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Biostimulators and Anatomy

Dr. Cohen:
The differences between biostimulatory agents like poly-L-lactic acid and fillers are really important to understand. Are you confident that you can deliver great results and understand how to use these products for your patients?

I'm Dr. Joel Cohen for CME on ReachMD.

TOPIC 1
Well, I actually use both [poly-L-lactic acid and dermal fillers], and when it comes to the face, I use both products on a regular basis. So poly-L-lactic acid really is a biostimulatory agent. When we place it into the skin, it turns on some of the fibroblasts to produce collagen. And with dermal fillers, particularly HA [hyaluronic acid] fillers, you actually are restoring volume more immediately. So whereas poly-L-lactic acid is a gradual effect, turning on those fibroblasts, HA fillers are satisfying volume requirements that you see more immediately and you'll see right that day. There are some studies showing that HA fillers can actually cause specific stretch on fibroblasts, and they do cause some degree of neocollagenesis, as well. And that was published by Wang and Voorhees several years ago in *Archives of Dermatology*.

So if somebody is looking for immediate volume correction, for instance, the nasolabial fold or the marionette area, or the jawline or infraorbital area, I tend to go to HA fillers. If somebody really wants augmentation of the cheek and gradual volume replacement in the cheek, somebody who may work out a lot and they have high metabolic activity, Sculptra is a great choice because it's gradual, it's biostimulatory, and they're going to see results over the course of about 4 to 8 weeks. I also use poly-L-lactic acid in the temple very commonly because it is a liquid and because I can place it down deep on the bone, and I can drop and aspirate and try to ensure that I'm not in a blood vessel. But I like the liquid formulation in case of blood vessel compromise in the temple. And you still really have to look at your endpoints. You always have to look for a blanch, and you have to communicate with the patient, how they're feeling and what they're perceiving at the time. And then poly-L-lactic acid has a lot of exciting and interesting uses with more and more data, from décolletage are to gluteal and buttock augmentation to knee laxity and even elbow laxity. So I think we're seeing an exciting time, really understanding some of the nuances of how we use products like poly-L-lactic acid to gradually biostimulate collagen.

So let's talk specifically about what the benefits of biostimulators are for specific areas of the face or off-face. So biostimulators like poly-L-lactic acid and Radiesse, to some extent, do stimulate collagen production with their overall presence in the skin, turning on fibroblasts and allowing sort of reformation of some of the collagen that's lost over time. We know that as women develop into the perimenopausal years, as well as 5 years into menopause, they lose about 30% of the collagen, and we see areas of volume loss and we see textural changes to the skin that, if we're putting something underneath, we can gently lift that up. I actually like to use poly-L-lactic acid in the temple because it's actually a liquid, so it's important to make sure it's in suspension. So I use a higher grade reconstitution than people historically used, and typically, I'm using 7 or 8 cc of sterile water to reconstitute this before I add a couple cc of lidocaine with epinephrine. It's important to make sure it's in suspension because you don't want it to precipitate down. And then by placing it into the temporal area, I often place it on bone very, very deep down in the temporal fossa – you can withdraw and aspirate to make sure you're not in blood vessel – and then sort of gently filling that area.

So there are a lot of different ways that we can give our patients great results, and I think it's important to talk to experts and experienced

injectors out there about what they like to do and sort of take all this in and come up with your own algorithm of what really works. But absolutely understanding anatomy is really important, and understanding what can go wrong in getting into a blood vessel is really important, as well. And that's one of the reasons I like to use poly-L-lactic acid a lot of times in the temple because it is a liquid, it's not a gel, and if you do get into a blood vessel, hopefully that whole vessel won't be occluded. And just make sure it's in suspension and it's not precipitated down.

[ANIMATION PLAYS]

For those just tuning in, you're listening to CME on ReachMD. I'm Dr. Joel Cohen, a board-certified and fellowship-trained dermatologist from Denver, and I'm examining the role of biostimulators in the face and body.

TOPIC 3

That was a great animation to really show us how to get super results with our patients and make sure that we're delivering really, really key injections in the appropriate pattern. But there's also some important things to consider in terms of reconstitution volume as well as reconstitution timing. So, historically, when we all first started using poly-L-lactic acid in 2004, in Europe, they were using a very small reconstitution volume of only a few cc, and over time, we've actually expanded that and further expanded that. So it's really commonplace for people to actually reconstitute from 7 to 10 cc of sterile water before even lidocaine with epinephrine is added. And there's some recent literature on that, and that may actually vary depending on the areas that you're injecting, such as lower, perhaps, in the face; such as 7 or 8 and then higher in other parts of the body where you're actually treating laxity, such as in the buttock area or the knee area or the décolletage or the underarm type of laxity or elbow laxity. So really think about the areas that you're going to inject and the overall volume. And look to some of the articles. There's been a lot of exciting articles that have been published in *Dermatologic Surgery* and *Journal of Drugs in Dermatology* and then *Plastic and Reconstructive Surgery* on specific areas, as well as just overall off-face reconstitution versus on-face reconstitution.

Just as there has been an evolution in overall reconstitution volume and how we inject and where we inject and do we need to massage or do we need to vortex and really shake product up, as far as poly-L-lactic-acid, there's been some interest in looking at reconstitution time. And there was a new report of a particular project that was done showing that we really don't have to mix a day or 2 before like we've been doing for over a decade at this point. People do mix at the time of treatment and are able to get poly-L-lactic acid appropriately in suspension to deliver great results.

TOPIC 4

Now that we've really discussed the areas of injections and seen some really good animation of the procedure itself, I think it's important that we talk about, potentially, what can go wrong. I mentioned that if you're over a named vessel area, it's good to aspirate and make sure you're not in a vessel with whatever you're injecting, from poly-L-lactic acid to HA dermal fillers. In terms of a nodularity developing, if you are using poly-L-lactic acid and you have a nodule that develops either on the face or off-face areas, oftentimes you can mechanically break this up by really taking a needle and sort of inserting the needle in the area. And then I like to actually take an 18g needle with some saline and put some saline in through the area and then sort of mechanically massage the area and break it up. And that seems to be very helpful. There have been several patients who've actually had some nodularities that have developed in areas of thin skin, such as the back of the hand or the décolletage area, and every once in a while, you can take a little bit of triamcinolone, some Kenalog, and you draw it up. And I tend to use about 5 to 10 mg/cc, 5 mg/cc on the hand and about 10 mg on the chest, where very small aliquots can be placed into the skin to help actually mechanically break up and dissolve some of that product that's stuck there in terms of the neocollagenesis. You don't always get everything to go away, but usually mechanically and the saline over time, you can really get things to break up.

Unfortunately, that's all the time we have today, so I want to leave you with a few take-home messages. I think we've been enjoying the use of poly-L-lactic acid on the face for many years, in some cases, more than 15 years, in my experience. But it's really exciting to have a lot of new data on how we can effectively and successfully use poly-L-lactic acid off the face, in particular for buttock augmentation, wavy cellulite, laxity, as well as in the décolletage.

Thanks so much for joining us. For CME on ReachMD, I'm Dr. Joel Cohen from Denver, Colorado.