

# THE IDEAL CDT SITUATION VERSUS ONE MONTREAL HOSPITAL CLINIC'S REALITY; HOW WE ARE TREATING AND HELPING OUR PATIENTS

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# CDT

- Criterion therapy for lymphedema
- Europe
  - Therapy well recognized and part of health care system
  - Inpatient (lymphedema institution)
- Quebec (Canada)
  - Therapy not yet recognized
  - 2014: compression garment recognized by the RAMQ
  - 2018: bonification of garment program
  - Setting: Outpatient (hospital or private clinic)
  - 5<sup>th</sup> component to CDT: self-management



# HOSPITAL'S AND PRIVATE CLINIC'S REALITY

## HOSPITAL

- Modified CDT offered 1-3 day(s) per week
- Advantage: free (patient only pay for bandages/garments)
- Inconvenient: therapy often postponed because of the waiting list
- Garment: community fitter

## PRIVATE CLINIC

- Conventional CDT offered 5 days per week
- Advantage: minimal delays in starting the therapy
- Inconvenient: all costs are assumed by the patient
- Garment: community fitter



# COMPRESSION

- Compression modalities
  - Multi-layers bandaging
  - 2-layer cohesive system
  - Neoprene breathable compression system



# OBJECTIVE

To estimate the extent to which,

- (P) in women with BCRL
- (I) using a modified compression component of CDT
- (C) compared to conventional multi-layer bandaging of CDT
- (O) obtained significant arm volume reduction



# SETTINGS

- Clinic opened 2008
  - 300 women/year
- Charitable foundation
- 3 Vodder certified lymphedema therapists
- Patients
  - Pre / Post-surgery; follow-up min. 2 years
- Workload + “outpatients” → seen 1-2 / week OR 1 every 2<sup>nd</sup> week
  - Wait list: ~ 6 weeks



# METHODS

## PARTICIPANTS

- Inclusion
  - $\geq 18$  years old
  - Unilateral breast cancer
  - Signs/symptoms BCRL requiring intensive therapy
- Exclusion
  - Bilateral breast cancer
  - Malignant lymphedema
  - Maintenance phase
  - Stage 1 lymphedema

## ASSESSMENTS

- Education
  - Post-op exercises
  - Upper extremity dysfunction risk reduction
  - Lymphatic system
  - Ongoing education
- Assessment
  - Arm circumferences
  - Shoulder ROM
  - BMI



# COURSE OF CDT

- Lymphedema present ( $> 10\%$ )  $\rightarrow$  CDT
- Waiting period:  $\sim 6$  weeks
- Education (lymphatic system + self-management)

## COMPRESSION

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graph TD; A[COMPRESSION] --> B[Bandages]; A --> C[2-layer cohesive]; A --> D[Neoprene];
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### Bandages

- 09-2008/ 12-2013
- Cost  $\sim 50\text{\$}$
- 2-3 x / week

### 2-layer cohesive

- 02-2014/ 10-2014
- Sponsorship (30 $\text{\$}$ )
- 1-2 x / week

### Neoprene

- 11-2015/ 06-2017
- Cost  $\sim 250\text{\$}$
- 1/week or 2<sup>nd</sup> week



# RESULTS

| Variable: Mean/ Frequency (SD) / (%) | Bandages<br>(n = 45) | 2-Layer<br>(n = 17) | Neoprene<br>(n = 15) | P-value |
|--------------------------------------|----------------------|---------------------|----------------------|---------|
| Age, years                           | 62.6 (10.7)          | 67.5 (9.2)          | 59.4 (16.2)          | 0.17    |
| Breast surgery                       |                      |                     |                      |         |
| ▪ Mastectomy                         | 18 (40 %)            | 6 (35 %)            | 9 (60 %)             | 0.356   |
| ▪ Lumpectomy                         | 24 (53 %)            | 11 (65 %)           | 6 (40 %)             |         |
| Axilla surgery                       |                      |                     |                      |         |
| ▪ ALND                               | 41 (91 %)            | 16 (94 %)           | 14 (93 %)            | 0.06    |
| ▪ SLNB                               | 1 (2 %)              | 0 (0 %)             | 1 (7 %)              |         |
| Chemotherapy                         |                      |                     |                      |         |
| ▪ Yes                                | 34 (76 %)            | 13 (76 %)           | 3 (20 %)             | 0.0003  |
| ▪ No                                 | 9 (20 %)             | 3 (18 %)            | 12 (80 %)            |         |
| Radiation therapy                    |                      |                     |                      |         |
| ▪ Yes                                | 38 (84 %)            | 16 (94 %)           | 14 (93 %)            | 0.55    |
| ▪ No                                 | 3 (7 %)              | 0 (0 %)             | 1 (7 %)              |         |



# RESULTS

| Compression modality     | Bandages<br>(n = 45) | 2-Layer<br>(n = 17) | Neoprene<br>(n = 15) | P-value |
|--------------------------|----------------------|---------------------|----------------------|---------|
| Pre-treatment (ml)       |                      |                     |                      | < 0.001 |
| ▪ Healthy limb           | 2298.0 (547.9)       | 2281.5 (623.3)      | 2234.3 (696.0)       |         |
| ▪ Affected limb          | 2922.0 (718.7)       | 3006.4 (616.0)      | 2902.5 (806.0)       |         |
| Post-treatment (ml)      |                      |                     |                      |         |
| ▪ Healthy limb           | 2283.7 (552.1)       | 2319.3 (596.2)      | 2227.3 (644.9)       |         |
| ▪ Affected limb          | 2624.0 (589.7)       | 2789.0 (566.4)      | 2655.0 (760.8)       |         |
| % volume change          | 45.5 %               | 35.2 %              | 36.1 %               | 0.007   |
| # times seen             | 7.6 (3.6)            | 6.8 (2.0)           | 3.9 (2.3)            | 0.005   |
| Length of therapy (days) | 32.7 (17.5)          | 29.2 (18.4)         | 66.9 (19.3)          | < 0.001 |



# DISCUSSION

- Have to find solutions: CDT not realistic
- Studies report 40-50% limb volume reduction
  - Modified CDT = 45.5% / 2-layer = 35.2% / Neoprene = 36.1%
- Constraint: compliance to compression
  - Difficult 24/7
  - Hygiene difficult (e.g. showering)
- Neoprene
  - Donning/Doffing: simple
  - Allow more time for education, self-management and MLD



# CONCLUSION

- CDT is an integral part of the solution
  - Greatest results obtained
    - However: NOT a realistic situation
- Education on risk reduction strategies and on self-management + Neoprene system
  - Significant results
  - Length of therapy is longer
    - However: with hospital time constraint, suitable situation, cost efficient and higher patient compliance to therapy.



# THANK YOU!

# QUESTIONS?

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