

LASER RESURFACING 2017

Laser resurfacing – both full field and fractional continues to be a common procedure performed by core physicians. We have come a long way from the carbon dioxide lasers used for skin resurfacing in the mid 1990's. Erbium:YAG lasers (2940nm) ablate tissue with much less thermal damage (5-10 microns) than carbon dioxide lasers. Initial systems were low powered and it was difficult to achieve deeper depths of ablation. Subsequent systems had more significant power and had pattern generators similar to the more advanced carbon dioxide systems. My preference is the Sciton Erbium:YAG system and I use this device daily in my office.

Fractional lasers create an array of injury and treat a 'fraction' of the skin at any one time leaving intact skin bridges adjacent to the treated area. This differs from full field resurfacing in which 100% of the skin surface treated is removed. They were first introduced in 2004 by Manstein. The first generation of these devices were non-ablative and created a zone of desiccated tissue called a micro thermal zone (MTZ). Advantages of non-ablative fractional resurfacing were avoidance of an open wound and very low risk of complications including pigment disturbance or scarring. Disadvantages include the need for multiple treatments and somewhat less clinical response than with full field ablative resurfacing.

The next advance in laser resurfacing was the development of fractional ablative resurfacing. These lasers in wavelengths of carbon dioxide, erbium, and YSGG systems created a column of tissue ablation in the skin instead of a column of desiccated tissue like the fractional non-ablative systems. These ablative fractional lasers are more efficacious than the non-ablative fractional lasers but create more patient healing time albeit much

less than the full field ablative variants.

The newest fractional laser on the market is a hybrid fractional laser made by Sciton (Palo Alto, CA) and called the Halo™. This is a very interesting device as it allows coincident delivery of first their erbium fractional laser then a non-ablative 1440 nm pulse in the same hole. This device is very efficacious and creates very minimal healing times. This is my laser choice for skin rejuvenation when recovery time is limited.

The patient assessment includes Fitzpatrick skin type, ethnicity, and pathology to be treated. Some problems such as perioral rhytids may be treated by one deep full field resurfacing but other pathology, such as acne scarring, respond better to multiple fractional treatments. The patients healing period is a very critical component of the laser consultation as some patients may not be able to spend the week of so to heal from a deep full field treatment but may be able to have a few fractional

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ablative laser treatments with a few periods of limited recovery spaced monthly. Another consideration is laser resurfacing while

patients are undergoing other procedures such as facelift, abdominoplasty or aesthetic breast surgery. These patients often have built in downtime from other procedures and have the recovery time available for deep resurfacing.

The laser procedure is treated as any other office or operating procedure. Following the initial consultation a proper history and physical examination is obtained. Informed consent specific to the laser used is obtained. The skin is cleaned of makeup and eye precautions as outlined above are placed. Most fractional treatments or very superficial full field treatments are usually performed with topical anesthetics and a cold air chiller (Zimmer USA) for added comfort. Deeper full field procedures or aggressive fractional

HIGHLIGHTS OF THE DAY

Review Of Non-Invasive Fat Reduction Devices

Time 8.00am
Chris Robb, MD

Demographic Data Of Non-Invasive Body Contouring Practices Collated From Across The United States

Time 10.00am
Brian Biesman, MD

A Comprehensive Approach To Facial Rejuvenation

Time 11.30am
Roger Dailey, MD

New Cosmeceuticals Making Waves In The US Market

Time 2.15pm
Michael Gold, MD

Fat Grafting The Face

Time 3.00pm
Timothy Marten, MD

The Young Aesthetic Patient: When Is Too Young To Start Anti-Aging

Time 5.00pm
Sabrina Fabi, MD

Advancements In Topical Combination Treatments For Hyperpigmentation

Time 6.00pm
Rebecca Kazin, MD

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“#TBT #miraDryMascot made moves on #Deodorant. Stop by #VCS2017 Booth #307 to Meet @antoniosabatojr & Enjoy the Fun! #miraDry @VCS2017” @miraDry

“1st day at the @VCS2017! Looking forward meeting all #VCS2017 members #cosmeticsurgery #plasticsurgery #skincare” @nellydevuyst

“Who do you think are the best investors in healthtech - who really understand the domain? #VCS2017 #entrepreneur #startups” @normanwinarsky

“How #PrivateLabel can increase your practice revenues? Pass by Booth #411 @VCS2017 #vcs2017 #plasticsurgery <http://ow.ly/2fj730cmM1d>” @Derme_Co

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procedures are performed under facial nerve blocks, IV sedation or general anesthesia. It is very common in our office to perform deep laser full field resurfacing with an oral benzodiazepine, IM meperidine, facial blocks and a Zimmer chiller. General anesthesia or IV sedation (monitored anesthesia care) is usually used when combined with other

more invasive procedures. Following the treatment post procedure care as outlined below is performed.

The use of antiviral prophylaxis is important with ablative resurfacing. Most agree that therapy should continue until complete reepithelialization occurs. Prophylactic antibiotic use is often recommended although we know of no controlled studies of their use. Bacterial infection is extremely rare and is covered in the next section.

Post laser treatment there are a myriad of ways to care for the treated skin. For full field procedures most recommend an occlusive ointment or dressing until epithelialization is complete. We find that occlusive dressings, such as Flexzan, work well for carbon dioxide full field resurfacing but are difficult to keep on erbium patients due to the transudate that occurs following this procedure. Our recommendation is an occlusive agent, such as aquaphor or vaseline, until epithelialization is complete then a non-occlusive moisturizer, such as cetaphil lotion.



Figure 1 Patient is (Left) before and (Right) 6 years after laser resurfacing with sciton laser

Use of sunblock is mandatory for all laser resurfacing patients in our practices after epithelialization is complete. We also recommend institution of a skin care regimen after epithelialization is complete and the skin has had a chance to 'calm down'.

In 2017 there are many options for skin rejuvenation available to patients. I find the ability to offer deep Erbium:YAG resurfacing to patients who need that and to offer hybrid fractional (Sciton Halo™) to those with superficial redness and pigment allows me to offer comprehensive skin rejuvenation to my patients.

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