Evaluation of Transforming Powder Dressing (TPD) in Treatment of Chronic Venous Ulcers: A Randomized Controlled Trial and Two Observational Case Series

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INTRODUCTION

Only 60% of chronic venous ulcers (CVUs) heal within 12 weeks[1]. They often reoccur and are associated with significant financial burden. Current standard of care (SOC) for CVUs is adequate compression changed at least weekly.

A prospective randomized controlled trial (RCT) and two multi-site observational case series were conducted to evaluate the role of transforming powder dressings (TPD*) versus SOC.

TPD is a commercially available wound dressing with an extended wear time of up to 30-days. In the presence of moisture, the powder creates a moist, oxygen permeable barrier that facilitates the flow of excess exudate through vapor transpiration while while protecting the open tissues contamination. TPD may be covered with simple dressings including compression if indicated and "topped off" as needed. It dries and flakes off as the wound heals.

METHODOLOGY

The RCT enrolled 60 subjects [TPD = 30 and SOC = 30] with average wound duration of over 30 months. The two multi-site observational studies compared TPD to conventional SOC in patients with recurring and persistent CVUs.

DISCUSSION

TPD was associated with significantly higher healing rates, shorter duration to healing, less pain, pain medications and decreased dressing changes compared to current SOC in the treatment of CVUs.

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Reference: Kyung Bok Lee. Ann Optimal Diagnosis and Therapy of Venous Ulcer. Phlebology 2023;21(1):5-13 jyyps://doi.org/10.37923/phle.2023.21.1.5

Altrazeal® Transforming Powder Dressing, USA

RESULTS

RANDOMIZED CONTROLLED STUDY (N=60): Mean Wound Duration > 30 Months

Metric	TPD	SOC	*p*
Complete ulcer healing at 12 weeks, n (%)	13 (43.3%)	3 (10%)	0.004
Complete ulcer healing at 24 weeks, n (%)	26 (86.7%)	12 (40%)	<.001
Time to healing (wk), mean (95% CI)	16.7 (14.1 - 19.3)	37 (30.8 - 43.2)	<.001
Number of mean dressing changes +/- SD	23.9 +/- 9.7	196 +/- 85.5	<.001
Postdressing pain (VAS), mean +/- SD	1.4 +/- 1.1	2.9 +/- 1.3	<.001
Need for analgesics, n (%)	2 (6.7%)	11 (36.7%)	0.005

TWO OBSERVATIONAL CASE SERIES (N=7)

Three patients with recurring ulcerations and four with recalcitrant CVUs who failed SOC compression therapy were transitioned to TPD

Series 1: Patients with recurring ulceration

- TPD Healing time lower by 12 weeks (15.1 vs. 27.6)

Series 2: Patients with recalcitrant CVUs >6 months

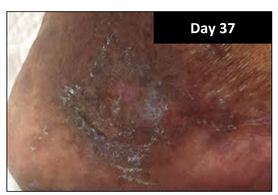
- All CVUs healed within 88 days on average

Reduced dressing changes from multiple times a week to once weekly on average for all patients

CASE SERIES 2: Patients with recalcitrant CVUs >6 months

Age / Sex	Previous Treatment	Wound Duration	Wound Location	Days to Heal	Dressing Changes	Days Between Applications
48 / M	Naftidrufuryl, celcept, cilostasol, immuran	2 years	Calf	150	22	7
62 / M	Dressing change every 3 days	2 yrs	Right leg	60	5	12
48 / M	Dressing change every 4 days	7 months	Right leg	65	5	15
54 / F	Ancoplast used but it had a reverse reaction and the wound increased. Dressing change every 5 days	2 yrs	Right leg	75	7	10

SERIES 1



SERIES 2