

UTILIZING TRANSFORMING POWDER DRESSING ON CHRONIC VENOUS LEG ULCERS REFRACTORY TO STANDARD OF CARE MANAGEMENT: OUTCOMES OF THREE PATIENTS

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INTRODUCTION

Venous leg ulcers (VLU) pose major clinical challenges¹:

- Account for 70% of all leg ulcers
- Occur in 1-2% of the general population
- Occur in 4% of people 65 years of age and older
- Only 60% heal after 12 weeks of treatment

VLUs are associated with significant financial burden,² decreased quality of life,^{2,3,4} and pain.^{3,4} This study describes the outcomes of three patients with chronic VLUs and multiple comorbidities who were transitioned to a novel transforming powder dressing (TPD*) after no significant improvements with conventional standard of care (SOC) therapies for several months.

TPD is an extended wear dressing comprised primarily of polymers similar to those used in contact lenses and may be left on the wound for up to 30 days. Upon hydration, TPD granules aggregate to form a moist oxygen-permeable barrier that covers and protects the wound and dries and flakes off as the wound heals.

METHODS

Three (N=3) patients with wounds refractory to SOC treatments (various modalities including hydrogels and other dressings with broad spectrum antimicrobial properties in conjunction with compression therapy) were transitioned to TPD. TPD was applied to the wound and “topped off” (additional powder sprinkled on existing TPD matrix) or reapplied weekly, followed by compression, in an outpatient wound clinic. The type of compression utilized for each patient before and after implementing TPD was not changed.

REFERENCES

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*Altrazeal Transforming Powder Dressing

RESULTS

Patient	Baseline	SOC Treatment				TPD (+ Compression)			
	WSA (cm ²)	Timeline	WSA (cm ²)	Dressing Frequency*	Debridements	Days to Healing	Applications	Dressing Frequency	Debridements
74 y/o male	0.6	30 weeks	0.5	3-4 days	12	29	3 applications / 1 top off	> 7 days	None
71 y/o male	7.4	13 weeks	2.2	3-4 days	4	36	4 applications / 1 top off	> 7 days	None
71 y/o female	6.3	13 weeks	4.6	3-4 days	5	42	3 applications / 3 top offs	7 days	None

*from twice daily, to twice weekly

PATIENT 1: 74 y/o male with DMT2, venous insufficiency with previous VLUs, obesity, lymphedema on 30-40 mmHg compression
Initial SOC Treatment | 28 Weeks: Vascular evaluation, topical antibiotics, UltraMist, hyperbaric oxygen therapy (discontinued due to ear issues), wound vac therapy (not tolerated >24 hours), pentoxifylline, multiple debridements (N≥12; enzymatic, sharp)
Time to Healing Post TPD: 29 days
TPD Applications: 3 applications, 1 top off | **Debridements:** None



PATIENT 2: 71 y/o male with DVT post thrombotic syndrome, venous insufficiency with previous VLUs, lymphedema, obesity, on 30-40mmHg thigh high compression
Initial SOC Treatment | 12 Weeks: Vascular evaluation, T Com evaluation (periwound oxygen measurements 32 and 31 mmHg with good response to 10 minutes at pressure), various topicals, pentoxifylline, multiple debridements (N=4)
Time to Healing Post TPD: 36 days
TPD Applications: 4 applications, 1 top off | **Debridements:** None



PATIENT 3: 71 y/o female with venous insufficiency, lymphedema, obesity, left ankle fracture, on compression (however, socks did not fit well)
Initial SOC Treatment | Three Months: New compression socks, topical antibiotics, multiple debridements (N=5)
Time to Healing Post TPD: 42 days
TPD Applications: 3 applications, 3 top offs | **Debridements:** None



DISCUSSION

Despite quality SOC for several months, wound healing had stagnated for all three patients. Once converted to TPD, all wounds epithelialized within six weeks with significantly reduced frequency of dressing changes and debridements versus SOC. TPD was well tolerated under compression with no complications. TPD presents a cost-effective option for VLU treatment in conjunction with standard compression.