,761.67	15,256.49	14,761.67	14,572.50
Milliliter		6,100.02 ml	5,904.23	5,145.02		Milliliter	4858.75	4701.16	4858.75	4701.16	4640.92
Difference						Difference					

The information that has been provided in the Case Study is true and accurate to the best of my ability.

Amita Speer, OTR, LLC