Multidisciplinary approach of a patient with lymphedema

Sarah Thomis, MD, PhD
Vascular surgery, Leuven, Belgium
Team

Vascular surgery:
- Sarah Thomis, MD, PhD, responsible physician
- Beate Bechter-Hugl, MD
- Inge Fourneau, MD, PhD
- Team of fellows/assistents

Physical therapists:
- Nele Devoogdt, PhD, coordinator
- Carol Swinnen
- Jasmien Cools
- An-Kathleen Heroes
- Karen Geeroms
- Elien Van der Gucht
- Charlotte Van Calster
Team

Compression specialists: Elke Sleurs
Nurses: Stijn, Connie
Dietician: Joke Verheijen
Psychologist: Morgane Hubin
Social worker: Tina Visser
Diagnostic phase

- MD consultation
- Exclude red flags
- Perform venous US, arterial examination
- Dermatologist, pediatrician, genetician involvement if necessary
Differential diagnosis edema

1. Venous edema
2. Lymphedema
3. Lipedema
Therapeutic phase: groups

4 groups, depending on the stage of the edema

GROUP 1
Light to moderate edema

GROUP 2
Moderate edema with pitting

GROUP 3
Moderate to severe edema, without wounds and/ or co-morbidity

GROUP 4
Moderate to severe edema, with wounds and/ or co-morbidity
Therapeutic phase

4 treatment plans, depending on the group

GROUP 1: no intensive treatment, compression with garment

GROUP 2: intensive treatment by peripheral physiotherapist, guided by the centre of lymphedema

GROUP 3: intensive treatment in centre, ambulatory

GROUP 4: intensive treatment in centre, hospitalisation
## Decongestive lymphatic therapy

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Consensus Document 2020 – International Society of Lymphology
Decongestive lymphatic therapy

Phase 1: Intensive phase

Purpose: Lymphoedema reduction

Method:
- Skin care
- Manual lymph drainage
- Exercises
- Healthy lifestyle
- Multilayer bandaging

Phase 2: Maintenance phase

Purpose: Maintain reduction

Method:
- Skin care
- (Manual) lymph drainage
- Exercises
- Healthy life style
- Compression sleeve

As long as pitting/oedema reduction
(3 to 4 weeks)

7 on 7 days
24 on 24 hours
Skin care

• Method:
  – Wound care
  – Hydrating lotion
  – Preventive measures

• Purpose:
  – Improve/maintain condition skin
  – Avoid infection

(MacLaren 2001)
Manual lymph drainage

• Method:
  – ‘Massage’

• Purpose:
  – Decrease stagnation of lymph proximal of bandage
  – Difficult area’s
  – Loosening fibrosis
Bandaging

Method:
• Make case around limb

Purpose:
• Increase tissue pressure
  – To decrease filtration
  – To increase resorption
• Improve lymph transport
• Moves fluid to region without compression
• With padding: loosening fibrosis

(EWMA 2005)
Bandage - method

- Tubular bandage
- Padding
- Inelastic bandages

+
Tubular bandage

Padding

Inelastic bandages
Exercises

• Method:
  – Mobilising exercises while wearing bandage
  – Breathing exercises

• Purpose:
  – Improve lymph transport
  – Increase muscle strength and improve functioning

(Lane 2005)
Healthy life style

• Method:
  – Daily care for healthy food
  – Sufficient drinks
  – Sufficient sleep
  – Avoid stress

• Purpose:
  – Maintain healthy balanced weight through a healthy lifestyle: healthy food and physical activity
  – Weight loss when overweight and lymphedema
Decongestive lymphatic therapy

Phase 1: Intensive phase

Purpose: Lymphoedema reduction

Method:
- Skin care
- (Manual lymph drainage)
- Multilayer bandaging
- Exercises
- Health life style

Phase 2: Maintenance phase

Purpose: Maintain reduction

Method:
- Skin care
- (Manual lymph drainage)
- Compression sleeve
- Exercises
- Healthy life style

Consensus Document 2020 – International Society of Lymphology
Compression sleeves

• Method:
  – Measuring when no pitting is left
  – Different compression materials/classes available
  – Most often: flatknitted, custom-made

• Purpose:
  – Improve lymph transport
  – Decrease filtration
  – Protect the skin

(Földi et al 1989)
Lymphofluoroscopy

- Intradermal injection of Indocyanine Green
- Visualisation of superficial lymph vessels and dermal backflow
- Indication:
  - Difficult maintenance treatment: optimalisation compression therapy
  - Edema in difficult area: breast, scrotal, face,..
  - Guidance for surgery
  - Screening tool?
Surgery

• **Liposuction:**
  – Collaboration with department of reconstructive surgery (prof Jan Vranckx)
  – **Indication:**
    • Lymphedema stage 2b and 3 and lipedema
    • High volume, diminished functioning limb
  – **Goal:** reducing volume, need for 24/7 compression material

• **Reconstructive surgery:**
  – Collaboration with department of reconstructive surgery (Dr Segers)
  – **Indication:**
    • Lymphedema stage 1 and 2
    • No stabilisation after 6 months conservative treatment
  – **Goal:** improving QOL, adapt compression material
NEW SurLym trial: Effect reconstructive lymphatic surgery

- Multicentre RCT
- Funded by: KCE
- Period: February 2022 - 2027

180 participants with arm or leg lymphoedema

- Reconstructive lymphatic surgery (n=90)
- No surgery (n=90)

Conservative treatment +
Follow-up up to 36 months after start

Interested? Mail to
nele.devoogdt@kuleuven.be
sarah.thomis@uzleuven.be
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Follow-up

- Referral to a peripheral physiotherapist
- Return to centre at 1M, 3M, 6M ... after intensive phase
MD pathway of lymphedema (or convention lymphedema)
Purpose of the program

• Create
  – Specialised multidisciplinary centers
  – For patients with moderate to severe lymphedema
  – For conservative care of the lymphedema patients
Specialised centers

- UZ Leuven
- Mont-Godinne
Indications

- Primary or secondary lymphedema
  - Stage 2a, 2b of 3
  - Leg, arm or midline
- Lipo-lymphedema: lymphatic component
- Unilateral: at least 10% volume difference
- Bilateral or midline: detailed report and pictures
Setting

- Group 3: ambulatory
Setting

- Group 4: hospitalisation due to severe comorbidity (groep 4)
Task of the multidisciplinary centre

- Patient care in a conservative way
- Training peripheral physiotherapists
- Research
• Since 7 May 2018
• Group of 8/10 patients every week
• 545 patients so far (until Jan 2022)
Multidisciplinary team

Nurse

Physiotherapist

Physician

Bandagist

Psychologist

Dietician

Social assistant

Coördinator
Pathway patient in convention

Evaluation start treatment

MD consult
- Diagnostics
- Discuss individual pathway

MD program
- MD intensive treatment
- 3 weeks (max 20 days/year)
- 5 consecutive days
- ≥ 5 hours/day

Evaluation after intensive phase

Follow-up
- Maintenance treatment
- Peripheral physiotherapist guided by the centre
- Evaluation edema and adaptation

Evaluation after 6M maintenance
Day schedule

Physician, 15 min

Wound care by nurse, 30 min

Edema therapy by physio, 60 min

Exercise program by physio, 60 min

Edema therapy by physio, 30 min

Psychologist/ dietician/ social work, 30 min

Education in group by physio/ psychologist/ dietician or activity in group
Dietician

• Gives advice regarding healthy lifestyle, relation weight and lymphedema in educational sessions
• Individual session if:
  - patient wants extra advice
  - BMI > 30
Psychologist

- Educational session: how to handle a chronic disease
- Individual session if:
  - patient wants extra advice
  - high score on HADS questionnaire
Social worker

• Individual session if patient needs advice regarding a social problem:
  – Financial
  – Social context
  – Need for aids
Education

- Physical therapist:
  - Lymphedema and treatment
  - Compression material
  - Self-bandaging
  - Self-MLD and self-exercises
  - Quiz
- Dietician:
  - Nutrition and lymphedema
- Psychologist:
  - How to handle with lymphedema
- Nurse:
  - Skin care and wound care and lymphedema
Exercises in group

- Fitness
- Hydro-therapy
- Walking
- Relaxation
- Bicycling
Bandagist

30 min, 100% of ptn
- 1st week: introduction
- 2nd week: measuring compression material
- 3rd week: delivery compression material
Purpose and evaluation of patiënt in convention

• Purpose:
  – Reduction lymphedema volume
  – Improvement of functioning
  – Fulfill patient-specific goals
  – Reduce episodes of infections
  – Stabilize stage of lymphedema
  – Improving self-management skills

• Evaluation:
  – Baseline, after intensive phase and after 6 months maintenance
Results convention

- Age: 59.7y
- BMI: 34.1
- Region:
  - Upper limb: 26%
  - Lower limb: 81%
  - Midline: 14%
- Gender:
  - Female: 78%
  - Male: 22%
- Type:
  - Primary: 53%
  - Secondary: 47%
Results convention

• % reduction volume after 3 weeks intensive decongestive treatment:
  – Arm: 246 ml or 34% reduction
  – Been: 740 ml or 41% reduction
Results convention

- Improvement functioning: 24%
- Specific goals reached in 79% of the patients
- Improvement of self management
- Decrease in erysipelas episodes
Conclusion

Lymphedema treatment = Multidisciplinary treatment
You’ve Got to be kidding

Thanks!