

# Utilization of a home exercise program with self-manual lymph drainage for a patient with upper extremity lymphedema

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## Case Presentation:

### •Background & Purpose

•This case presentation describes the physical therapist examination, evaluation, and interventions for a patient with left upper extremity lymphedema

### •Case Description

- 55 year old female
- Left upper extremity lymphedema after surgery and chemotherapy for breast cancer
- breast cancer in late 2013, bilateral mastectomy in January 2014
- Single lymph node removed; tested negative for cancer
- Presented swelling in left upper extremity
- Decreased range of motion
- Inability to complete functional tasks,
- Pain
- Decreased active and passive left shoulder flexion and abduction
- Difficulty reaching overhead

### •Interventions

•Patient received Complete Decongestive Therapy 2-3 times/week for a total of 9 visits

### •Outcomes

- Limb circumferences were at or below the size of the contralateral control limb
- Range of motion was increased back to functional limits, and the patient was able to resume all functional activities
- This case presentation demonstrates the effectiveness of a home exercise program with a focus on self-manual lymph drainage

## Interventions:

- Initial Visit
  - Evaluation & patient education on lymphedema and upcoming treatment
- Visits 2 to 4
  - Focus on decreased left upper extremity volume
  - Manual lymph drainage applied to left upper extremity and trunk
  - Self-manual lymph drainage emphasized due to decreased frequency of visits
  - Multi-layer compression bandaging, therapeutic exercise, and skin care
- Visit 5
  - First visit after breast reconstruction so patient was re-measured
  - Deemed appropriate for compression garment; instructed in garment care, fit, donning, and doffing
- Visits 6 to 9
  - Continued focus on decreasing limb size
  - Increased emphasis on self-manual lymph drainage and at-home management/maintenance of symptoms
  - Importance of skin care again emphasized
  - Additional exercise progressions given
  - Final measurements taken at visit 9

## Before and After Photos



## Plan of Care:

- Complete Decongestive Therapy (CDT) is the gold-standard treatment
  - Manual lymph drainage, Compression Bandaging, Therapeutic Exercise, and Skin Care & Skin Care Education
- Research recommends 5x/week
  - This patient only able to attend 2-3x/week

## Outcomes:

- Presented with decreased edema of the trunk and left upper extremity
- Active and passive ranges of motion brought into functional ranges
- The patient reported a return to all functional activities, without pain or difficulty overhead
- The patient had about a 9% reduction in volume, according to the Matthews & Smith Formula
  - (Note: This formula has not been validated for measuring a decrease in volume, but gives an overall view of reduction of lymphedema when combined with girth measurements)

## Initial & Final Circumferential Measurements

Location	Distance from Anatomical Landmark	Left Upper Extremity Initial (cm)	Left Upper Extremity Final (cm)	Change (cm)
Metacarpals	On metacarpals	18.4	17.2	1.2
Wrist	At the styloid process	16.2	14.9	1.3
Distal Forearm	8cm superior to styloid process	20.1	17.5	2.6
Proximal Forearm	16cm superior to styloid process	25.8	22.7	3.1
Elbow	Taken at the elbow crease	26.7	24.7	2.0
Distal Upper Arm	8cm superior to the elbow crease	30.5	28.5	2.0
Axilla	On the humerus, even with the superior aspect of the axilla	37.7	34.3	3.4
<b>Total:</b>		175.4cm	159.8cm	15.6cm

## Conclusion & Discussion:

- Most studies recommend a frequency of 5x/week during the initial stage of treatment
  - This was unattainable due to various factors
- This case study proves reductions in volume and circumference are still possible with suboptimal frequencies. The increased emphasis on the home program and self-care was due to the breast reconstruction in the middle of her treatments, likely lengthening the duration of treatment