

RF microneedling applications

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By Lisette Hilton

New York City dermatologist Judith Hellman, M.D., says she used the pulsed dye laser since about 2003, day in and day out, to treat acne. But for the last few years, Dr. Hellman says she has largely replaced that technology with a radiofrequency (RF) microneedling device called Fractora (Inmode).

The impact not only on patients' acne, but also on their scarring, makes Fractora a superior option, according to Dr. Hellman. In fact, she says the RF microneedling device is the way to go for treating axillary hyperhidrosis and is a viable option for neck tightening, stretch marks and even to treat the vertical lines some women develop on their chests.

“[Inmode] is a multiple application platform, and one of the applications that I use with this platform is called Fractora, which is a radiofrequency device. It comes with different tips and each type of tip head has a different number and different length of microneedles,” says Dr. Hellman, who is associate clinical professor of dermatology at Mt Sinai Hospital and has no conflicts of interest with Inmode or Fractora.

The technology's 24-tip option has thin tips and a 3mm depth.

“When the pins enter the skin, simultaneously, radiofrequency goes through them and into the skin. So, you're getting both the physical injury, as you do with all microneedling devices, and also the added heat effect. And heat creates thermal zones beyond the actual reach of the needle,” she says. “So, now you have two ways of affecting the skin. One is the physical entering of the microneedles. The other one is the effect of the heat, as would occur with the CO2 laser.”

A unique feature to the Inmode technology is that Fractora allows users of the 24-pin needles to choose between regular tips and tips with silicone coating. The silicone coating goes about two-thirds down the length of the tip, and, basically, protects the epidermis and the top layers of the dermis from heat injury.

“What that means is you can basically treat any skin type, even the darkest type VI skin without the risk of pigmentation changes,” Dr. Hellman says.

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Dr. Hellman says she used Fractora initially for acne and acne scars. Her research on use of the fractional radiofrequency device on acne and related scars has been published in the *Journal of Cosmetics, Dermatological Sciences and Applications*.^{1,2} In one study, Dr. Hellman took skin biopsies of patients undergoing Fractora treatment and pathology results suggested there was an approximately 50 percent decrease in scar depth, three months after the fourth monthly treatment, she says.

The followup article showed further improvement in scarring, up to 75 percent or 80 percent, she says, despite patients' having no additional treatments. She credits this remarkable outcome with the unusually abundant collagen production following the treatments, for many months after the last treatment is over.

Success in one area led her to try Fractora in another.

"I started using it in patients with axillary hyperhidrosis. There are other treatments, like Miradry (Miramar Labs). But Miradry has potential side effects, such as potential nerve damage and some other issues," Dr. Hellman says. "What the Fractora does is it just basically enters the skin, 3 mm or so, and it concentrates the heat in the deep layers with coated tips. You can kind of heat and damage the sweat glands. We have seen a great improvement in the amount of sweat, as well as the odor."

Downtime for acne patients is minimal and lasts between 24 to 48 hours before the redness subsides. Tiny brown dots at the entry site of the microneedles may last another 24 hours. For the underarms, there is no downtime, being that it's not a cosmetically visible area.

Dr. Hellman says she'll still use the pulsed dye laser for acne patients with no signs of scarring because it's easy and there's no need for topical numbing. But the downtime for even those patients, where they walk around for five to seven days with visible black and blue marks, makes many want prefer Fractora instead.

Dr. Hellman says her patients have reported no complications from Fractora treatment, and she has been using the device for three years. Dermatologists should ask patients about their sensitivity to pain and recommend over-the-counter or stronger pain relievers. Dr. Hellman has all her patients take an antiviral, regardless of their histories with the herpes virus.

She recommends dermatologists use the regular 24-pin device without the coating when possible for the treatment of acne and acne scars. That's because of the increase in collagen stimulation will be accompanied by actual ablation of the scarring on the skin surface.

"If somebody has superficial scars, the Fractora also has a 60-pin tip, which is much shorter and is totally ablative-it doesn't go down deep. So, it's not so much for collagen stimulation but to smooth out the surface," Dr. Hellman says.

She'll combine the 24- and 60-pin tips for patients who have deeper scarring in some areas.

The dermatologist also uses Fractora for neck skin tightening.

"I use the coated tips in the neck for neck tightening because they concentrate the heat effect, so you get more collagen stimulation. And also you don't need the resurfacing on the neck," she says.

And she has been using it with some success on a limited number of patients with chest acne, vertical lines on the chest and for stretch marks.

"I have had significant improvements in stretch marks after just one treatment," she says.