Patient and Clinical Satisfaction Using a New 2 Layer Lite Compression System* for Patients with Low ABPIs

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Introduction

Chronic venous insufficiency is believed to be the underlying condition responsible for 54-81% of leg ulcers with increasing prevalence in an aging population. The literature indicates that approximately 25% of these patients also present with concomitant arterial compromise making the selection of reduced compression difficult as most systems are indicated for patients with Ankle Brachial Pressure Index's (ABPIs) greater than or equal to 0.8.

In our practice, we estimate that 40% of the patients we treat for venous leg ulcers require reduced compression due to lower ABPI's and it has been a great concern because there has not been a product proven to be safe for these at risk patients.

We have had to utilize a variety of bandage combinations such as: zinc paste bandages with a cohesive wrap or cast padding plus a roll gauze or tubular stockings in an attempt to provide reduced compression but the effectiveness was variable.

Objective and Methods

With the introduction of a new 2 layer lite system* that has been shown to be safe for patient's with ABPI's ≥ 0.5, we were very interested in conducting an evaluation using the system on outpatients in our Wound Healing & Treatment Center with ABPIs between 0.5 and 0.8 verified by an ABPI or arterial doppler study.

We planned to evaluate the product on at least 20 patients over a 6-12 week period seeing patients 1-2 times per week and at the end of the trial, the team would discuss the results and make a decision whether to add the 2 layer lite bandage to our formulary. t

* 3M ™ Coban™ 2 Layer Lite Compression System, (3M Health Care, Neuss, Germany)

Patient History

HD. 82 year old male with 2 partial thickness LLE venous leg ulcers. Status post 6 way cardiac bypass with stent placement in carotid artery, has Type 2 Diabetes, peripheral arterial disease with clinical symptoms including weakened pedal pulses, thinning of skin, thinning toe nails, loss of hair to extremities.

Previous treatment prior to outpatient wound care: Left open to air for 2 weeks. No antibiotics.

Patients comments: Compression wrap very comfortable, no slippage, glad he didn't have to care for wounds himself, LLE felt so much better as edema much improved, able to wear his own shoe.

2 layer lite applied along with silver foam dressing

Initial visit: , 2+ pitting edema, proximal wound 4x1.5x.1cm, partial thickness, 100% granular, distal wound 3x4.3x.1cm partial thickness, 100% granular.

2/15/11: Proximal wound 8x.5x.1cm, distal wound 2.5x4x.1cm, continued same treatment.

2/22/11: Edema completely resolved, all wounds 95% epithelialized. Pt was referred to home health for physical therapy and resolution picture not obtained.

Note: Patient refuses compression stocking which was prescribed to him over a year ago as he has too much difficulty applying and removing but states would use the 2 layer lite bandage anytime .

Patient History

GM. 68 year old male with multiple full thickness ulcers since 9/10/10.

Peripheral arterial disease with weak pedal pulses, Type 2 Diabetes-well controlled with the use of Insulin, hypertension, positive culture for MRSA, on systemic antibiotics.

Patients comments: More comfortable than previous wraps, stays up well, and he is able to wear his own footwear.

10/12/10: 3x2x.3 100% granular full thickness ulcer with multiple small partial thickness ulcers

1/11/11: 2x1.5 x.2 100% granular full thickness ulcer with epithelial margins

3/10/11: 2 x 1.2 x.1 100% granular, resolving full thickness and epithelialization at edges.

3/31/11: 1.5 x.8 granular and closing.

Clinician advantages: Easier to apply, decreased application time, no residue, no leakage in between compression wrap changes, easier to apply, consistent compression, able to use on patients that have a lower ABPI.

Patient History

RW. 64 year old male with mixed etiology leg ulcers. Arterial Doppler results- 1.2 both legs but pt. has significant arterial calcifications with stents placed in both legs . Insulin dependent diabetic-not well controlled, Heart disease, s/p CABG 2005 with saphenous vein graft. Significant edema since CABG on same leg as vein harvest. On hemodialysis which causes increase in edema to legs in between treatments

Patients comments: Very comfortable and able to wear this compression wrap where before he could not tolerate other types of compression wraps. Pt. was also able to wear his diabetic shoes and continue his lifestyle without any changes. A cast cover was used to allow showers.

Initial visit 1/6/11: 1.5 x2.5 100 % granular partial thickness ulcer with significant edema to left anterior shin.

1/13/11: 1x1.2 100% granular partial thickness ulcer, left leg edema very decreased with use of 2 layer lite bandage.

1/20/11 .4x.4 100% granular partial thickness ulcer, edema well controlled.

1/27/11 Ulcer healed. Patient fit in compression stocking 15-20 mmHg

Results

For these patients with mixed etiology and for our patients with venous stasis ulcers who do not tolerate full compression, the 2 layer lite compression system has proven to be clinically therapeutic without compromising patient comfort, safety and compliance. For the patients presented, edema was controlled and healing occurred with no adverse effects.

Discussion

This system has improved our patient's acceptance of compression therapy because the material is comfortable, lightweight and allows them to wear their own shoes. We feel it has also decreased our workload because it is easy to use. More importantly, our concern for safely applying compression to patients with low ABPI's has been greatly reduced.

Based on the successful evaluation, our Wound Center has standardized to using the 2 layer lite compression systems for all our patients with lower ABPI's..

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