



Periorbital Revolution

By Linda W. Lewis

The scalpel is no longer the only weapon to fight the signs of periorbital aging.

Crow's feet and glabellar furrows dig in for the siege. Dispigmentation, unsightly veins and dark undereye circles take up offensive positions. Then the truly frightening enemies start their advance. Brows and lashes thin and fade; lids get heavier and begin to sag; bags develop under the eyes; and the surrounding skin becomes thin and crepey. Most women begin to camouflage these flaws long before they're ready for blepharoplasty. Even those who would never consider cosmetic surgery happily spend whatever they can afford to defend themselves against these distressing signs of aging.

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“Those in their 30s and 40s start with Botox, then add fillers in their 40s and 50s.”

“We are seeing an increased demand for minimally and noninvasive therapies for orbital rejuvenation, and not just because of the economy,” says Michelle R. Yagoda, MD, associate adjunct attending clinical instructor at the New York Eye and Ear Infirmary; medical director of Rejuvenescence Space for Beauty in Manhattan; and co-creator of Beauty Scoop, a patent-pending beauty supplement. “Lots of patients just prefer effective nonsurgical options. And there are many useful tools. What’s new is our ability to combine these minimally invasive treatments to achieve noticeable and natural results.”

To address the needs of women from 30 years old to 70 years old, aesthetic physicians are combining neurotoxins, dermal fillers, energy devices and skincare topicals to rejuvenate the periorbital region.

“My approach to periorbital rejuvenation starts with Botox, progresses to fillers and then lasers and skin tightening devices, depending on the patient’s specific needs,” says George J. Hruza, MD, clinical professor of dermatology and otolaryngology, St. Louis University, and medical director of the Laser and Dermatologic Surgery Center, St. Louis. “This progression often follows the ages of patients. Those in their 30s and 40s start with Botox, then add fillers in their 40s and 50s, and lasers and skin tightening treatments in their 50s and 60s. Many patients want something other than surgical intervention even into their 70s.”

Can every patient benefit from these minimally invasive approaches? “Only surgery can repair large fat pads that have begun to herniate,” says Michael Sinclair, MD, dermatologist, Epilution Medspa, West Palm Beach, Florida. “But for women with mild to moderate sun

damage, whether they are in their 20s or 60s, a combination of dermal fillers, neurotoxins, laser treatments and a good homecare regimen can turn back the clock.”

Battle Lines

Aesthetic practitioners agree that Botox Cosmetic (onabotulinumtoxinA, Allergan, botoxcosmetic.com) led the minimally invasive revolution. Now we have Dysport (abobotulinumtoxinA, Medicis Aesthetics, dysport.com), and XEOMIN (incobotulinumtoxin A, Merz Aesthetic, xeomin.com) with others in development. Most of our panelists use both Botox Cosmetic and Dysport almost interchangeably (XEOMIN had just gained cosmetic clearance as we went to print). Both have FDA clearance for use on glabellar lines, but are also widely used in other areas of the face.

“Botox and Dysport are comparable in most cases,” says Dr. Yagoda. “Some patients have preferences and I try to honor those, although they rarely make sense to me. Dysport does have a slightly shorter onset of action, which could be beneficial to a patient who is getting treatment for an upcoming event. If there are lots of blood vessels in the way of the muscle I want to inject, Dysport might have an advantage because it diffuses more, allowing me to affect the muscle without injecting as precisely.”

In the first head-to-head trial conducted at the University of California, San Francisco, and published in the July issue of *Archives of Facial Plastic Surgery*, 90 patients were randomly assigned to receive Botox to treat crow’s feet on one side of the face and Dysport



on the other. After 30 days, two-thirds of the patients said they preferred the results in the area treated with Dysport. When the patients and researchers judged photos of the treated patients using a five-point scale, rating differences were statistically significant only in photos where the eye muscles were contracted, not when they were at rest.

After many years of use, neurotoxins have proved to be not only effective but safe. “The main danger is the possibility of affecting nearby muscles, which can lead to eyelid drooping or a feeling of heaviness in the eyelids,” says Dr. Hruza. “Although this goes away in a few weeks, it makes patients uncomfortable.”

Reinforcements

While Botox may have started the revolution, it was the introduction of hyaluronic acid-based dermal fillers that enabled aesthetic physicians to wage an all-out war on periorbital aging. While there are rare reports of nodules and allergic reactions, HA-based fillers are generally safe and have the added advantage of being immediately reversible with the injection of hyaluronidase.

“Most patients have shadowing under the eye as they [reach] their late 30s,” says Saul Lahijani, MD, a plastic surgeon with a private practice in Beverly Hills, California. “This can be corrected with fillers. My favorite for the eye area is Restylane (Medicis Aesthetics, restylaneusa.com) because it isn’t as hydrophilic [as other

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fillers]. The others absorb a lot of fluids and can cause edema.”

Dr. Sinclair also likes Restylane for tear troughs. “I use a blunt cannula for placement so there’s less bruising and it’s more comfortable for the patient. The technique may be a little more difficult to learn and is more time-consuming, but the results are worth it. You can slide the cannula right up to the medial aspect and layer the product underneath with little trauma.”

Dr. Yagoda also prefers Restylane. “It comes out of the needle in a more linear fashion,” she explains. “Juvederm (Allergan, juvederm.com) tends to come out as a series of droplets.”

“I use them all and, though there are subtle differences, I think you can achieve similar results with any of them,” says Dr. Sinclair. “The one exception may be Radiesse (Merz Aesthetics, radiesse.com), which is thicker. It’s my preference for deeper placement. I don’t use it in first-time patients, though. Radiesse may not last as long after the first treatment as it does after the second and third treatments, but it can’t be reversed like the hyaluronic acid fillers.”

Dr. Hruza will use Radiesse for patients who ask for longer-lasting treatments, but only after he has established the look the patient wants. “I am always careful not to place any filler too superficially. I go right on the bone,” he adds. “I also occasionally use fillers under the eyebrow to raise it and improve definition.”

Heavy Artillery

While lines and wrinkles may be held in check with strategically placed needles, erasing sun damage-induced discoloration and skin texture changes requires targeted equipment. Even surgery cannot repair dyschromia and thin, crepey skin. Intense pulsed light (IPL), lasers, radio-frequency (RF) and ultrasound energies have all shown the ability to erase or improve one or more of these concerns.

Laser Options. To say there’s no consensus about the best lasers for periorbital rejuvenation is an understatement. Eric F. Bernstein, MD, director of Main Line Center for Laser Surgery in Ardmore, Pennsylvania, specializes in laser treatments and uses many different tools, depending on the specific target. “One of my favorite treatments around the eyes uses the Candela Perfecta (candelalaser.com) to remove broken (extra) blood vessels,” he says. “I often reduce fluencies for sensitive periocular skin. Even so, you do get some swelling when using lasers around the eyes so you need to warn patients. The results are worth it though.”

“When it comes to brown spots, I prefer a Q-switched laser. The one I choose depends on how dark the patient’s skin is and the darkness of the spots,” continues Dr. Bernstein, who uses either the Candela TriVantage, Sinon Q-Switched Ruby (Palomar Medical, palomarmedical.com, formerly Wavelight Aesthetics) or ConBio RevLite (ConBio, conbio.com).

“When you get down to improving

skin texture, enlarged pores, and fine lines and wrinkles, the Fraxel Dual (Solta Medical, solta.com) or the Cynosure Affirm (cynosure.com) are my favorites,” says Dr. Bernstein. “Downtime is minimal and progressive treatments yield progressively better results. Patients report skin tightening, but that’s a controversial topic.”

Four of the doctors interviewed use fractional CO₂ lasers to improve skin texture and tone in the eye area. Resurfacing lasers address problems that can’t even be corrected with blepharoplasty, says Dr. Sinclair. “I use my Lux 2940 (erbium micro fractional ablative laser, Palomar Medical, palomarmedical.com) to tighten eyelids and shrink redundant folds,” he says. “If there’s dyschromia, I might suggest IPL treatments as well.”

Researchers at the University of Florence, Florence, Italy, studied 45 patients who received two to three treatments with a fractional CO₂ laser in the upper eyelids, lower eyelids and the periorbital region for one year and concluded that fractional laser treatments allow physicians to achieve “notable improvements in eyelid skin tightening and brow elevation safely and without significant side effects.” Their results were published in the June 2011 issue of the *Journal of the European Academy of Dermatology and Venereology*.

One of the newest approaches to improving undereye dark circles is using the 1064 Nd:YAG laser. The

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June 2011 issue of *Dermatologic Surgery* includes a study from China assessing low-fluence treatments with a Q-switched 1064nm laser for the treatment of infraorbital dark circles. Twenty-six of the 30 patients who underwent eight sessions showed global improvement that they rated as excellent or good. Results also showed a dramatic decrease in melanin deposition in the upper dermis for these patients.

Dr. Lahijani is enthusiastic about using 1440nm or 1444nm lasers—which have an affinity for fat—to get rid of herniated fat on the lateral aspect of the eye. “I’ve used the Smartlipo Triplex (Cynosure, cynosure.com) with good results,” he says. “This technique is very new and not [many] surgeons are doing it. You don’t really suction the fat; you simply melt the fat and tighten the skin. I recently began using the Lutronic AccuSculpt 1444nm (lutronic.com). It’s used a lot in Korea. I’m impressed but waiting to assess longer term outcomes.”

Despite the widespread use of lasers in the periorbital region, there is always reason to be cautious when working in the eye area. “To work around the eyes you need a ton of experience, especially if you are using ablative tools,” says Dr. Bernstein. “Even with experience you need to be careful. Too much tightening under the eye can lead to ectropion. Good eye shields are essential. My favorites are Durette Shields; in my opinion they fit the best. With a small and large pair of external shields I can protect all of my patients.”

“I’m very careful when working with patients who have a history of dry eyes or laxity of the lower lid and those who have had previous blepharoplasty,” adds Dr. Lahijani. “I assess them more

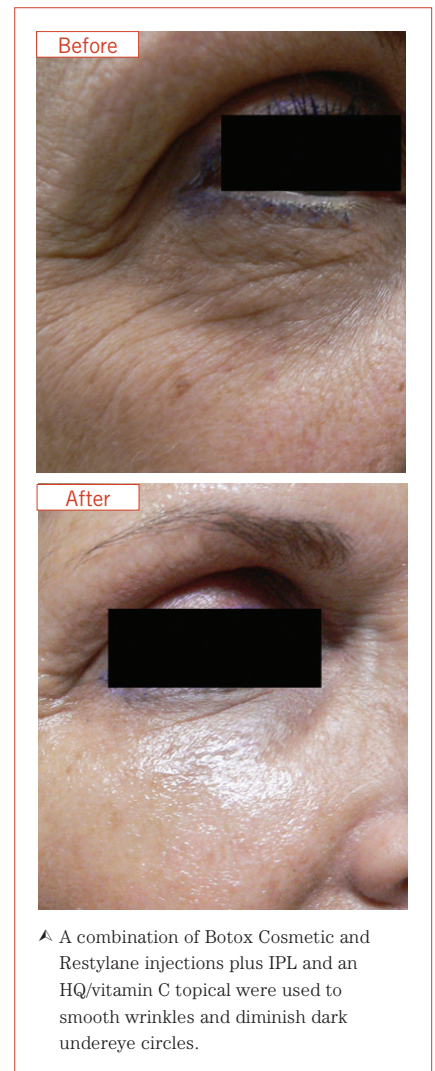
closely and am cautious about which procedures I offer. I almost always use intraocular eye shields because I think they are more comfortable for patients. When I use external shields, it seems they are always trying to sneak a peek around them. With the internal shields they seem to relax better.”

Radiofrequency and Ultrasound Energies. “The two newest tools for periorbital rejuvenation are Thermage (Solta Medical, solta.com) and focused ultrasound, which are used for eyebrow lifts and tightening eyelid skin,” says Dr. Hruza. “I prefer the Thermage for eyelids because it has a small tip.”

The first and only system to receive FDA clearance for noninvasive eyelid treatments, Thermage has a specially designed Eye Tip 0.25 (ST) to deliver precise, shallow heating to smooth and tighten the skin of the upper and lower eyelids. The Face Tip 3.0 (STC) can be used to soften periorbital wrinkles and reduce hooding. Because it is not light energy, RF is safer for use on patients with dark skin.

The newest weapon for noninvasive skin rejuvenation is Ulthera focused ultrasound (ulthera.com), but it has not yet been widely used in the periorbital region. The device produces vibrations, which generate heat and selective coagulation in the focal region of the beam. Deep penetration (4mm to 5mm) means it works to tighten skin from the subcutaneous layers, rather than more superficially.

“I’ve encountered no permanent complications with RF devices or the Ulthera,” says Dr. Hruza. “There were reports in early days of skin waffling in the eye area with Thermage, but that was because the initially recommended settings were too high. The main issue



▲ A combination of Botox Cosmetic and Restylane injections plus IPL and an HQ/vitamin C topical were used to smooth wrinkles and diminish dark undereye circles.

I face with RF is discomfort. I treat to patient tolerance.”

Addressing Discoloration. “To correct brown spots or abnormal blood vessels in the lower lid, I use the Clareon IPL (Novalis Medical, novalismedical.com), which employs krypton technology,” says Dr. Yagoda. “It produces a more focused and targeted wavelength. There is less potential risk and I can attach it to my chiller, which makes the treatment entirely comfortable. To correct looseness, I use a TCA peel, which tightens the skin, lightens it and gets rid of fine lines. TCA peels may not be as new as lasers but they are proven to produce results equal to or even superior to lasers and at half the price. Eyelids that have more looseness than can be treated with TCA peels need surgery.

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“Every laser has a specific thing that it’s really good for,” Dr. Yagoda continues. “My concern is that once a physician buys a laser, the search begins for other ways to use it. Often the results don’t justify the cost to patients. In most cases the benefits from RF or

fractional lasers are too small to satisfy patients. As a female as well as a plastic surgeon, I’m always assessing how well the treatment solves the problem in relation to its cost. I’ve seen patients who have spent \$10,000 on laser treatments without discernible benefits.”

Holding Ground

“Using topicals to continue the good effects of office treatments is a key to longer-term success,” says Dr. Bernstein. “The skin around the eyes is so thin it responds well to topical alphahydroxy acids, retinoids and antioxidants. And it is always important to stress the use of a good sunscreen every morning.”

All of our panelists agreed that recommending daily sunscreen protection with the addition of dark glasses and hats is essential in combating periorbital aging. “I also recommend Phyto Gel (Skinceuticals, skinceuticals.com) or Teamine (Revision Skin Care, revisionskincare.com) to address dark circles under the eye,” says Dr. Yagoda. “NeoStrata Eye Cream (neostrata.com) treats fine lines, wrinkles and discolorations, and has the added benefits of being highly moisturizing and nonirritating. It provides great value for the money.”

“My favorite skincare ingredients, which I include in my Epilution line, are salicylic acid, glycolic acid and stabilized vitamin C. The latest development in vitamin C derivatives—tetrahexyldecyl ascorbate—is oil soluble and penetrates readily to allow the skin to make collagen,” says Dr. Sinclair.

What about those thinning, fading brows and lashes that can make such a difference in the appearance of eyes? “I offer Latisse (Allergan, latisse.com), and my patients have had great results with it,” says Dr. Lahijani. “Some even claim success with using it (off-label) on their eyebrows.”

Dr. Yagoda recommends Latisse or lash tinting. “For my male patients and some women, I recommend eyelash tinting. Having darker brows and lashes is really important to a more youthful look,” she adds. “Most women will solve the problem of thin, light eyelashes with mascara, but men usually won’t, so I have an esthetician in my office who offers lash tinting.”

Linda W. Lewis is MedEsthetics contributing editor.

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