**Poster 0012: Stimulating Non-healing Venous Leg Ulcers: Evaluation of Innovative New Muscle Pump Activator**

Harris, C, Loney, A, Brooke, J, Charlebois, A, Coppola, L, Mehta, S, Flett, N

**Goals:**
This observational case study series reports the first evaluation of a novel neuromuscular electrostimulation muscle pump activator (MPA) as an adjunctive therapy in healing in patients with chronic non-healing Venous Leg Ulcers (VLUs), in 2 home care communities. The purpose was to learn how the self-contained, easy to use, and wearable could contribute to healing with this patient population, and if positive, to add the product to the Medical Supply and Equipment formularies.

**Methodology:**
When the MPA device is applied to the common peroneal nerve, it can increase the venous flow by 100%, arterial flow by 75%, and microcirculatory flow by 400%. Patients whose VLUs had failed to heal within 24 weeks of standard therapy were identified and consented to the product evaluation, with physician agreement.

**Results:**
Eleven patients consented to the evaluation with a combined 107-year history of recalcitrant venous leg ulcers. The pre-MPA healing rates were unknown.

The average weekly % change in surface area (SA) for the 28 measured wounds with the geko™ was a 4.5% reduction (range of -3% to 40%). Two circumferential leg wounds in one patient were never measured. Six patients (54%) with 16 wounds were adherent to geko™ and best practice wound care had a 7% reduction in SA per week. One patient who was adherent to care was likely not healable, having been offered amputation prior to the evaluation. Without her, the average weekly percentage change in SA for adherent, healable patients increases to 7.6%.

**Patient 1:**

**Baseline:**

- Severe infection
- Rt. Leg
- @ 27 weeks

**Outcome:**
- @ 26 weeks
- Left leg
- @ 32 weeks
- 12%

**Patient 2:**

**Baseline:**

- Severe infection
- Left leg
- @ 27 weeks
- 12%

**Outcome:**
- @ 39 weeks
- 33%
- @ 50 weeks
- 58%

**Key Messages:**
A very positive result was pain reduction. Three patients who were not in optimal or any compression either started or increased to a therapeutic level of compression therapy, key in treating CVI. The MPA device has been added to the medical supply formulary in one center; pending in the other.

**References:**

**Author Information:**
Care Partners (formerly, Perfuse Medtec Inc. London, Canada, Hamilton Niagara Haldimand Brant (HNHB) Community Care Access Centre (CCAC), Bayshore Home Health, Saint Elizabeth Healthcare), Eerie St. Clair Community Care Access Centre, Windsor Regional Hospital and University of Western Ontario, London, Canada, McMaster University, St. Joseph’s Villa, Hamilton Niagara Haldimand Brant (HNHB) Community Care Access Centre. Connie.Harris@perfusemedtec.com