How A Change in Practice in a Nurse-led Wound Clinic Improved Venous Leg Ulcer Healing Outcomes

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Background: Venous Leg Ulcers Impact to the Healthcare System

Venous leg ulceration (VLU) affects up to 3% of the population worldwide and accounts for 60–80% of all cases of ulceration. These ulcers can end up becoming challenging chronic wounds, with up to 30% remaining unhealed even after a year of care and up to 70% recurring within a year. This can pose a negative impact on the patient's perceived quality of life and can cause the clinician frustration with applying interventions that end up unsuccessful. Spectrum Health Care nurse-led wound clinic within the Mississauga Halton region makes every effort to apply best practice (wound bed preparation, assessment of infection, and appropriate compression therapy based on ABPI) care for VLUs and understands that adjunctive therapy also has a place in the care of these complex wounds. When the geko™ device was introduced and made available for access by the Mississauga Halton Local Health Integration Network (LHIN) in 2017, Spectrum clinicians began to include the device in the care planning of patients with VLUs.[1,2]

Aims

To share how a change in practice within an Ontario nurse-led community wound clinic resulted in improved outcomes for patients living with VLUs.

Method

Prior to this evaluation clients with VLUs were provided with best practices and required 30 days of standard of care (SoC) before adding the geko™ device. For this evaluation, patients with VLUs had the geko™ devices added to the treatment plan as soon as possible following admission. Wound measurements were documented pre geko™ utilizing SoC and then with geko™ and standard of care. Common metrics for assessing the healing rate of wounds such as percentage area reduction introduce bias depending on wound size.

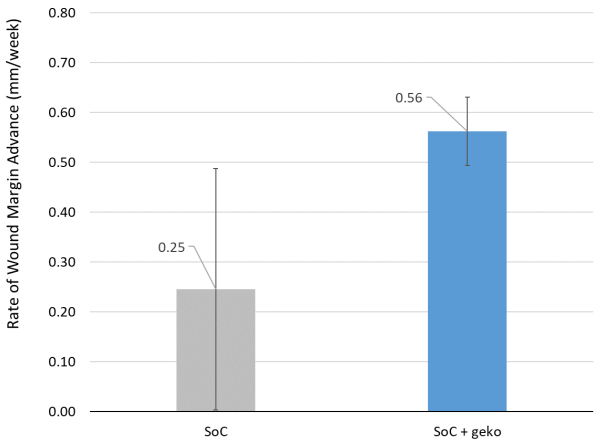
Linear advance of the wound margin (WMA) (wound area/perimeter) has been favoured by other researchers as a metric for the healing rate of VLUs[3] because it removes wound size bias. In this analysis the WMA was used to highlight the effect of SoC healing rates and SoC + geko™ healing rates, of the 18 patient VLU wound measurements included in this review.

Results:

Prior to initiation of the geko™ device, the average time to close a wound in Mississauga Halton Local Health Integration Network (LHIN) was 15 weeks with a geko™ initiation time of 14.3 weeks[4]. In this evaluation the average time to closure was 6.7 weeks with a geko™ initiation time of 3.8 weeks[4], a decrease of 55% in the time taken to add the geko™ device to the treatment plan.

The graph shows that when the geko™ device was added to SoC the rate of closure increased compared to SoC alone. Results observed occurred with SoC (optimal compression) and geko™ application as soon as possible.

The Effect on Rate of Wound Margin Advance of Adding the geko™ device to Standard Care (N=18)



Implications for Practice:

The positive results influenced how patients with VLUs are managed. These faster healing times allowed patients to be discharged from service earlier. It was noted some patients that stopped using the geko™ device before the wounds closed, still showed a decrease in wound size however, further study is needed. The geko™ device is now initiated at baseline assessment in conjunction with SoC.

References:

1. The Burden of Wounds in Canada https://www.woundscanada.ca/members-of-the-media/overview-media/burden-of-wounds-in-canada
2. Spectrum Health Care data 2019-2021
3. Bull RH, Staines KL, Collarte AJ, Bain DS, Ivins NM, Harding KG. Measuring progress to healing: A challenge and an opportunity. Int Wound J. 2021;1-7. https://doi.org/10.1111/iwj.13669
4. Mississauga Halton LHIN local data 2019

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