The study demonstrated the safety and effectiveness of this product in correcting atrophic acne scars. Results of the 6-month endpoint was previously described in Karnik et al. To determine the continued benefit of PMMA-collagen for atrophic acne scars, and confirm the original findings over a longer time period, the study was continued through 12 months follow up.

OBJECTIVES: Demonstrate PMMA-collagen is safe and effective in correcting moderate to severe atrophic acne scars using the validated acne scar rating scale (ASRS).

METHODS: A Phase III, multicenter, randomized, double-blind, controlled study was conducted in subjects with ≥ 4 acne scars in the facial area. Eligible scars were distensible, rolling scars that were considered moderate to severe (3 or 4) on a validated 4-point (1–4) ASRS.

Subjects were randomized in a 2:1 ratio to PMMA-collagen or saline (control). Subjects received up to 2 injections per scar and followed for 12 months. Evaluations were performed by treating and blinded investigators and subject self-assessments. Success was determined by an improvement of 2 points on the ASRS by at least 50% of treated scars. At month 6, the blind was removed and control subjects were given the option to receive treatment with PMMA-collagen. All subjects were followed for 12 months following last PMMA-collagen injection.

RESULTS: 147 subjects enrolled and underwent treatment. At 6 months 64.4% of PMMA-treated subjects were graded as responders compared to 32.6% of the control subjects (p = 0.0005). Improvement with PMMA-collagen was durable over time as noted by the ASRS response rates of 61.5% and 70.7% at Month 9 and 12 respectively. High scores were observed for subjective endpoints on GAIS with 97.6% and 83.1% of physicians and subjects respectively noting improvement. Subjects expressed a high degree of satisfaction (90.4%) with the amount of scar correction. PMMA-collagen showed excellent safety with generally mild, reversible adverse events. No significant differences in efficacy or safety were noted between genders, for darker skin types, or in older age groups. PMMA-treated subjects followed for 12 months continued to show an excellent safety profile.

DISCUSSION: PMMA-collagen demonstrates substantial effectiveness in the treatment of atrophic acne scars while maintaining an excellent safety profile.

REFERENCES:
1. Bellafill [Instructions for Use]. San Diego, Ca: Suneva Medical, Inc.; 2015
2. Karnik J, Baumann L, Bruce S, et al. A double-blind, randomized, multicenter, controlled trial of suspended polymethylmethacrylate microspheres for the correction of atrophic facial acne scars. J Am Acad Dermatol. 2014;71:77–83.
brown pigmentation was reduced from 73.77 ± 12.69% to 69.15 ± 13.56% (p = 0.042) in the BF group, with a decrease in total dark spots from 20.47 ± 16.57 to 13.76 ± 12.04 (p = 0.010). No significant changes in total redness or brown pigmentation occurred in either of the control groups (p = 0.75 and 0.89). At 90 days, VAS scores were significantly improved for radiance, brown spots and dryness in the AIF group (p < 0.05), with no significant changes in the placebo group. Radiance, softness and overall quality scores were significantly improved in the BF group. The BF placebo group reported significant improvements in brown spot and dryness scores.

CONCLUSION: This study suggests that the AIF and BF supplements provide significant clinical benefits in the reduction of facial erythema and hyperpigmentation.

REFERENCES:
1. Del Rosso JQ. Advances in understanding and managing rosacea: part 1. J Clin Aesthet Dermatol. 2012;5:16–25
2. Masaki H. Role of antioxidants in the skin: anti-aging effects. J Dermatol Sci. 2010;58:85–90

The Management of Facial Hypertrophic Scars by Using Fractional CO2 Laser, Adipose-Derived Stem Cells, Regenerative Epithelial Suspension and Lipoinjection Combination

Fatih Ceran, MD; Mehmet Bozkurt, MD

DISCLOSURE/FINANCIAL SUPPORT: The authors declare none disclosure.

INTRODUCTION: Facial burns often get an inextricable situation in terms of healing and long-term morbidity. Many different procedures were used to overcome these challenging topics. Although results were more promising in terms of surgeons, is inadequate for patients. We present the efficiency of fractional CO2 laser (FL), Adipose-Derived stem cells (ADSC), Regenerative Epithelial Suspension (Recell®) and lipoinjection combination treatment on facial hypertrophic scars due to burns (FS).

MATERIAL AND METHODS: 20 patients (M: 12, F: 8) among the ages of 18–38 years (Mean: 25.6) between 2012–2016 were included. Skin thickness and perfusion were assessed by using ultrasonography, Vectra® computer simulation was performed to obtain symmetric lipoinjection, skin biopsies were performed, hematoxylin-eosin, and Movat pentachrome staining were carried out on preoperative and postoperative 12 months. ADSC-enriched lipoinjection and FL was performed, Recell® was administered following. All of the patients underwent a satisfaction questionnaire.

RESULTS: Mean follow-up was 18 (14–24) months. A significant improvement in skin softness, thickness, elasticity, color and symmetry was obtained in all patients. An increase in Keratinocyte, type 1 collagen; a decrease in nodular type 3 collagen and elastin, epidermal rete ridges, proteoglycan, fibronectin, neurofilament, T cells, macrophages and mast cells was observed in the histopathological studies. A significant reduction in skin thickness, scar microcirculation and an increase in fatty tissue rates were obtained from USG, and all patients had higher scores in questionnaire.

CONCLUSION: FL has an active role on smoothing and regression of FS. ADSC-enriched lipoinjection is effective in the long term management of facial asymmetry. The Recell® application increases the amount of keratinocytes and provides significant skin quality.

ACKNOWLEDGEMENTS: Conflict of Interest: None

Efficacy of Laser and Light Therapy for the Treatment of Non-Atrophic Scars: A Systematic Review and Meta-Analysis

Amanda L. Maisel, BS; Kirsten M. Lipps, BS; Sedona E. Speedy, BS; Deepa Bhat, MD; Aaron Kleyn, MS; Daniel D. Li, BS; Robert D. Galiano, MD

DISCLOSURE/FINANCIAL SUPPORT: None of the authors has a financial interest in any of the products, devices, or drugs mentioned in this manuscript.

INTRODUCTION: Scarring is the unavoidable consequence of injury to the skin. Treatment of scars remains a challenge despite the various treatment options available. Within the past decade, laser and light therapy (LLT) has become widely used to treat scars. The purpose of this systematic review and meta-analysis is to evaluate the evidence for the treatment of non-atrophic scars (e.g. linear scars, hypertrophic scars, and keloids) with LLT.

METHODS: PubMed/MEDLINE, EMBASE and CENTRAL databases were searched for studies published