Lymphedema and Breast Cancer
...beyond the swollen arm

Suzie Ehmann DPT CWS CWLT CLT-LANA DN-Cert
Atrium Health Stanly
Albemarle, NC USA
Who am I?

- Physical Therapy x 22 years
- Clinical Specialist x 17 years lymphedema and chronic non-healing wounds
- Passionate about lymphedema education and treatment

Disclosures & Acknowledgements

- Director of Compression Education, ILWTI
- Clinical Consultant: 3M, L&R, Jobst, Milliken, Urgo
- Educational grant: Compression Dynamics
Breast Cancer Related Lymphedema
More than just extremity swelling!

Trunk swelling

Chest wall swelling

Breast Swelling
What is Lymphedema?

- Localized fluid retention and tissue swelling caused by a compromised lymphatic system.
Lymphatic System

• Drain the tissues and transport this fluid and its contents back to lymph nodes

• Lymphatic Vessels (small to large)
  – Lymphatic Capillaries
  – Collector Vessels (superficial & deep)
  – Lymph Nodes (filtering stations)
  – Thoracic Ducts

• Immune system - protects you against infection and disease
  – Spleen
  – Thymus
  – Lymph nodes and lymph vessels
  – Tonsils and adenoids.

• Spleen
• Thymus
• Lymph nodes and lymph vessels
• Tonsils and adenoids.
Lymphatic Highway

NIRF
(Near-infrared fluorescence Imaging of Lymphatic)
Lymphatic Assessment


Rasmussen, et al., JVS: VLD, 2016
Lymphedema Trivia

• How many lymph nodes (LN) in the body?
  o 500-600 distributed throughout the body
  o Clusters underarms, groin, neck, chest, abdomen
  o LN at all major joints

• How many lymph nodes in the axilla?
  o 20 – 40 LN

• What do lymph nodes do?
  o Immune system
  o Filters for foreign particles and cancer cells
What Causes Lymphedema?

• Swelling occurs when lymphatic fluid cannot be drained from a region
  o Surgical removal of lymph nodes
  o Scar tissue from surgery
  o Radiation damages lymphatic vessels
  o Congenital insufficiency
  o Individual inflammatory response

• Lymphedema is **Not** just fluid
  o Chronic inflammatory resulting in trophic changes
    – Thickening/hardening of skin
    – Increased deposition of adipose tissue
Lymphedema... More Than Arm Swelling

- Lymphatic system divides body into quarters
  - Top/bottom at belly button
  - Left/right midline
- Impairment /damage to axillary LN can cause swelling
  ANYWHERE within that quadrant
Why doesn’t everyone get lymphedema?

• WE are ALL ... UNIQUELY different
  • Anatomical Differences
  • Genetically different
  • Different procedures

• Redundancy within lymphatic system
• Lymphatic Watersheds
  – Drain to contralateral LN (opposite side armpit)
  – Supra-clavicular LN
  – Drain to ipsilateral inguinal LN (same side groin)

GET THE LYMPH MOVING!!!
Breast cancer related lymphedema (BCRL)

• Lymphedema after SLNB
  • 17 studies – 6711 patients (6.3%, 0-23%)
• Lymphedema after ALND
  • 12 studies – 5354 patients (22.3%, 11-57%)

• Impact of XRT (systematic literature review)
  • Breast/chest wall irradiation – 14.5%
  • Breast/chest wall and supraclavicular irradiation – 31.5%
  • Breast/chest wall, supraclavicular and posterior axillary boost irradiation – 41.4%
Why such wide ranges?

How lymphedema is measured?
How long do you look for it?
Lymphedema Diagnosis

• Clinical Diagnosis
  • Varying definitions
  • Sensitivity/specificity of tools
    • Water displacement
    • Circumferential Measurement
    • Perometry
    • Bio-electrical impedance
    • Tissue Dielectric Constant

• Time to presentation – 80% experience lymphedema within the first 3 years
  • Need lifelong follow-up


• Associated Risk Factors
  • Severity of surgery
  • Radiation
  • Complications after surgery
  • Weight gain after diagnosis/obesity

Lymphedema Impact

• Lymphedema is significant health issue
  – Financial cost
  – Negative impact on HRQOL
    o Emotional
    o Functional
    o Social/family
    o Physical domain

  – Breast Cancer Population
    o Negative impact on QOL
    o Exercise and complete decongestive therapy (CDT) associated with overall improvement

Treatment

• Should be individualized to each presentation!!!

• Goals of treatment:
  o Reduce swelling
  o Reduce pain
  o Improve functional use of arm
  o Self management

• Complete Decongestive Therapy (CDT)
  1. Skin Care
  2. Manual Lymph Drainage
  3. Compression
     a. Bandage
     b. Garment
     c. Intermittent pneumatic pump
  4. Therapeutic Exercise
Manual Lymphatic Drainage (MLD)

• Massage to help stimulate lymphatic function
• Mobilize fluid from congested area to a functional lymph zone

• Multiple schools of training (Klose/Vodder/Norton/ACOLS/LeDuc/Casley Smith)

• Self-MLD can be taught to patient or family members
Compression Bandage
Compression Garments

• Different Garments
  o OTC vs Custom
  o Circular knit vs. flat knit
  o Coverage area (glove, sleeve, compression bra, etc)
  o Daytime and Nighttime

• Medicare does not cover
• Should be fit by skilled clinician NOT a technician
• Compression prescription should be followed up
• New compression every 6 months (depends on severity of swelling and type of garment)
Compression ... Beyond arm swelling!!

NOT ABOUT HOW TIGHT!!!
TISSUE SHOULD BE CONTAINED – NOT SPILLING OVER
Compression for Chest Wall
Compression Pumps


Exercise

• No long-term physical limitations following surgery for breast cancer

• Exercise
  o Helps control weight gain
  o Reduces risk of breast cancer recurrence
  o Lowers the side effects of medications
  o Improves lymphedema
Adjunctive Tools

KENESIO-TAPE

COLD LASER

Low level laser therapy
Photo biomodulation therapy
- photochemical reaction within cells giving the cells the extra energy needed to function at optimum and repair themselves

PHYSIOTOUCH/LYMPHATOUCH
Other ‘treatments’

• Oral treatment
  o Ultra – phase II study investigational medication ubenimex
  o inflammatory pathway
  o Patients still have to wear compression

• Surgery
  o Excisional Procedures
  o Liposuction
  o Lymphatic reconstruction
  o Tissue transfer procedures
Lymphedema and Metastatic Breast Cancer

• Therapy still works!!

• Reduce pain, reduce swelling, increase ROM, increase functional use of the arm

• Give you the tools to manage YOUR symptoms
  o NOT a cookie cutter approach
  o PLEASE DON’T JUST PUT A SLEEVE ON IT!!!!
My Job: Physical Therapist (Lymphatic Integumentary Rehabilitation Specialist)

• Give you the tools to make the most of everyday
• Give you a little control over this chaotic thing we call life
• Help you to LIVE YOUR life
  ○ Whatever that means to you!!
Your Job!!  SPEAK UP!!

Lymphedema?
I’ve never heard of it.

This must change.
March 6 is Lymphedema Awareness Day.
Together, we can spread the word.

Since 1998, LE&RN has been looking for answers to this misunderstood disease which causes suffering for so many millions. Find us on the web at www.LymphaticNetwork.org, and on Facebook and Twitter. Together, we can make a difference.

https://lymphaticnetwork.org/
Lymphedema Treatment Act

https://lymphedematreatmentact.org/

action checklist

☐ write to your representatives to support the Lymphedema Treatment Act (HR 3877)

☐ write to your local members of press about lymphedema and the Lymphedema Treatment Act

☐ post on Facebook and Twitter about lymphedema

☐ organize a community event to share information about lymphedema and offer support
Parting thoughts...

Not every day is a good day, show up anyway.

Not all you love will love you back, love anyway.

Not everyone will tell you the truth, be honest anyway.

Not all deals are fair, play anyway.
Suzie.Ehmann@atriumhealth.org