

Efficacy and Compatibility of Combination Therapy with Super-Oxidized Solution* and a Skin Substitute[§] for Lower Extremity Wounds

Regulski M, Floros R, Petranto R, Migliori V, Alster H, Pfeiffer D
Ocean County Foot & Ankle Surgical Associates. NJ. USA

PURPOSE

New technologically advanced wound care products, like skin substitutes and a super-oxidized solution, SOS*, have been shown to promote healing rates. Unfortunately, the evaluation of combined therapies is rarely undertaken.

OBJECTIVE

Evaluate the incidence of 100% closure (epithelialized) of non-infected, graft ready wounds treated with SOS and a skin substitute (SkS)[§] during the initial 12 weeks of the treatment period and additional 12 weeks of follow-up.

METHODS

Twenty-two patients with lower extremity wounds of at least 1 month were randomized to receive SOS or saline solution. SOS or saline solution (30 mL) was applied bid for three days before grafting the SkS and once everyday thereafter. A dressing saturated with either SOS or saline was placed in the wound bed and covered with a 2-layer compression system. The SkS was changed every week and assessments were conducted on Day 0, Day 3 and weekly thereafter for up to 12 weeks.

Patient Demographics	Control Group (N=9) Mean ± SD (Median)	Study Group (N=9) Mean ± SD (Median)
Age (in years)	70.22 ± 13.86 (72.00)	64.89 ± 18.81 (66.00)
Gender (M/F)	7/2	1/8

Wound Type	Control Group (N=9) Frequency	Study Group (N=9) Frequency
Post – traumatic	5	5
Post – surgical	1	3
Venous Ulcer	3	1

Baseline Wound Measurements	Control Group (N=9) Mean ± SD (Median)	Study Group (N=9) Mean ± SD (Median)
Length (cm)	1.55 ± 0.91 (1.34)	2.22 ± 1.34 (1.83)
Width (cm)	2.26 ± 1.04 (2.11)	1.94 ± 0.81 (1.69)
Area (cm ²)	2.53 ± 1.37 (2.08)	3.39 ± 3.11 (1.62)
Depth (cm)	2.89 ± 0.60 (3.00)	3.33 ± 0.71 (3.00)
Volume (cm ³)	0.71 ± 0.34 (0.62)	1.14 ± 1.21 (0.51)

RESULTS

Eighteen out of 22 patients were fully evaluable, 9 in each group (SOS or Saline). The median ulcer volumes were similar for the study group (0.51 cm³) and the control group (0.62 cm³). Despite of this the median number of weeks to complete epithelialization was shorter for the study group (6 weeks) than the control group (7 weeks).



CONCLUSION

SOS might induce a faster epithelialization than saline solution independently of the use of the OWM. Both technologies appear to be compatible.

* Microcyn® Technology, Oculus IS, Petaluma, USA.

§ OASIS® Wound Matrix, HealthPoint, Texas, USA.