

FRACTORA: A NOVEL METHOD FOR DEEP RADIO-FREQUENCY FRACTIONAL RESURFACING AND TOTAL SKIN REJUVENATION

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Introduction

One of the significant advances in laser skin rejuvenation was the introduction of ablative fractional skin resurfacing [4-6], where small areas of skin, with depths in the range of 100-800 microns were treated with in a fractional fashion, leaving a proportion of the skin intact around the ablative thermal column, keeping this undamaged skin around for fast skin healing after the fractional ablative laser treatment.

Over several years and multiple different lasers and wavelengths, the majority of laser manufactures have focused on Fractional CO₂ resurfacing [7-8], either as a single aggressive treatment or in several more mild sessions, providing dramatic improvement in skin dyschromia, texture, wrinkles and acne scars, with relatively short downtime and a low rate of side effects that can be minimized by correct patient selection.

An alternative ablative technology is radio-frequency (RF) fractional skin resurfacing [8], which in published studies promotes more superficial ablation and is more focused on non-coagulative dermal residual heat. This relatively comfortable treatment demonstrates some level of improvement over a multiple treatment program. We believe that RF technology need not be limited by this superficial ablative approach, but rather, it can be extended to CO₂ like ablative results for effective resurfacing combined with simultaneous non-coagulative deep dermal heating.

The current study demonstrates the results with a new fractional RF ablative rejuvenation technology providing a complete single treatment solution for aging patients.

Materials and Methods

- 15 patients with an age range of 34-65 years old and skin type I to V received a single full face, ablative fractional radiofrequency treatment using the Fractora hand piece of the BodyTite device (Invasix Ltd.).
- 60 pin tip (10% surface coverage) & 20 pin tip (localized small lesions).
- All patients were observed for a minimum of 4 months following the treatment.
- Pain management: all patients underwent subcutaneous tumescent anesthesia with a mixture of 1 bottle of 1% lidocaine mixed in 1 liter of Ringers lactate and 2ml of epinephrine 1:1000. Approximately 150 cc of infiltrate was used on the forehead, cheek and lower face and another 100 cc if the neck was treated. Prior the tumescent anesthesia, Supra-orbital, Infra-orbital, Zygomatic-facial

and –temporal, and mental nerve blocks were performed with 10cc of 1% xylocaine.

- A full face, single pass, ablative fractional RF treatment was applied using the 60 Pin Fractora Hand-piece. For those regions with deeper rhytides, such as the upper lips, lower lids or acne scars, a second pass was delivered. Lower lid, upper lid and deeper upper lip lines received a second pass with either the 60 Pin or 20 Pin tip.
- For light and thick skin 50-62mJ/pin was applied, while for darker and thinner skin 30-40 mJ/pin were used.
- Antibiotic ointment was applied after the treatment. The skin kept moist with Aquaphor for 3-4 days until camouflage make-up can be applied. Standard photographs were taken prior to the treatment and at the 6-month follow appointment Patients were advised to take a few days off following the treatment.

Results and Discussion

Intense edema and erythema were observed and lasted for up to 1 week, with a minor degree of edema being observed for up to 2 weeks.

Small crusted dots, representing the ablated epidermal–dermal tissue at the opening of the ablative crater, appeared the next day following the treatment and were observed for several days to 1 week after the procedure before flaking off.

All patients re-epithelialized within 4-7 days. There were no cases of delayed healing, no significant adverse reactions and specifically, no hypo-pigmentation, post inflammatory hyper-pigmentation (PIH) and no hypertrophic or hypotrophic scars.

Conclusion

The Fractora fractional ablative RF lesion reproduces many of the same characteristic features those seen with Fractional CO₂ and ablative laser resurfacing. The Fractora has the additional benefit of a strong, bipolar RF non-ablative, non-coagulative dermal matrix stimulation not seen with ablative lasers.

Fractional Ablative Radiofrequency treatment acts as a Total Skin Rejuvenation system that can:

- induce wrinkle reduction and skin tightening;
- deliver additional non-ablative, bipolar dermal matrix thermal stimulation which provides additional skin tightening over and above that seen with the ablation;
- improves melanin lesions and dyschromia;
- removes superficial vascular lesions

This is a one page summary.

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