

Title of Abstract:

Pulsed Radio Frequency Energy (Provant®) Wound Therapy in a Series of Complex Diabetic Wounds

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ABSTRACT

Purpose: Diabetes Mellitus is growing at epidemic proportions around the world. An estimated 20.8 million Americans (7% of the population) are diabetic. Foot ulcerations arise in about 15% of diabetic patients, and are a leading cause of hospitalization and lower limb amputation. Pulsed Radio Frequency Energy (PRFE)* therapy has been used adjunctively to decrease inflammatory features and to promote wound healing.

Methods: Three insulin-dependent diabetics with complex, non-healing foot ulcers are presented. The first, a 59 year-old male status post amputation of two toes for ulceration and osteomyelitis, presented with a 14-month old metatarsal wound complicated by recent hospitalization for wound infection. The second patient, a 76 year-old alcoholic male, had a 6 month-old highly calloused, non-epithelialized plantar ulcer. The third patient, a 56 year-old hypertensive male, presented with a large plantar ulcer of 3-4 years duration. PRFE was used to reduce edema and recruit the diabetic ulcers into the inflammatory phase of healing.

Results: All ulcers responded to PRFE therapy and one wound closed entirely in 4 weeks. The first patient's wound reduced in volume by 71% in 4 weeks; the second patient's wound closed fully in 2 weeks and remained closed; the third patient had a reduction in wound volume from 3.1 cm³ to 1.96 cm³ (37% reduction) in 2 weeks.

Conclusion: PFRE therapy is found to promote the healing of foot ulcers in diabetic patients with chronic, non-healing wounds.

* Provant Wound Therapy System, Regenesi Biomedical Inc, Scottsdale AZ