

MedEsthetics.

BUSINESS EDUCATION FOR MEDICAL PRACTITIONERS

physicians more freedom of movement during treatments and can be easily transported from room to room. "The downside is that it begins to lose power toward the end of the battery life so you need a fresh battery ready all the time.

"I like to use hyaluronic acid (HA) with the Eclipse Micropen. It allows the device to glide over the skin. The HA then penetrates to hydrate," continues Dr. Bucay. "For facial rejuvenation we often apply Tensage (40% ampoules, Biopelle), a snail secretion high in growth factors. It was first used in Chernobyl to treat patients with radiation burns. It improves healing and rejuvenates skin. For patients with highly sensitive skin or those who don't have a lot of photodamage, we stick with topical preparations like Eau Thermale Avène Soothing Serum or Cicalfate Restorative Skin Cream (Avène).

To combat photodamage, we also like SkinMedica or Neocutis skincare products. We do avoid some topical preparations during the actual treatment, such as those with high doses of vitamin C or kojic acid, which can cause contact dermatitis in some patients."



Both ablative and nonablative lasers are used to deliver topicals into the dermis.

The vacuum pressure places the skin under tension, allowing for more precise needle penetration and deeper drug delivery.

Dr. Waibel is working with the new **Aquagold** microneedle technology introduced by Aquavit Pharmaceuticals at the 2014 annual meeting of the American Academy of Dermatology. "Aquagold is a new delivery system. It delivers whatever medication or cosmeceutical you wish through 20 hair follicle-size needles to a dermal depth of 600 μ ," she says. "There is a home unit that delivers up to a depth of 250 μ . You place the product in the attached vial for treatments."

Another new microneedling treatment introduced by Genesis Biosystems in March 2014 is the DermaFrac device, which combines microneedling with simultaneous vacuum infusion. Needles are available in 0.25mm and 0.5mm lengths. The theory behind combining these modalities is that the vacuum pressure places the skin under tension, allowing for more precise needle penetration and deeper topical delivery.

ENERGY-ASSISTED TED SYSTEMS

Both fractionated CO₂ or Er:YAG lasers are now used for TED, because both vaporize tissue efficiently. Fractionated radiofrequency energy can produce the microchannels necessary for TED as well, but there are few published studies validating this method.

Vic Narurkar, MD, founder of the Bay Area Laser Institute, San Francisco, is also investigating the use of nonablative fractional devices for TED. His research suggests there is too much coagulation with ablative devices to achieve optimal delivery. In his practice, he uses the Clear + Brilliant Perm a (Solta Medical), which was specifically designed for transepidermal delivery of topical products. "It is a fractional laser with lower wattage than say, a Fraxel," he explains. "We do an average of five to six patients a day and have seen very good results. We use a variety of topical preparations from antioxidants, such as CE Ferulic (the compound used in clinical trials for the Perm a), to Lytera for skin lightening and hyaluronic acid for hydration. We use it primarily for patients with pigmentation disorders, such as melasma."

Dr. Alexiades-Armenakas uses a variety of CO₂ and Er:YAG fractional lasers in TED treatments involving aminolevulinic acid for photodynamic therapy, and SkinCeuticals Pigment Regulator as a nonhydroquinone drug for melasma. She is currently finishing a study using the iTED solution to deliver 37 actives.

The iTED, introduced by Alma Lasers in 2012, is a transepidermal delivery solution that adds an

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