

**CAWC Spring 2017** 

# The Use of 2.5% Sodium Hyaluronate Wound Gel

to Promote Wound Healing for Patients with Diabetic Foot Ulcers (DFUs) and Lower Leg Ulcers (LLUs)

# in Community Settings by a Certified Wound Ostomy Continence Nurse (CWOCN)

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#### Background

- Reducing health care costs has been acknowledged as a global issue.
- "Every 30 seconds a lower limb is lost due to diabetes somewhere in the world".
- 50% patients with leg ulcers had a leg ulcer history 5 to 10 years; 30% > 10 years.
- Treatment costs increases when the duration of treatment, and product use increase.
- Early identification of difficult-to-heal wounds and targeted use of advanced wound care products should be considered whenever possible (Vowden 2011).

### 2.5% Sodium Hyaluronate Wound Gel

Has been used for management of lower leg ulcers, pressure ulcers, diabetic foot ulcers, and surgical wounds (Reece & Quiring, 2002; Woo, et al 2005).

### Method (Study period: May – November 2016)

This prospective, self-controlled non-randomized clinical case series study was conducted to evaluate the efficacy of 2.5% sodium hyaluronate wound gel for community patients with DFUs or LLUs in out-patient clinic settings by assessing:

- The healing rates by comparing the changes of wound size and time to heal
- The incidence of complications

## **Inclusive Criteria**

- Wounds that failed to reduce size by 30% after treatment for 4 weeks
- DFU: of wound size <10 cm<sup>2</sup>; have been off-loaded with most appropriate offload device, Total Contact Cast (TCC), Poor Man TCC, iTCC, etc.
- LLUs of wound size <100 cm<sup>2</sup>
- Patient with LLUs that have been on 20 mmHg or more compression therapy

### Study Protocol (Weekly wound gel treatment till wound closed or a max. 27 weeks)

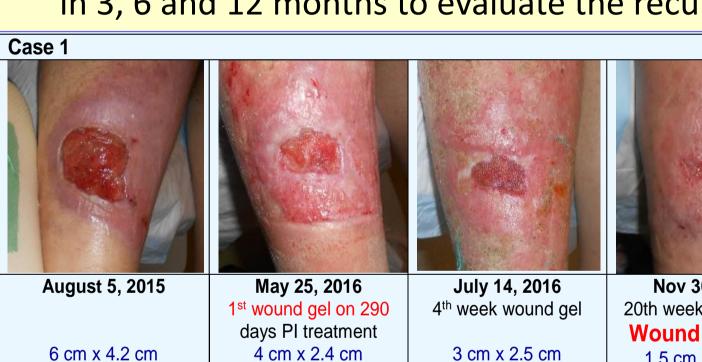
- Sharp or mechanical wound debridement by the Principal Investigator, a CWOCN
- Applied wound gel liberally to wound base and margins
- Maintained moisture/bacterial balance with bacterial binding dressings to
- Continued with appropriate offload (DFUs) or compression (LLUs)

# Results: 33 patients recruited; 20 patients completed the study (10 DFU (50%); 10 LLUs (50%):

- > 8 patients (40%): wounds closed
- 9 patients (45%): wounds improved
- > 3 patients (15%): wound status undetermined
- Mean Home Care Nurse treatment days before PI treatment: 195 days
- Mean PI treatment days before wound gel treatment: 193 days
- Mean wound gel weekly applications 15 weeks (105 days)

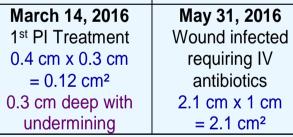
# **Implications:**

- 1. The results supported the use of the wound gel to supplement standard wound treatment for patients with DFUs or LLUs.
- To provide stronger evidence, further studies with a larger sampling size with follow up assessments in 3, 6 and 12 months to evaluate the recurrence rates is recommended.











 $= 3 \text{ cm}^2$ 

3<sup>rd</sup> TCC 6<sup>th</sup> TCC Offloader + 1st Offloader + 4<sup>th</sup> wound gel wound gel 2 cm x 1.5 cm 1.3 cm x 1.2 cm  $= 1.56 \text{ cm}^2$ 





Case 3

 $= 25.4 \text{ cm}^2$ 

Aug 25, 2016 TCC Poor Man -1st Wound gel 1 cm x 0.5 cm  $= 0.5 \text{ cm}^2$ (0.5 cm deep with

undermining 0.5 cm

12 – 12 o'clock)

September 22,

 $= 1 \text{ cm}^2$ 

 $= 9.6 \text{ cm}^2$ 

Sept 29, 2016 4th TCC Offloader 3rd TCC Offloader + 3rd Wound Gel 2<sup>nd</sup> Wound Gel 0.5 cm x 0.8 cm  $= 0.5 \text{ cm}^2$ 1 cm x 1 cm Deep sinus 2.5 cm @ 9 o'clock Deep sinus 3 cm @ 9



5th TCC Offloader 5th Wound Gel 1.5 cm x 0.5 cm  $= .0.75 \text{ cm}^2$ Sinus 0.3 cm @ 9

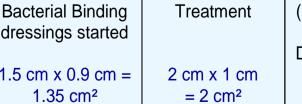


After 7th TCC Offloader and 7th Wound Gel Wound closed



Case 6

1st PI Treatment **Bacterial Binding** dressings started







 $= 0.54 \text{ cm}^2$ 

(0.4 cm deep)

8th Wound Gel Wound size ↑ Depth ↓ 100% granulatio 1 cm x 0.8cm  $= 0.8 \text{ cm}^2$ (0.2 cm deep)

Nov 4, 2016 Post 22<sup>nd</sup> Wound Patient was discharged after **Wound Closed** on Sept 30, 2016

#### **References:**

- Reece, et al. (2002) Hyaluronic acid in an ionic polymer gel matrix helps create an optimal environment for ulcer healing. Poster presentation, SAWC Conference, Apr 2002.
- Sibbald et al (2011). Special Consideration in Wound Bed Preparation. Advances in Skin and Wound Care, Sept 2011, pp. 425–436
- Vowden (2011). Hard-to-heal Wounds Made Easy. Wounds International 2011; 2(4), pp. 1 6. http://woundsinternational.com

## **Disclaimer**

o'clock

- This study was unfunded. The vendor provided the 2.5% sodium hyaluronate wound gel for 20 selected patients for product evaluation.
- The trade name of this 2.5% sodium hyaluronate wound gel is GlycoBioSciences Inc. IPM ™ Wound Gel Bio.