PROVIDING THERAPEUTIC COMPRESSION OPTIONS: THE KEY TO BETTER PATIENT COMPLIANCE AND CONCORDANCE WITH EDEMA MANAGEMENT REGIMEN

J. Suzie Ehmann, PT, DPT, CVS, CLWI, CLT-LANA
Atrium Health Stanly
Albemarle, North Carolina
United States of America

Jeannette Muldoon, RGN
Independent Clinical Researcher
Wound Care and Compression
United Kingdom

Karen J. Bock, PT, MPT, CVS, CLT-LANA
Truman Medical Centers
Kansas City, Missouri
United States of America

AtriumHealth

Aim

Observational study of 10 patients who had presented with lower extremity swelling and history of non-compliance with compression regimen. We hypothesized that offering a variety of therapeutic compression options would have a positive impact on patient’s compliance and concordance with a compression regimen. Objective data measured included limb volume cm³, range of motion (ROM), functional activity status (Timed Up and Go), quality of life (QOL) using the lymphedema QOL Tool (LYMQOL-LEC) and IP pressure measurements.

Methodology

Observational study performed at 2 different edema management clinics. Ten patients presenting with lower extremity swelling and history of non-compliance with previous compression regimens were observed. Objective data measured included the following:

- Limb volume cm³
- Range of motion (ROM)
- Functional activity status
  - Timed Up and Go (TUG)
  - 4 M Walk Test
- Quality of life (QOL) using the Lymphedema QOL Tool (LYMQOL-LEC)

Measurements were taken at four different intervals over a minimum of 3 months. Compression options were individualized to patient’s physical presentation and lifestyle for long term management of their edema.

Presented here are focused case studies with photos and individual outcomes, as well as group data.

Results

Limb volume remained constant in eight subjects throughout the observation period. Two of the subjects experienced a slight increase at initial followup however subsequent assessment revealed volume returned to baseline. LYMQOL scores showed improvement over baseline and functional performance level remained consistent. Therapeutic compression dose was observed for all forms of compression as initial assessment. The readymade and custom flat knit medical elastic stockings (MES) and the Velcro adjustable compression wrap showed consistent therapeutic compression dosage throughout the observation period. Readymade circular knit stockings demonstrated a steady decline in the therapeutic dose of compression over the observation period. Of note, the two subjects who experienced a slight increase in volume at two weeks follow up were observed with compression dosage that was below therapeutic. After patient was instructed with proper application, therapeutic compression was observed, and overall volume achieved stable levels.

Discussion

Compression therapy had a positive impact on all outcomes measured during the intensive phase of therapy. Follow-up outside the intensive phase of therapy demonstrated further volume loss in 6/10 subjects. Volume remained constant 3/10, increased slightly 1/10. LYMQOL scores and functional performance level maintained stable during the followup period.

Offering multiple compression options including custom and ready-to-wear flat knit stockings, Velcro adjustable wrap and night-time compression options had a positive impact on patients’ adherence to compression regimens during the study period compared to a single compression modality offered previously. Individualizing the compression regimen to each patient’s lifestyle improved their adherence to chronic edema edema management.

Case Study I

Subject is 42 y/o female with secondary lymphedema following treatment for melanoma. Previous treatment: prescribed circular knit OTC thigh high garment did not contain swelling and was uncomfortable.

Intervention: Complete decongestive therapy including manual lymphatic drainage, multi-component lymphedema wrap, exercise for approximately 2 ½ wks.

Long term management options: Measured/fitted with custom day and night time garments.

- Treatment had a positive impact on all outcome measures.
- These results were maintained over the observation period.
- Patient comments included: ‘I am so relieved to finally finding a way to manage my swelling: ‘those other stockings just didn’t work’.

Case Study 2

82 y/o male with h/o CVI, LE edema, recurrent stasis ulcers both LE. Previous treatment protocol had been issued elastic tubular stocking. The stocking rolled/ cut into skin, so patient cut the fabric. The wounds on LE returned.

Treatment: 2 layer cohesive to reduce volume and achieve 90% wound closure. Then fit with Velcro Adjustable wrap and OTC flat knit garment.

Long term management options: Velcro adjustable wrap and OTC flat knit, alternating use

- Treatment had a positive impact on all outcome measures.
- These results were maintained over the observation period.
- Patient comments included: ‘having the option to choose makes it easier on me’

Case Study 3

46 y/o male secondary lymphedema exacerbation due to contrast exposure, h/o previous kidney transplant. Previous treatment: OTC 20-30mmHg circular knit thigh high left LE. Treatment: Multi-component short-stretch for 2wks → transition to OTC flat knit thigh high.

3 months follow up pt continue wearing OTC flat knit however had to go down a size due to decreased volume: total weight decreased 25 lbs over this time

Long term management options: Flat knit thigh high

- Treatment had a positive impact on all outcome measures.
- Volume continued to reduced post intervention with ongoing use of OTC flat knit
- Patient comments included: ‘like the new stocking better - seemed to manage swelling better’

Conclusion

The optimal compression is the product the patient can apply independently and finds acceptable to h/s his lifestyle. Individualizing the compression regimen to each patient’s lifestyle improves adherence to chronic edema management. Further study should be performed on individual MES to provide the compression prescriber with additional information about the fatigue of the garment with normal wear/use/longevity of therapeutic compression.

References


*TributeNIGHT™ **ReadyWrap™ **ExoStrong™
Lohmann & Rauscher GmbH & Co. KG

ILF 2019 • June 13th – 15th, 2019
Chicago/USA