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Case Study #2

Anita Spreen, OTR, LLCC
July 16, 2009

Case History
Mr. G. - Bilateral Lower Extremity Lymphedema

Personal:

Age- 63 years old

Gender- Male

Occupation/profession- Air conditioner repair technician

Height: 5'10" Weight: 378 lbs.

History:

Medical History- Obese, herniated disc at L2-3, ulnar nerve neuropathy, breathing difficulty, neuropathy of the dorsum of the right foot for 1 year, bilateral RTC repairs

Subjective- Mr. G. reports that he is having difficulty with ambulating due to the feeling of heaviness in the lower extremities. He states that his job requires driving, walking and climbing and he is having moderate difficulty with performance of his job. He states that he is on his feet 12-14 hours per day. He explains that in December 2007, he was bedridden for 1 month when his legs began to swell. He remembers jumping down from a 3-4 foot high platform and later noted "mild swelling " in his ankles. He reports that he kept and continues to keep the legs elevated as "much as possible". Mr. G. reports a family history of lymphedema with his mother and sister both receiving treatment for swelling in the lower extremities.

Symptoms- Swelling in both legs, tightness, heaviness, peeling, dry, cracking skin at the lower legs, open wound with yellow exudate drainage at the anterior lower left leg. He states that the wound continues to drain and it has not healed.

Diagnosis- Primary Tarda Lymphedema of both lower extremities, Stage III per classification of the International society of Lymphology.

Medication- Lyrica 200 mg/twice daily, Hydrocodone 7.5 mg as needed, Baclifen twice daily, Potassium

Previous Surgeries- Bilateral rotator cuff repairs

Mr. G. has received wound care to the left leg since December 2006. At present, the wound is 1cm x 1 cm x ½ cm. and is being packed with iodized gauze every other day by Physical Therapy.

Evaluation/Assessment:
MLM and other findings:

The routing of the lymphatic fluid in the right leg was limited at the dorsum of the foot and thru the lower leg to the popliteal nodes where the lymph moved superiorly to the inguinal nodes. There was limited lymphatic flow at the posterior aspect of the right lower extremity leaving the skin a pale gray color.

The left leg routed toward the medial aspect of the leg with poor lymphatic flow across the dorsum of the foot and at the malleoli. Poor lymphatic flow due to the open area with poor healing as the wound had been present since 2006. Lymph flow was superior toward the inguinals.

The thighs of both legs were soft and palpable.

Mr. G. presents to therapy accompanied by his wife. He ambulates with a shuffled gait pattern, wearing open slippers on both feet. There is severe swelling in the lower extremities. The skin of both lower extremities is dry and peeling more at the ankles and dorsal aspect of the feet. There is no noted drainage of the lower extremities but at the anterior aspect of the left lower leg, there is a 2 x 2 gauze bandage that patient reports is an open wound that has been present since 2006. Upon examination, the wound is 1 x 1 x ½ cm. with iodized gauze packing present. There is no odor associated with the wound area. At the area directly surrounding the wound, the skin is adherent with poor skin mobility. Skin changes are noted with purplish discoloration at the anterior/posterior aspect of the lower legs. No additional scars are noted at the lower extremities. Stemmer's sign is + bilaterally. There are skin folds at the ankles and the toes. Mr. G. demonstrates 15° of ankle dorsi-flexion and 10° of plantar flexion at the right, 10° of ankle dorsi-flexion and 5° of plantar flexion on the left. Knee flexion of the right: 100°, left: 90°, extension of both knees demonstrate a 5° extension lag. The posterior and anterior aspect of the legs demonstrates moderate fibrosis, as does the dorsum of both feet. Both lower extremities are misshapened with thickening of the skin. There is non-pitting edema in both lower extremities. There is a pedal pulse present in both feet but very weak in the left foot.

Subjective- Mr. G reports that he is unable to reach to his feet and his wife must assist with grooming and bathing tasks. He requires assistance in donning his slippers, shorts/pants. He states that he is hypersensitive to touch pressure at the lower extremities and has difficulty wearing long pants depending on the fabric. He reports numbness at the dorsal right foot.

Mr. G. reports that he drinks approximately 35- 40 cups of coffee daily and very rarely drinks water. He reports difficulty transferring to and from the car and requires minimal assistance. He states he is able to ambulate about 25- 50 feet before becoming fatigued.

LDT treatments:

Average length of sessions - 1.5 hours

Number of sessions- 11 treatment sessions

March 26, 2008 thru May 13, 2008

Compression Bandaging April 11, 2008 thru May 13, 2008

Treatment include MLM, LDT, compression bandaging with the use of Tricofix tubular, Translast 4 cm., foam padding at the ankles and posterior knee, Artiflex, Rosidal Soft 10 cm. x 2.5 m (x2), Rosidal K 8 cm. x 5 m (x1), 10 cm. x 5 m (x2), 12 cm. x 5 m (x3). Mr. G. and his wife were instructed in skin care, precautions, and compression bandaging of the lower extremities along with donning/doffing of the compression stockings. They demonstrated good understanding but reported that they were very worried about treatment of the legs.

Outcomes:

Mr. G. demonstrated a decrease in swelling in the lower extremities. The wound size decreased from 1 x 1 cm. to ¼ x ½ cm. without drainage and was no longer being packed. He demonstrated an overall decrease in the discoloration of the lower extremities. He returned to work 4-6 hours per day, coffee intake decreased to 3-5 cups per day with increase in water intake to 3-5 8 oz bottles per day. He continued with Silver compression stockings to the lower extremities with 20 -30 mmHg compression. He is wearing knee-high stockings as thigh high stockings were recommended but Mr. G. refused due to the cost and the difficulty in donning and doffing. He wanted to be independent and not dependent on his wife.

Mr. G. is now able to ambulate up to ½ mile before becoming fatigued and is able to transfer to and from the car independently. He is driving. He states that he travels 20 -30 miles per day, 3 days per week.

Following each session, patient left the clinic reporting that he found it easier to ambulate. He was able to reach to the floor to don his shoes and did begin to wear sandals and occasionally a Velcro, closed toe shoe. Numbness in the dorsal aspect of the right foot had dissipated.

Percentage of Improvement:

In the right leg, there was a volume reduction of 3368.90 mls. and in the left leg 2329.76 mls. on the last day of treatment May 13, 2008.

Following each session, there was a decrease in the swelling noted in a decrease of circumferential measurements in the lower extremities. He reported decreased discomfort in the lower extremities and stated following treatments that he "felt lighter and it is easier to walk".

Weight following treatment: 369 lbs.

Coping:

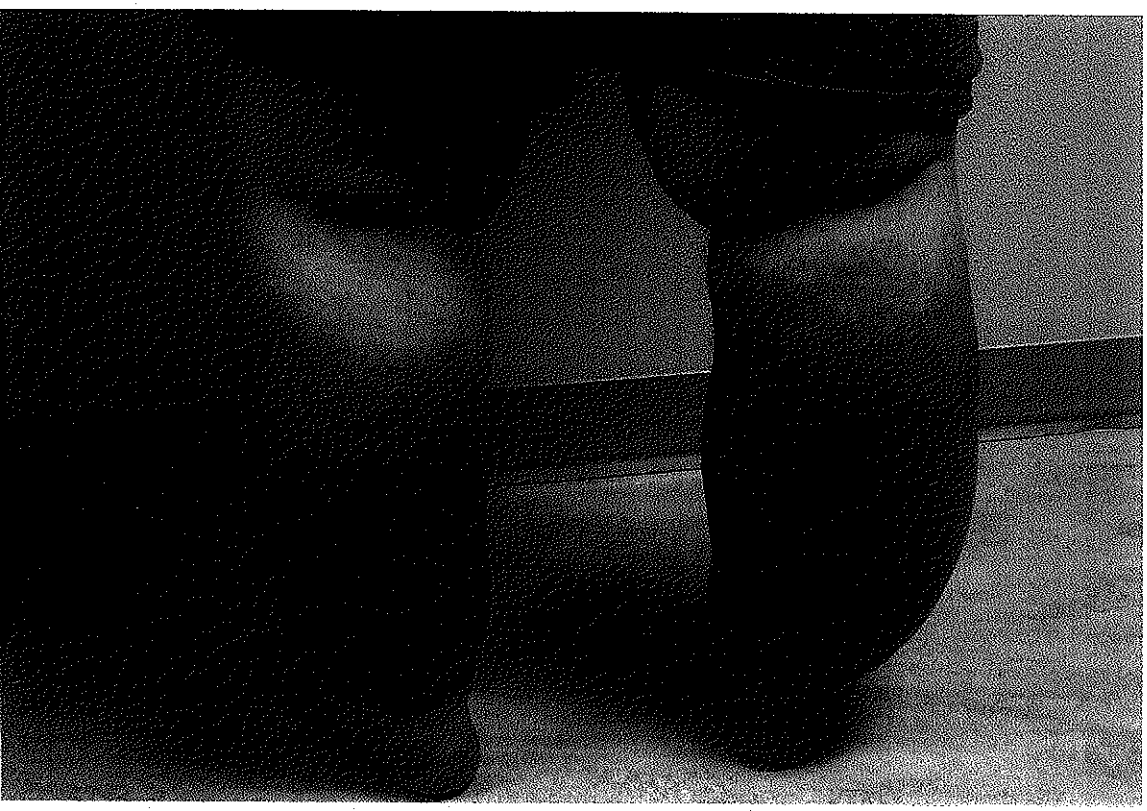
Although Mr. G. is depressed due to the swelling in the legs, he was ready to take an active role in his therapy. His wife had also agreed to take an active role but began to cry when treatment started. He was anxious to learn all that he could on how to control the swelling and improve his lifestyle.

Mr. G. was very compliant with the assistance of his wife. He did cut back on his work hours and continued to perform the compression bandaging at home with his wife. He reported that he did feel better about his appearance and was no longer afraid to be seen in public. His self-image has improved. Mr. G. reported that he did not have insurance and wanted to continue his treatment with his wife at home. He had his wife take videos of his sessions. Mr. and Mrs. G. were both very emotional during his course of treatment. They were very compliant with treatment.

3-26-08

4-29-09

3-26-08



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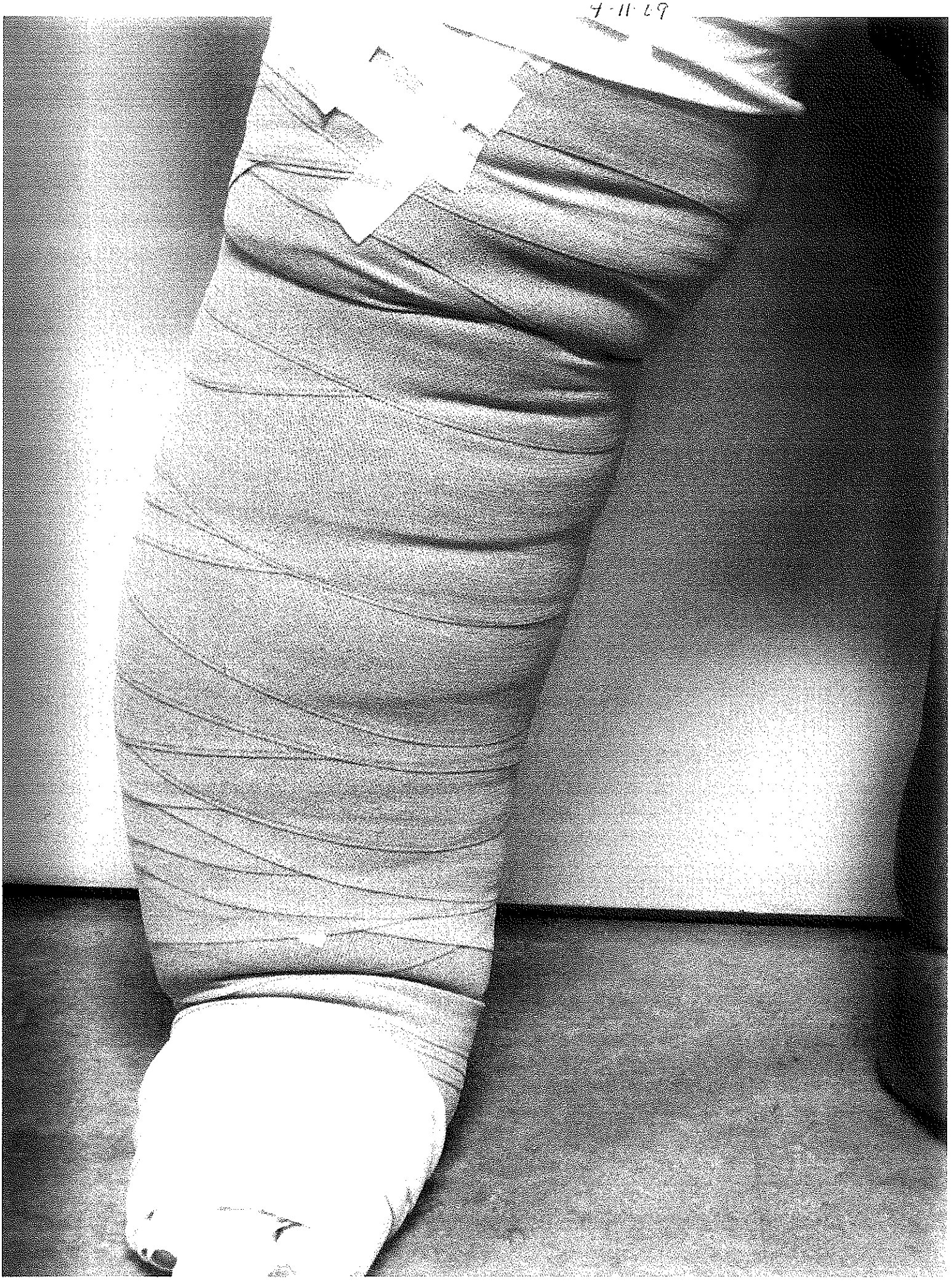

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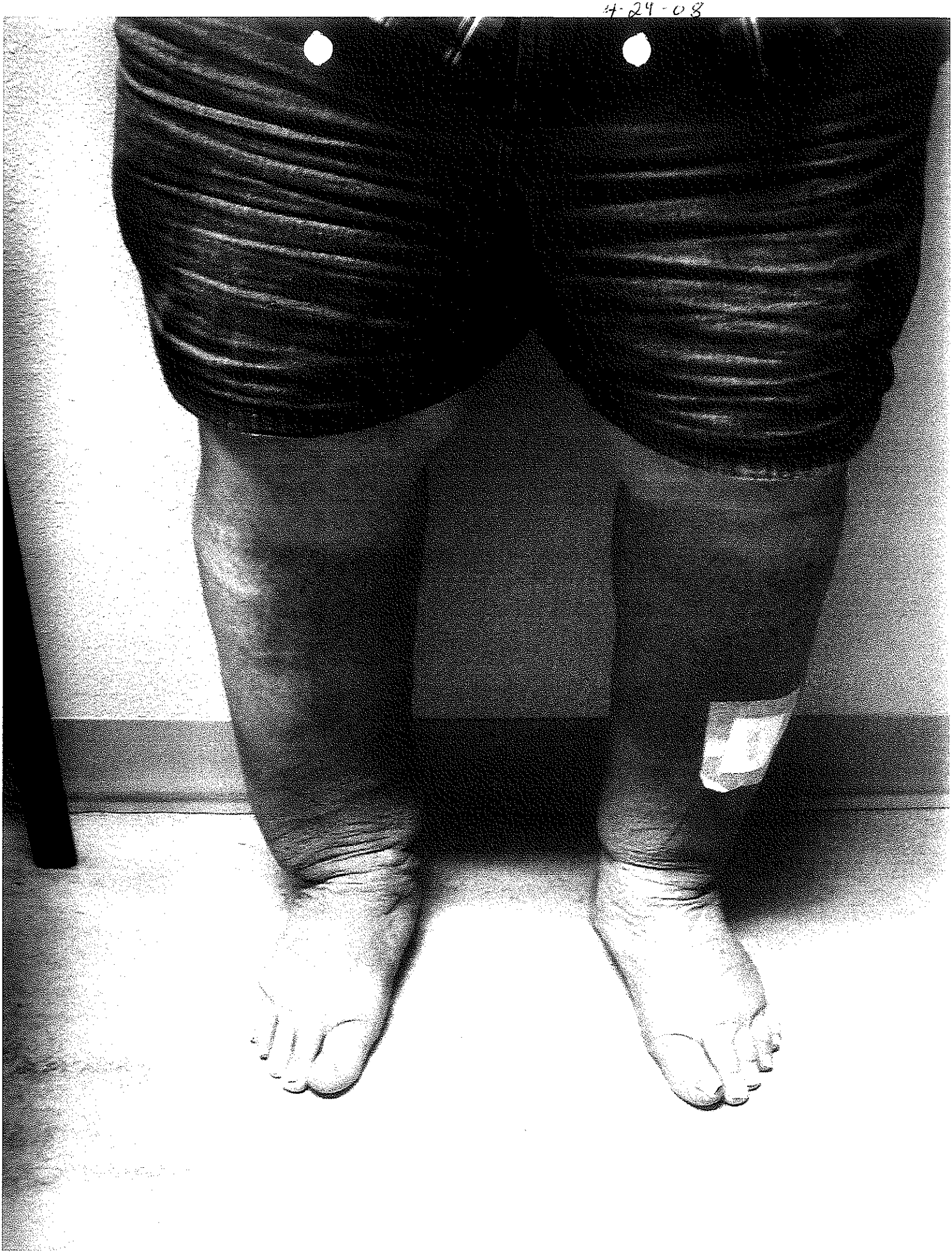

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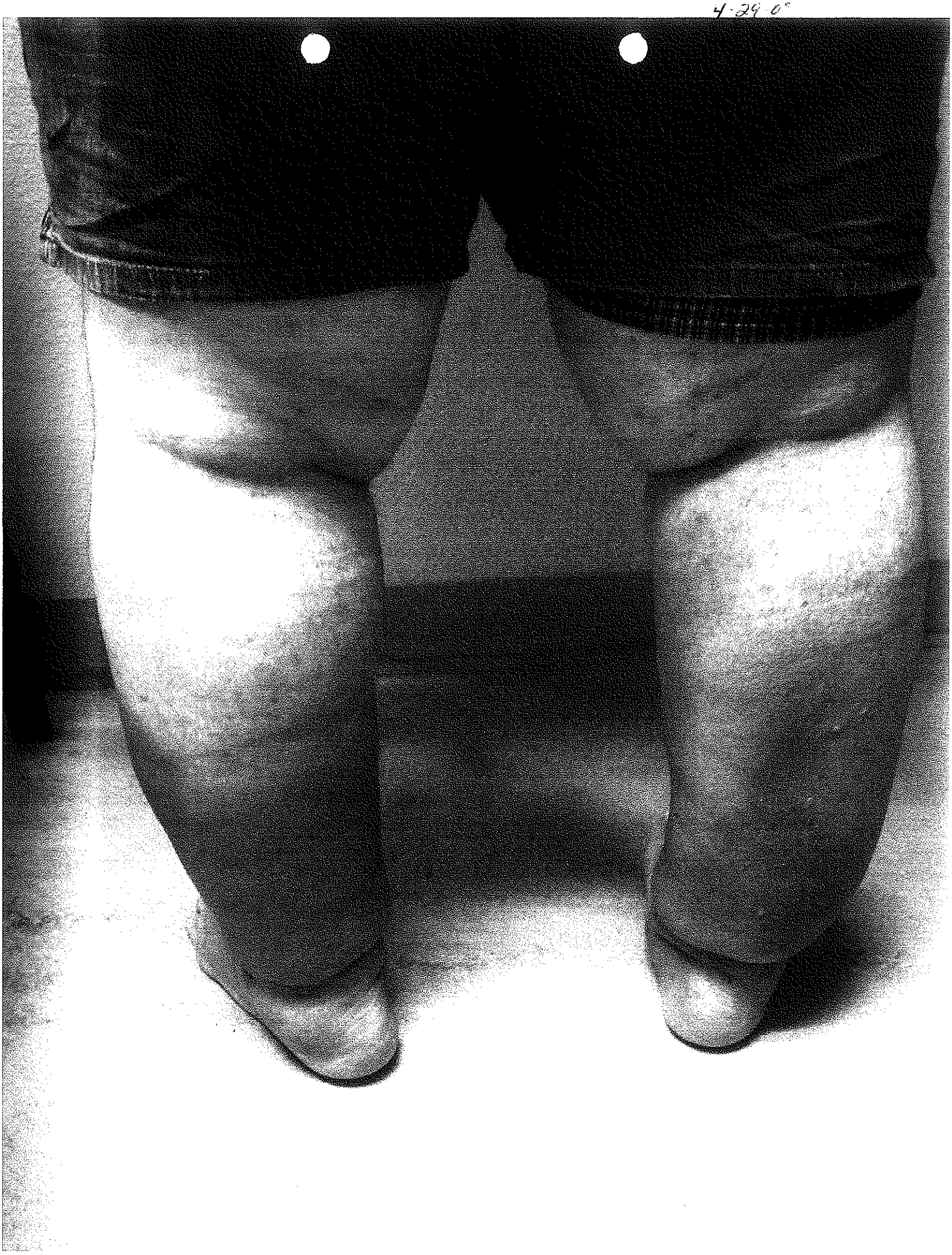

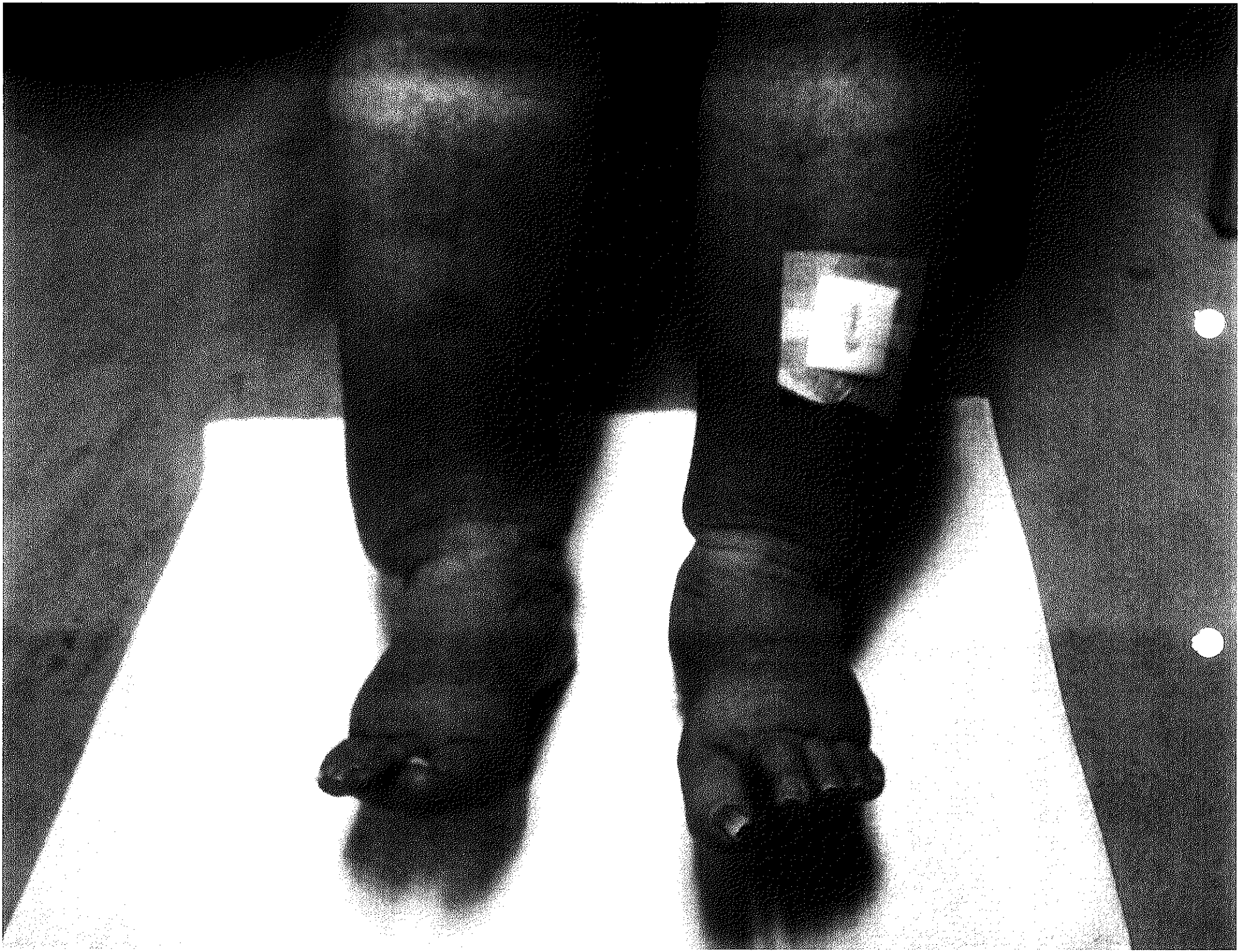

The information that has been provided in the Case Study is true and accurate to the best of my ability.

Anita Green, OTR. LLCC

Lymphedema measurement chart									
Name: [redacted]									
Affected	LEG	Right	Left						
Limb Measurement								~~Non~~-affected limb	
								Left	
	Initial	1st week	2nd week	3rd week	4th week	CM Mark		~~Initial~~	~~Final~~
CM Mark	Date	Date:	Date:	Date:	Date:			Date:	Date:
	3-26-08	3-28-08	4-4-08	4-8-08	4-11-08			4-22-08	4-28-04
1 0	36.3	35.2	33.5	34.5	33.2	1	0	38.0	35.0
2 4	49.5	47.8	49.5	51.5	46.5	2	4	57.2	47.5
3 8	55.4	54.8	58.1	59.8	56.0	3	8	60.5	53.0
4 12	57.4	57.3	57.1	59.0	56.4	4	12	59.2	56.5
5 16	50.5	51.0	52.2	55.2	50.0	5	16	52.5	49.0
6 20	64.5	67.5	67.8	67.0	60.0	6	20	68.2	64.0
7 24	78.5	76.1	73.0	77.0	77.3	7	24	76.0	75.0
8 28	90.0	85.4	87.0	86.0	83.0	8	28	83.8	80.0
9 32	89.8	89.4	89.0	88.0	87.0	9	32	87.0	86.0
10 36	90.0	89.8	89.7	89.1	88.8	10	36	88.3	87.8
11 40	89.6	89.0	89.3	89.0	88.8	11	40	88.6	88.0
12 44	89.8	89.1	89.0	89.0	89.0	12	44	89.0	88.8
13 48	91.0	90.0	90.0	90.1	90.0	13	48	90.0	89.4
14 52						14	52		
15 56						15	56		
16 60						16	60		
17 64						17	64		
18 68						18	68		
19 72						19	72		
20 76						20	76		
Total	71641.84	70068.03	70390.78	71,058.40	67906.62	Total		71323.15	66727.09
Milliliter	22815.87	22314.65	22417.44	22630.06	21626.31	Milliliter		22714.37	21250.66
Difference						Difference			

Lymphedema measurement chart									
Name: [redacted]									
Affected	LEG	Right	Left						
Limb Measurement								Non-affected limb	
		Initial	1st week	2nd week	3rd week	4th week	CM Mark	Initial	Final
CM Mark		Date	Date:	Date:	Date:	Date:		Date:	Date:
		4-29-08	5-13-08						
1	0	29.3	31.5				1 0		
2	4	42.0	42.0				2 4		
3	8	50.6	51.0				3 8		
4	12	54.3	53.4				4 12		
5	16	50.2	49.6				5 16		
6	20	66.0	59.6				6 20		
7	24	75.0	71.0				7 24		
8	28	81.0	82.0				8 28		
9	32	87.0	87.2				9 32		
10	36	88.0	87.9				10 36		
11	40	88.2	88.0				11 40		
12	44	89.1	88.9				12 44		
13	48	91.0	90.9				13 48		
14	52						14 52		
15	56						15 56		
16	60						16 60		
17	64						17 64		
18	68						18 68		
19	72						19 72		
20	76						20 76		
Total		59305.43	64,326.40				Total		
Milliliter		8887.07	20486.11				Milliliter		
Difference							Difference		

Lymphedema measurement chart									
Name: [redacted]									
Affected	LEG	Right	Left						
Limb Measurement								~~Non~~-affected limb Right	
		Initial	1st week	2nd week	3rd week	4th week	CM Mark	~~Initial~~	~~Final~~
CM Mark		Date	Date:	Date:	Date:	Date:		Date:	Date:
		3-26-08	3-28-08	4-4-08	4-8-08	4-11-08		4-22-08	4-28-08
1	0	37.5	36.3	33.5	34.0	35.5	1 0	38.0	34.5
2	4	58.2	54.4	49.5	49.0	51.0	2 4	57.2	53.5
3	8	63.0	62.1	58.4	59.0	59.0	3 8	60.5	53.5
4	12	61.0	59.0	57.4	57.6	62.5	4 12	59.2	57.4
5	16	54.3	53.0	52.2	53.0	54.0	5 16	52.5	51.6
6	20	68.0	67.9	67.8	67.0	65.0	6 20	68.2	67.3
7	24	76.5	76.5	73.0	73.0	79.0	7 24	76.6	78.9
8	28	87.5	86.7	86.3	81.0	83.0	8 28	83.1	83.0
9	32	88.4	88.0	88.0	86.0	86.0	9 32	86.1	86.1
10	36	88.8	88.2	88.8	86.3	86.0	10 36	86.0	85.8
11	40	89.3	88.6	88.3	86.4	86.1	11 40	85.7	85.6
12	44	90.1	89.8	88.7	87.0	86.7	12 44	86.0	85.9
13	48	92.4	92.0	91.0	90.0	90.0	13 48	89.0	89.0
14	52						14 52		
15	56						15 56		
16	60						16 60		
17	64						17 64		
18	68						18 68		
19	72						19 72		
20	76						20 76		
Total		73894.74	72304.25	69740.47	67501.34	72822.60	Total	69380.33	67856.03
Milliliter		23533.35	23026.83	22210.34	21,497.24	23191.91	Milliliter	22095.64	21610.20
Difference							Difference		

Lymphedema measurement chart								
Name: [redacted]								
Affected	LEG	Right	Left					
Limb Measurement							Non-affected limb	
	Initial	1st week	2nd week	3rd week	4th week	CM Mark	Initial	Final
CM Mark	Date	Date:	Date:	Date:	Date:		Date:	Date:
	4-29-08	5-13-08						
1 0	31.5	31.4				1 0		
2 4	44.3	42.4				2 4		
3 8	52.1	51.0				3 8		
4 12	56.5	53.8				4 12		
5 16	50.9	49.8				5 16		
6 20	69.6	59.8				6 20		
7 24	75.0	71.5				7 24		
8 28	83.0	82.0				8 28		
9 32	86.0	85.0				9 32		
10 36	85.4	85.6				10 36		
11 40	85.1	85.3				11 40		
12 44	85.7	86.0				12 44		
13 48	88.8	89.0				13 48		
14 52						14 52		
15 56						15 56		
16 60						16 60		
17 64						17 64		
18 68						18 68		
19 72						19 72		
20 76						20 76		
Total	65971.47	63316.94				Total		
Milliliter	21,010.02	2064.45				Milliliter		
Difference						Difference		