Lymphedema: Cancer's Little Known After-Shock

2nd Annual Lymphedema Awareness Day
BCIT
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Lymphedema

• Primary

• Secondary - obstruction/damage to the lymphatic system by disease or treatment
  - From cancer: breast, melanoma, vulva
  - From treatment of cancer: surgery, radiation
  - Post-traumatic, Post-infectious
  - Parasites: filariasis
Lymphedema
Distribution of etiology

- Malignancy or its therapy 75%
- Of all malignancy related lymphedema, 50% due to breast cancer surgery

Cancers association with lymphedema

- Breast
- Melanoma
- Vulva, cervix
- Penis
- Testicular
Number of cancer cases
B.C. 2007

- Breast - 2852
- Melanoma - 765
- “Genital” - 89
Who develops lymphedema with cancer?

- Direct involvement by cancer
- Surgical dissection of major lymph node draining groups
- Radiotherapy of major lymph node draining groups
- Obesity
- Repeated infections
Diagnosis

• The presence of lymphedema
  - From Symptoms to Clinical Examination
  - Limb circumference and volume*
  - ?Lymphoscintigraphy
  - ?Bioimpedance

• The etiology of lymphedema
  - Important to rule out recurrence of cancer!!

*Four point measurement: MP jt, wrist, 10cm distal to lateral epicondyles, 15cm prox to lateral epicondyles
It is really more than just the swelling!

2001

- Questionnaires sent to 744 patients 2 - 7 years after breast cancer treatment
- 49.9% reported symptoms in the arm and shoulder
- 17.5% of those with symptoms had documented lymphedema, and 7% of those without symptoms had lymphedema

Arm Symptoms
- arm pain
- chest wall pain
- breast pain
- shoulder stiffness
- numbness

Lymphedema
936 women, 5 years after surgery

<table>
<thead>
<tr>
<th>Reported swelling</th>
<th>Documented swelling</th>
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<tbody>
<tr>
<td>Reported swelling</td>
<td>41%</td>
</tr>
<tr>
<td>No reported swelling</td>
<td>5%</td>
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</tbody>
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A Contemporary, Population-Based Study of Lymphedema Risk Factors in Older Women with Breast Cancer

Tina W. F. Yen, MS, MD\textsuperscript{1,2}, Xiaolin Fan, PhD\textsuperscript{2,3}, Rodney Sparapani, MS\textsuperscript{2,3}, Purushottom W. Laud, PhD\textsuperscript{2,3}, Alonzo P. Walker, MD\textsuperscript{1}, and Ann B. Nattinger, MPH, MD\textsuperscript{2,4}

• Annals of Surg Oncology 2009
• Telephone surveys of 1338 patients >65 y.o. 4 years after breast cancer treatment
• Lymphedema is self reported
• Lymphedema reported in:
  - 7% after SLNB
  - 21% after ALND

Objective measurement of 936 women 5 years after breast cancer Rx

- Lymphedema reported in:
  - 5% of patients after SLNB
  - 16% of patients after ALND

Triggering events

- List variable and not evidence based
- Often quoted by physicians and patients without adequate validation
- Includes:
  - Infection
  - Needle pricks
  - Trauma
  - Burns
  - Insect bites
  - Air travel
  - Exercise
  - Lifting heavy objects
  - Heat
Exercise and lymphedema

• 141 breast cancer survivors, stable lymphedema
• 2x per weekly weight lifting Vs control
• Women required to wear a well fitting compression garment
• Results: No difference in lymphedema, wt lifting associated with reduced exacerbations & improved symptoms.

Practical Advice on treatment

1. Prevention, prevention, prevention
   • Maintain ideal body weight

   • Treat cellulitis promptly
     (consider giving home supply of antibiotics
      - Pen VK or cephalexin)

   • Avoid activities which can expose the arm/leg to repeated trauma and infection

   • Stay active
Practical Advice on treatment

2. Intervene early

- Compression Garments

- Sequential pneumatic compression pumps

- Massage therapy - MLD or CPD
Treatment - Compression garment

- Most established treatment
- Sleeves
  - “Over the counter” - ~$60
  - Custom made - $200 - $300
- Gauntlet/Gloves
  - $30 - $100 without fingers
  - $150 - $400 with fingers

Paid for by MSP if it is breast cancer related (prescription needed)
Treatment - Pneumatic Pumps

- Method of using the pump not standardized, the “ideal” pump not standardized
- Available in hospital based physiotherapy programs
- Referral by a physician required
- Possible waiting list depending on the hospital
Treatment - Manual Lymphatic Drainage

- Also known as Complex Decongestive Therapy
- Administered by Massage Therapists
- Involves a course of complex massages followed by elaborate bandaging
- Cost $60 - $80 per hour + materials
- Several different schools with similar but non-identical theories
Duration and magnitude of the problems

• Questionnaire followup of patients 7 - 12 years after breast cancer treatment (mean 9 years)

• Results: of women reporting post-mastectomy pain syndrome, half continued to experience the same at a mean of 9 years after surgery

New developments in Cancer Treatment

• Sentinel nodal biopsy Vs Axillary dissection in breast cancer
  - ALMANAC Study: Randomized comparisons of SNB Vs AND in early breast cancer
  - Self reported arm swelling at 18 months 7% Vs 14%

New developments in Cancer Treatment II

- Wider use of sentinel nodal biopsies in vulval cancer and melanomas
Objective measurement of 936 women 5 years after breast cancer Rx

- Lymphedema reported in:
  - 5% of patients after SLNB
  - 16% of patients after ALND

Lymphedema secondary to treatment is bad ...

But it is worse if one dies from the cancer