Treating Acne Scars with Radio Frequency Energy

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Acne scars are very common and yet are one of the more challenging conditions to treat. I have recently begun offering patients treatment with a controlled radio frequency (RF) device (INFINI, Lutronic, Inc., Fremont, CA) that delivers RF energy into the skin through an array of microneedles. This case study report describes one patient from my practice that had significant improvement not only in his acne scarring, but achieved noticeable rejuvenation of his face as well.

The INFINI device delivers bipolar RF energy through a disposable tip containing an array of 49 gold-coated microneedles, 200 microns in diameter. These microneedles penetrate up to 3.5 mm into the skin to create thermal coagulative effects in the dermis, while sparing the epidermis from undesired damage. The RF energy can be adjusted from power setting 1 (2.5 W) to a maximum of setting 20 (50 W), with an exposure time that is selectable from 10 ms to 1 second.

This patient is a 60 y/o male with Fitzpatrick type III skin having deep acne scarring as well as moderate and deep mid and lower facial wrinkles. He received two treatments with the INFINI system spaced 6 weeks apart.

Prior to both INFINI treatments the entire face was cleaned with iS Clinical™ by INNOVATIVE SKINCARE® Cleansing Complex followed by alcohol wipes, then a topical anesthetic cream containing 20% benzocaine, 8% lidocaine and 8% tetracaine was applied for 30 minutes. The anesthetic cream was removed with iS Clinical Cleansing Complex and the skin wiped clean with alcohol swabs. His forehead was given one pass with the INFINI set at a power level of 5 (12.5W), exposure time of 80 ms, and a microneedle depth of 1 mm. The nose and periorbital regions were then treated with power level 5, 50 ms, depth 0.5 mm for one pass. The lower face was treated with a single, more aggressive, pass at power level 12, 120 ms, and a 2 mm depth. Two additional passes were then applied specifically to the target areas of the acne scars and the nasolabial folds using a power of 8, 80 ms, and 1.5 mm depth.

Once the Infini treatment was completed, the face was gently wiped with sterile saline, iS Clinical™ Copper Firming Mist, Super Serum and SHEALDTM Recovery Balm were applied, then a cold compress was applied for five minutes. The patient was given Cleansing Complex, Copper Firming Mist, and SHEALDTM Recovery Balm, Pro-Heal®, Hydra-Cool®, and Eclipse SPF 50+ for at home use post...
procedure. Mild bruising was seen in the periorbital region which resolved by 48 hours. No pain or anti-inflammatory medications were needed.

His second treatment session 6 weeks later was performed in the same fashion.

RESULTS

The photographs below show this patient before treatment and the results seen 2 months after his second INFINI treatment.

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<tr>
<th>Date Taken: 03/21/2014</th>
<th>Date Taken: 07/07/2014</th>
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<tbody>
<tr>
<td>Before INFINI Treatment</td>
<td>2 Months After Two INFINI Treatments</td>
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CONCLUSIONS

We were able to achieve a much smoother appearance of this patient's acne scarring after just two INFINI treatments. Notable improvement of deep wrinkles on the cheeks and forehead are also apparent.

PHYSICIAN COMMENTS

"The Infini is a powerful tool to treat scarring as well as wrinkles. I am excited to be able to offer an effective, non-ablative treatment to patients who cannot take extended downtime. The Infini combines microneedling and RF technology in a way that makes sense in theory. To see it work on actual patients is fantastic, for we can all name products that promise a lot but do not deliver."

Jennifer S. Lee, M.D.
Plastic Surgeon
PATIENT COMMENTS

“I think the Infini treatment was worth it!”

PHYSICIAN CONSENT

Physician Name: Jennifer S. Lee, M.D.
Clinic Name: Jennifer S. Lee, M.D. Plastic Surgery
Contact Number: 217.793.9600

I certify that I have obtained the necessary patient consent to share the images included in this case study with Lutronic and understand that these images will be used in Lutronic marketing and education materials. The patients’ rights to privacy will always be protected and eyes will be blocked (as necessary) to ensure this privacy.

Signed: Signature On File____

Jennifer S. Lee, M.D.