## **Neck Rejuvenation**

ne of the undertreated areas that dermatologists and plastic surgeons see every day is the neck. While we have become quite good at surgical and nonsurgical renovation for facial areas, we suddenly stop at the jawline. I think that this is a mistake and that we should try to offer treatments that have a high degree of safety and satisfaction for the neck (and chest) areas.

Because it seems unlikely that we don't treat the neck because we don't see it, it is worthwhile to consider the factors that prompt us to avoid it. Most of us have either seen or heard about neck rejuvenation incidents that involved scarring, pigment changes, or other adverse events. Usually, this involves a laser treatment or chemical peel which damaged the skin beyond its ability to repair. Whereas facial skin is very tolerant of the types of controlled injuries that we inflict in the name of collagen stimulation, nonfacial skin is less likely to repair itself. Facial skin has a remarkable amount of hair follicles that can regenerate the epithelial cells as well as a reserve of fibroblastic cells to repair collagen. In addition, we have a massive amount of data to support the treatments that are used on the face while most of the information for neck and chest treatments is extrapolated. This lack of information leads us to regard the neck as a zone of uncertainty. I think that we should focus more on the nonfacial areas and offer a few suggestions about how to proceed. Nonfacial skin is amenable to chemical peels, fractional resurfacing, fat sculpting, poly-L-lactic acid, and botulinum toxin treatments, as well as a host of other nonsurgical renovations.

Injections of the platysma as it courses through the neck and originates on the sternum can be an effective treatment for neck and chest bands. The key to having good outcomes with this treatment is both patient selection and correct dosing and placement. Patients that tend to do well with these injections have discrete bands that are visible and can be activated with grimacing. Proper dosing involves anywhere from 25 to 50 units of Botox (OnabotulinumtoxinA) or 50 to 100 units of Dysport (AbobotulinumtoxinA). Placement into the belly of the bands should involve a 30-gauge needle with

Dr. Beer is scientific maker of Necksculpt and a shareholder in Theraplex LLC, Cosmetic Bootcamp LLC, and Eleme; an investigator and consultant for Allergan, Inc, and Medicis Pharmaceutical Corporation; and a trainer for sanofi aventis.

insertion points spaced 1 to 1.5 cm apart. I inject by grasping the bands between my thumb and forefinger to secure the target area and proceed superiorly as I inject. I have seen colleagues (notably Pat Wexler, MD) inject in a horizontal pattern, spacing her injections about 1 to 1.5 cm apart. In the right hands, each method will achieve superior result. To my knowledge, there have been no comparative studies evaluating which is a better method.

I have been injecting some of the deep horizontal lines of the neck with hyaluronic acids to etch out the surface lines. As with injections into the horizontal lines of the forehead, there is a tendency to form beads when injections are horizontal. To avoid these beads, use fillers that are smooth and use less than one might normally inject. Another caveat is to avoid brisk massage or strong pressure when smoothing out neck injections. Neck creases are probably going to be a good niche for some of the newer fillers waiting in the wings.

Poly-L-lactic acid has been injected into the neck by its adherents and it is a consideration for neck rejuvenation. Dilution for injections into this off-label area are less concentrated than those used for the face. Colleagues familiar with this methodology have discussed using 8 to 9 mL of water and 1 to 2 mL of anesthetic (usually lidocaine 1% with epinephrine). Some caveats apply here: there is little data to support this use and most of what is available is anecdotal; it is likely that, as with other early reports of poly-L-lactic acid use, this may result in some papule formation; optimal dilution is not established; and it is an off-label use.

Having listed all of these caveats, I think that poly-L-lactic acid injections into the neck hold potential and may help to generate the fibrosis and new collagen formation that is a hallmark of liposuction. Whether combining it with radiofrequency or laser treatments can optimize outcomes is another avenue that would make for an interesting clinical trial.

Surgery remains a mainstay of neck renovation. Procedures range from a platysma-banding procedure, to lower face and neck lift, to neck lift and/or liposuction. When these are appropriately used, they can deliver impressive results. My advice is that if your patient requires surgery, don't waste their time and money doing something less.

Finally, the surface of the neck is a frequent hallmark of aging. Simple things such as using tretinoin and sun protection can help to improve the appearance of neck skin that has a weathered appearance. Poikiloderma can be improved with intense pulsed light or pulsed dye laser treatment, and I recommend these devices for many of my patients. Light chemical peels (trichloracetic acid 20% or up to salicylic acid 30%) can be used in a variety of skin types and these produce predictable, albeit moderate, results. Fractional lasers, both ablative and nonablative, also are useful for treating the neck area. When using these technologies, I recommend using lower settings than those used to treat facial areas and proceeding gradually. Scarring in the neck area can be severe and treatments are unforgiving when they are pursued too aggressively.

The neck and chest are areas that many cosmetic practitioners fail to treat. In my estimation, this is a mistake because there are multiple modalities available that can improve patient appearance and satisfaction. When treating these areas, proceed gently and instruct your patients that you intend to achieve a gradual renovation with some of the many tools available. Hopefully, in the near future, clinical trials for treating this area will shed some objective light onto the subject.

Kenneth Beer, MD West Palm Beach and Jupiter, Florida