

Use of circaid[®] reduction kit for decongestive lymphatic therapy

By Circaid[®] Medical Products, Inc, a Medi Company

Intro/Purpose

This article summarizes 49 case studies that were conducted to determine the suitability of the circaid[®] reduction kit line of products as compression devices for the intensive treatment phase of upper and lower extremity lymphedema. The study examined the devices' therapeutic efficacy, as well as clinician and patient satisfaction.

Background

Lymphedema is swelling that occurs when excessive protein-rich lymph fluid accumulates in the interstitial tissue. Lymphedema is one of the most poorly understood, relatively underestimated and least researched complications of common diseases like cancer, and thus the prevalence of lymphedema within the general population is largely unknown. For those who are diagnosed with lymphedema, the standard of care consists of meticulous skin care, manual lymphatic drainage, exercise therapy, inelastic compression and eventually compression garments for maintenance.

The use of compression bandaging, although proven effective in reducing edema, has its drawbacks. The application of inelastic compression bandages is time consuming and requires a skilled clinician. Furthermore, as some patients are not able to effectively bandage themselves, this treatment strategy does not provide sustained therapeutic levels of compression and requires frequent follow up visits from patients. Lastly, wearing bandages can negatively impact the patient's quality of life in regards to comfort and hygiene, resulting in low compliance rates.

What is circaid[®] reduction kit?

The reduction kit product line consists of one-size-fits-all, easy-to-use, inelastic, instantly adjustable compression components that are fitted to the patient's limb size and shape on site. These upper and lower extremity wraps are made of a patented, breathable material that has just enough elasticity to follow the contour of the limb, maximizing comfort and reducing slippage. Each component consists of a series of offset bands that are wrapped around the limb and fastened with hook and loop closures, allowing for quick and easy application, as well as removal and adjustment. First applied by a clinician, the patient can then apply them just as easily and quickly. This increases compliance and hygiene, greatly improving results with far fewer follow up sessions. The products also feature a Built-In-Tension system which ensures the patient can apply the same compression as the clinician.

The quick simple and therapeutic application of the reduction kit gives the patient a comfortable, clean and effective system that does not unduly hinder their lifestyle or state of mind.

The circaid[®] reduction kit gives clinicians and patients the simplest and most effective tool for acute, early-phase edema both in the clinic and at home.

The Study

Patients used the reduction kit components as assessed and directed by the therapist. The study was conducted by 11 clinicians/therapists in 8 facilities in the US and abroad. The reduction kit was applied on 49 patients who suffered from lymphedema in the upper or lower extremities. The study subjects consisted of 15 male and 34 female patients that ranged in age from 38 to 87 years. Standard protocols of regular check-up appointments, routine skin care, and Manual Lymph Drainage were followed throughout the treatment period.

The assessment considered ease of initial application, application time, fit, comfort, ease of use, reduction of edema, patient hygiene, compliance and overall quality.

Results

71% patients used the reduction kit on their legs, 33% lower leg and 39% whole leg, while 29% used them on their arms. 78% of patients wore the reduction kit day and night.

The initial mean volumes (and standard deviations) for the entire affected limbs were 19900cm³ +/-16500* for lower leg group, 19300cm³ +/-12500* for whole leg group and 4340cm³ +/-1430 for arm group.

The final mean volumes (and standard deviations) were 17700cm³ +/-14900* for lower leg group, 17500cm³ +/-10900* for whole leg group and 3930cm³ +/-1190 for the arm group. The average total volume reductions for all lower leg cases were 2150cm³ +/-3940*, for all whole leg cases is 1810cm³ +/-1870*, and for all arm cases were 414cm³ +/-406. The average total volume reduction for all cases in the trial was 10.8%.

When lower leg volumes are isolated, their affect on the upper leg is discernable. The initial mean volume (and standard deviation) of only the lower leg was 8660cm³ +/-5320, the final mean volume was 7900cm³ +/-5230 and the average overall volume reduction was 786cm³ +/-1363. Therefore, the average percentage volume reduction was 9.69%.

79% of patients stated they would continue to use the product to maintain their condition with 70% describing the reduction kit as "Excellent". By the end of the trial, clinicians view of the reduction kit improved from the initial evaluation and reported that the overall quality of the reduction kit was "Excellent" in over 85% of the case studies. For all evaluations by patients and clinicians, the mode rating of the overall product quality was the highest possible of 1.83% of patients and clinicians reported "Excellent" hygiene while using the reduction kit compression system. By the end of the study, 80% of clinicians found the reduction kit components to still be in "Excellent" condition.

Finally 67% of clinicians gave the reduction kit an "Excellent" rating for its ability to control edema and the improvement of the patient's skin and edema.

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Case Study Highlights:

The remainder of this article displays two case reports of specific patients who participated in this evaluation.

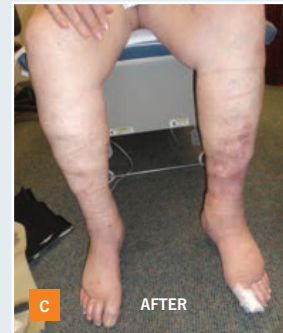
Case Example 1

This 74-year-old man was treated for bilateral below knee swelling using the lower leg circaid® reduction kit. The therapist who fitted the reduction kit to this patient reported that she found the leggings very easy and quick to cut to size and apply, that they conformed well to the patient's leg and rated the overall quality of the product as "Excellent" (Fig. A).

This patient intermittently wore the system day and night. At a follow up appointment, he reported that he was satisfied with the fit of the reduction kit system, that it was comfortable and easy to apply and remove, and that it controlled his swelling quite well. He was also very satisfied with being able to maintain his hygiene, due to the quick and easy removal and reapplication of the system.

When this patient's evaluation concluded, his skin condition rating went from 5 "Poor" to 2 "Excellent". This patient's change in edema rating was also "Excellent". After only 22 days of wearing the reduction kit system he experienced 21.9% localized volume reduction (Fig. B&C).

Overall, the patient was very satisfied with the reduction kit lower leg component as they were much easier to apply than the compression stockings he had been wearing. The patient was able to be compliant with the reduction kit.



Case Example 2

This case is about a 72-year old woman who was being treated for bilateral lower leg swelling. She was fitted with two reduction kit leg components as well as circaid® compression anklets. When fitting the system, the therapist reported that the leg components were very fast and easy to cut to size and fit, and that the fit was excellent (Fig. G).

When the patient was asked about her experience with the reduction kit after having worn them for at least 1 week, she reported that she was thrilled with how easy it was for her to use, how well it fit, and how well it contained her swelling. She reported that she had been wearing the components day and night and commented that she is very satisfied with how comfortable the components are and with the results she is seeing.

Upon completion of this patient's evaluation, the therapist gave "Excellent" scores across the board: control of edema, compliance, patients's ability to use the system, patient's hygiene, change in patient's skin condition, change in swelling, and overall quality. She specifically commented that this patient's compliance increased with the use of the reduction kit system, and that the patient has requested to be put into a circaid® product for maintaining her swelling long-term. In 68 days she experienced 12.2% total volume reduction (Fig.H&I).



For a copy of the complete study please email: info@valco.ca

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