THINKING "OUTSIDE THE BOX" USING A UNIQUE OFF THE SHELF TOTAL CONTACT CAST FOR UNUSUAL OR UNIQUE FOOT ULCERS

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BACKGROUND/PURPOSE

Foot ulcers are the leading cause of non-traumatic lower extremity amputations in diabetic patient populations.[1] Patients with challenging foot ulcers of various etiologies other than diabetic foot ulcers (DFUs) can benefit from Total Contact Casting (TCC) to promote healing and closure.[2] Key components of TCC are off-loading and forced compliance to decrease ambulation. TCC off loads pressures on the foot by equalizing the contact of the cast material with plantar skin and redistributing pressure to the calf area of the lower leg.[3] These cases will demonstrate effective use of TCC in more unusual and unique foot ulcer patients than typical Wagner grade 2 DFUs.

METHODS

Wound care staff received complete education and training regarding the purpose and use of a Roll on TCC System*. 8 patients ages 26-83 years; 6 male and 2 female; were treated with this system to off-load pressure. Wounds were sharply debrided PRN and dressed according to advanced wound care evidence based practice using moist wound healing principles. Casts and dressings were changed 2-3 days after initial application then weekly thereafter unless drainage required more frequent changes. Etiologies and co-morbidities included the following: Spina bifida with bony foot deformity, s/p transmetatarsal amputation (TMA), lymphedema, venous insufficiency, arterial insufficiency, s/p STSG, non-ambulatory quadraplegic with PU of foot, osteomyelitis, morbid obesity and diabetes mellitus.

RESULTS/CONCLUSION

8 patients with unique or unusual foot ulcers achieved complete closure or >50% reduction in surface area over 4-5 weeks using the Roll on TCC System.

These case studies demonstrate a positive impact on healing rates of chronic ulcers in patients with various wound etiologies. Often, wound care clinicians need to think "outside of the box" to determine an appropriate and effective treatment. The Roll on TCC System is a less complex TCC system with fewer parts; giving clinicians more confidence in TCC application and options for treatments.

References: 1. Incidence of diabetic foot ulcer and lower extremity amputation among Medicare beneficiaries. 2006 to 2008. www.ahrq.gov. 2. Shah S. Clinical and economic benefits of healing diabetic foot ulcers with a rigid total contact cast. WOUNDS 24(6):152-159. 2012. 3. Armstrong DG, et al. Off-loading the diabetic foot wound. Diabetes Care 24:1019-1022. 2001

* TCC-EZ® Derma Sciences, Inc. Princeton, NJ

** MEDIHONEY® Active *Leptospermum* Honey Dressings, Derma Sciences, Inc. Princeton, NJ

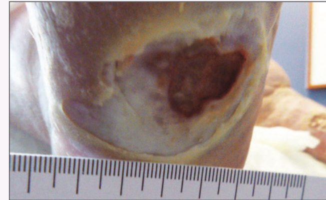
Derma Sciences provided an educational grant to support this research. The information may include a use that has not been approved or cleared by the Food and Drug Administration. This information is not being presented on behalf of Derma Sciences.

CASE 1

66 year old female with history of obesity, bilateral lower extremity lymphedema, neuropathy, venous insufficiency, history of non-compliance with treatment regimens.

1st plantar right midfoot ulcer was treated for 7 weeks with Roll on TCC System (Active *Leptospermum* Honey {ALH}**, collagen, and silicone border). Single layer compression sleeve was applied to calf with ABD padding for treatment of venous insufficiency and lymphedema. These treatments were removed for 1 month and had recurrence of the wound due to not being able to follow compliance with off-loading and/or get fitted for proper diabetic shoes/inserts. Therefore patient was placed back into the Roll on TCC System for another 6 weeks to wound closure.

RIGHT LATERAL MIDFOOT PLANTAR ULCER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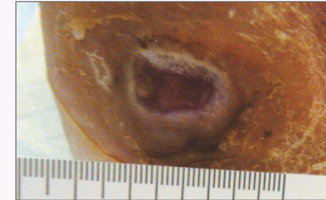
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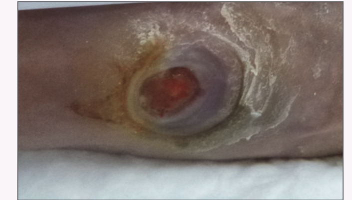
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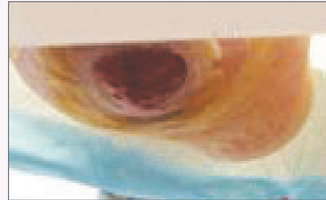
CASE 2

26 year old male with history of Spina Bifida and foot deformity. Patient had ulcer for 2-3 weeks and had been seen by podiatry in private office. Patient came to wound care center with right plantar 5th metatarsal base and left plantar foot ulcer. Patient was treated with right LE in Roll on TCC System on 8/13/13, along with debridement of callus, ALH, collagen and silicone foam dressings. Wound healed within 4 weeks on 9/10/13.

RIGHT PLANTAR BASE 5TH METATARSAL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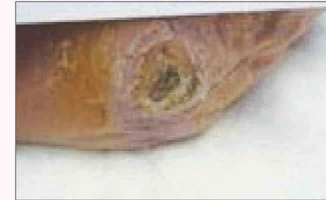
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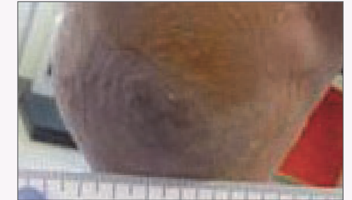
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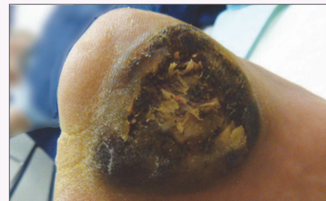
CASE 3

56 years old male history of DM, tobacco use, obesity, CAD and recent TMA to the right foot. Patient presented to clinic with right plantar malodourous TMA foot ulcer measuring 5.0 cm x 5.0 cm x 0.2 cm. Edges were hyperkeratotic and there was dark discoloration under wound and peri-wound. Previous biopsy with verrucoid lesion was done to r/o malignancy. 1st visit included extensive debridement with tissue pathology being sent out. Betadine and alginate were applied first and then the Roll on TCC System. Wound completely healed in 3.5 weeks with no known recurrence.

RIGHT TRANSMETATARSAL AMPUTATION SITE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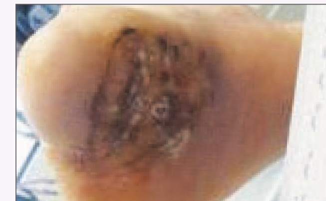
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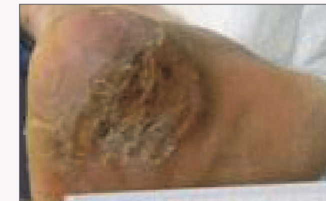
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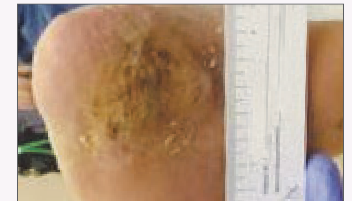
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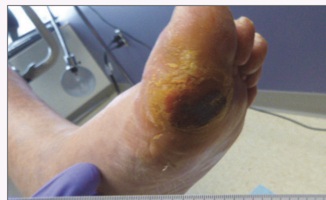
CASE 4

57 year old female. History of DM II, Osteomyelitis, DVT. Patient presented from podiatrists office after being treated for 1 month with IV ABX. Roll on TCC System placed on 1st visit

a. Left plantar great toe ulcer 3.0 cm x 3.0 cm x 0.2 cm with fluctuance. Roll on TCC System applied with ALH and silicone foam. Wound healed in 3 weeks with reduction of fluctuance in 1 week.

b. Left medial heel ulcer 1.5 cm x 3.0 cm x 0.2 cm with pain and erythema. Roll on TCC System applied with ALH and silicone foam. Wound healed in 3 weeks with reduction of pain after 1 week.

LEFT 1ST METATARSAL PLANTAR ULCER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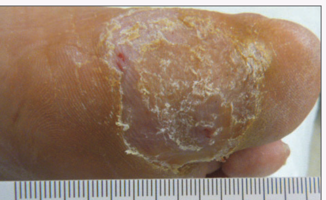
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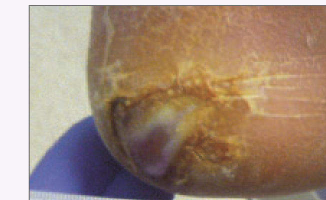
LEFT MEDIAL HEEL ULCER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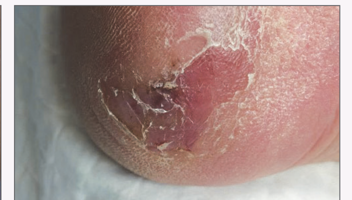
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