

Treatment of Décolletage Photoaging With Fractional Microneedling Radiofrequency

January 2018 | Volume 17 | Issue 1 | Original Article | 74 | Copyright © 2018

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Abstract

OBJECTIVES: The objective of this study was to examine the efficacy and safety of a novel fractional microneedling radiofrequency device to improve the appearance of rhytides and skin laxity of the décolletage. **METHODS:** Twelve subjects received a total of three fractional microneedling radiofrequency treatments with Endymed Intensif (EndyMed Ltd., Cesarea, Israel) at least three weeks apart. Primary outcome measure was clinical efficacy quantified by a patient survey to assess treatment satisfaction as well as a physician Global Aesthetic Improvement Scale (GAIS). Photos were taken before every treatment and at a follow-up appointment. **RESULTS:** Assessments by two board-certified dermatologists revealed an overall improvement in 67% of patients. Seventy percent of subjects rated their post-treatment skin laxity and rhytides as improved, while 60% of patients rated their skin texture as improved. Eighty percent of subjects were at least slightly satisfied with their treatment. Forty percent of subjects would recommend this treatment to others. **CONCLUSIONS:** Subjects in this study demonstrated an overall improvement in décolletage appearance in regard to skin tightening, wrinkles, and skin texture suggested by overall patient satisfaction (80%) and physician-rated GAIS improvement (67%). This study suggests that fractional

microneedling radiofrequency devices are a safe and efficacious way to improve overall décolletage appearance with little down time.

INTRODUCTION

Ultraviolet (UV) photoaging contributes to increased skin laxity, rhytidosis, solar lentigines, hyperpigmentation, erythema, tactile roughness, atrophy, and telangiectasias. These changes can have a significant effect on patient self-esteem and may negatively affect quality of life.¹ Patients often seek out various treatments to mitigate these changes including photorejuvenation, radio-frequency tightening, chemical ablation, retinoids, fillers, neurotoxins, and surgical intervention. Although laser and light-based treatments are frequently employed to address these concerns, their use can be limited on poikilodermatous skin of the chest, given the higher risk of post inflammatory pigment changes. Noninvasive and nonablative options are increasing in popularity due to their decreased downtime and better safety profile. Fractional microneedling radiofrequency (FMR) offers an approach that is safe and efficacious on the décolletage. FMR devices have been successfully used for aesthetic treatments of the face and neck to improve skin laxity, rhytides, acne scars, and post inflammatory hyperpigmentation, and multiple studies have substantiated their clinical validity.²⁻⁵ FMR devices deliver radiofrequency energy at specified depths to the dermal layer, while minimizing damage to the epidermis. Because energy is delivered at a deeper level than contact radiofrequency devices, fewer treatments may be required to achieve results, and epidermal cooling is unnecessary.⁶ Dermal collagen fibrils are targeted, leading to collagen fibril shortening and collagen neogenesis.⁷⁻⁹ Moreover, these devices are gaining in popularity, given their minimal side effects and required downtime. Clinical data evaluating the efficacy of FMR on the chest has been limited. The aim of this study was to investigate the efficacy of a specific FMR device, Endymed Intensif (EndyMed Ltd., Cesarea, Israel) on the décolletage rhytides, skin laxity, and skin texture. Our aims were to characterize FMR's ability to improve skin rhytides and laxity of moderate-severely photodamaged décolletage, correlate FMR therapy of the décolletage with patient satisfaction, and identify the safety of FMR of this anatomic region. To our knowledge, this is the first study to characterize the effect of FMR on the décolletage.