



New Horizons in esthetic dentistry

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Cosmetic dentistry has been one of the backbones of every dental practice for the last couple of decades. Any dental practice that is placing tooth-colored composite resin restorations is certainly practicing under the cosmetic umbrella, with most dentists performing whitening procedures, esthetic crowns and bridges, and veneers. All of these topics have become part and parcel of dental practice in North America. Dentistry has made huge advancements in the cosmetic realm, and now that cosmetic dentistry has evolved into a staple in every dental practice, we really have to ask ourselves what's coming next in the cosmetic dental field.

Just look at some of the advancements that have been made. We now have teeth whitening in less than an hour. We have veneers any way you want them — from aggressive preparations to minimal preparations to no preparations at all. Certainly, with the incredible popularity of Lumineers, the swing has been to a much more minimally invasive approach, which has resulted in wider patient acceptance for cosmetic makeovers. Veneers can now be done comfortably with much less need for anesthesia and tooth removal.

Composite resin as a material is the best it's ever been. Most composite resins are now nanofilled, which means they have high strength and high polishability — how much better can that get? Bonding agents have never been stronger. Certainly there will always be improvements in the dental materials field, and we welcome that. Technology, with in-office and in-laboratory CAD/CAM proce-

dures, is able to make crown and bridge restorations more convenient than ever before. All of these are wonderful things, and we have accomplished a great deal with cosmetic dentistry.

The question is, where else is there to go? We can't possibly get teeth any whiter without patients looking like they're from Mars. We can't get teeth any straighter once they're straight. What's the next thing on the horizon when it comes to esthetic dentistry?

The next big step

After investigating this thoroughly, I would submit that the next big advance in cosmetic dentistry will be the surrounding tissues outside of the mouth, which will complete the entire picture of what we're trying to accomplish with esthetic dentistry in the mouth.

It's great to have the perfect midline, golden proportions, white teeth, and exquisite occlusion on your completed esthetic makeover case. Now, let's bring the camera lens out just a little more and look at the surrounding tissues framing this perfect dentistry. Teeth have to fit into the entire framework of the face, and this is certainly true of the areas that outline the mouth. If your esthetic dental case is framed by deep nasolabial folds, wrinkles around the lips, creased marionette lines, and downward facing oral commissures, then you really have completed only part of the beautiful portrait you're trying to paint.

Certainly, some dentists reading this are thinking, "Patients are only interested in great looking teeth and they don't care about these other areas," or "This is beyond the realm of dentistry," or "Malcmacher has finally lost his mind."

Number one, I'm pretty sure I'm of sound mind. Number two, as you shall soon see, this is quite within the realm of general dentistry, and the general dentist is absolutely the best choice of any health-care provider to accomplish dermal filler procedures. To address the first question, I say



This patient has moderate nasolabial lines and uneven lips.

we need to stop looking at the retracted views of esthetic dental cases and start looking at the view that is most important to the patient and everyone else — the full-face view of a finished case. Sure, you need the retracted view to make sure that the margins are impeccable, embrasure form and the emergence profile are proper, and all other accepted dental principles have been met. But the key is to have a complete case of esthetics that would include both hard and soft tissues, in and out of the mouth. It's high time to expand our horizons in esthetic dentistry.

What is dermal filler therapy?

Dermal filler therapy has been widely accepted by patients in North America, much more so than cosmetic dentistry. You don't need to believe me — just ask the women in your life and your female patients if they have heard of dermal fillers. Ask patients if they have ever had Botox or dermal fillers and you will quickly find that these are immensely popular esthetic therapies.

What does a dermal filler do? Simply put, a dermal filler is a material injected underneath the skin in the nasolabial fold, marionette lines, and oral commissures, which plump up these areas and smooth out the wrinkles. Lip augmentation is also done with dermal fillers. Traditionally, plastic surgeon and dermatologist offices provide these services. Notice that I said their "offices" provide these services. Most dermal fillers are placed by nurses and medical estheticians who work in the office of a plastic surgeon or cosmetic dermatologist. I am not putting anybody down, but I would bet when it comes to injection experience and technique, oral and facial anatomy, and the natural skills required to provide

these services, dentists are much better trained than plastic surgeons, dermatologists, or their employees.

Generally, when you look at the world of esthetic injectable treatment, botulinism toxin (Botox Cosmetic) is generally for the top half of the face, and dermal fillers are



Much improved esthetics with Restylane dermal filler material.

for the bottom half. The main areas where dermal fillers are used are in the nasolabial folds, the oral commissures, and the marionette lines. These are the areas that frame the teeth and mouth, and are certainly within the realm of dentistry and dental treatment. Dermal fillers are gently placed in these areas through an extraoral injection right under these folds and creases to plump them up. By the way, these are exactly the same areas that you routinely inject. The only difference is that you typically inject these areas intraorally when you deliver local anesthesia. You as a general dentist are already familiar with the anatomy in these areas and you didn't even realize it.

What was really interesting to me during my training for dermal fillers is that the nurses, dermatologists, and plastic surgeons that I trained with had absolutely no problem giving the extraoral injections for dermal fillers, but were a bit squeamish about delivering local dental anesthesia and giving intraoral injections. The dentists that I trained with were exactly opposite and were very comfortable with the intraoral injections, but were initially a little unsure of themselves on the extraoral injections.

Why choose dentists?

One of the biggest advantages a dentist has in performing dermal filler therapy is the ability to deliver profound dental anesthesia for these procedures. Most other health professionals who deliver this therapy are poorly educated in dental anesthesia techniques, and even after learning them are unable to do as good a job as any dentist. Therefore, what usually happens is that most dermatologists and plastic surgeons forego dental anesthesia and use

some form of topical anesthesia cream or ointment on the skin for 20 to 45 minutes before performing dermal filler therapy. Most of the patients I asked who had used topical anesthetic creams were uncomfortable during the procedure and said they would never go through that again.

As my experiences have grown in the dermal filler field, and in speaking with other health-care professionals, cosmetic dermatologists and facial plastic surgeons often wonder why it has taken so long for dentists to get into this field. They see it as a totally natural fit and complement to everything dentists are trying to accomplish in total esthetic dentistry, and general dentists have the natural skills to accomplish dermal filler therapy.

How long do dermal fillers last? Depending on the dermal filler used, the effects can last anywhere from six months until forever. There are temporary dermal fillers and permanent dermal fillers. Typically, most health-care professionals shy away from permanent dermal fillers because if the filler is placed in an improper position, its permanence becomes a huge issue and liability. Most dermal fillers placed are temporary and dissolve in six to 18 months.

There are a few types of dermal fillers on the market. Bovine and human collagen have been used in the past but require pre-testing by the patient and are not very popular anymore. Hyaluronic acid dermal fillers are today's most popular fillers. Hyaluronic acid is a naturally occurring substance in the body that is lost with aging. Hyaluronic acid dermal fillers add volume to the facial structures, are very hydrophilic, and look very natural. Hyaluronic acid fillers typically last six to 12 months and can also be used for lip augmentation, which is a big advantage. Restylane and Juvederm Ultra are very recognizable names and very popular dermal fillers.

Calcium hydroxylapatite is a naturally occurring substance in the body that is used in a popular dermal filler called Radiesse. Radiesse is a thick, viscous material that typically lasts longer than hyaluronic acid fillers because it takes longer for the calcium hydroxylapatite material to break down. In addition, as the calcium hydroxylapatite breaks down, the body naturally replaces it with collagen, which keeps the area free of wrinkles longer.

The choice of dermal filler material is very important depending on the areas that are being injected and corrected. It's essential to know which material is being used, and as with everything else, the right material should be used with the right application.

Dermal filler therapy requires a little different thought process than the dentistry we put into the mouth. We typically want our dentistry to last for a long time, preferably five to 10 years, or ideally for the patient's lifetime. Dermal filler therapy is different because by its nature it's a temporary therapy that will only last from six to 18 months, depending on the type of material used. Patients who have never had dermal filler therapy need to be educated that this is a cosmetic therapy that

needs to be repeated on a regular basis.

What patients want

Let's talk about patients and what they want. You'd be amazed at the number of people in your practice who use dermal filler therapy and Botox therapy. These are immensely popular products and treatments. Any patient that has had this kind of therapy doesn't need any education. They basically walk in and say, "Let's get started." They know what to expect and are extremely pleased that you can attain a profound level of anesthesia to make this a completely comfortable experience, something they probably haven't had while undergoing dermal fillers.

Interestingly, because of the temporary nature of dermal filler materials, liability issues and wrong treatment are very limited. The reason for this is that the areas where dermal fillers are used will completely return to normal within six to 12 months, so there's no long-lasting result that can occur. Like anything else, you have to take into account the anatomy of the patient, what you are trying to accomplish, and which dermal filler materials will work best in each circumstance.

Training is important

Training is the key to performing this exciting treatment. I have trained many dentists in facial injectable therapies such as dermal filler and botulinism toxin therapies. There's a very short learning curve because dentists are already well trained in injections. You need to become competent in the mechanisms of these materials, reviewing the facial expression muscles, indications, risks and benefits of these treatments, hands-on training in placing these materials, and preventing and managing complications. With some practice, you'll be well on your way to performing these procedures. Many state dental boards allow dentists to deliver these esthetic facial injectable therapies, so check with your own state board.

Dermal filler therapy is a natural progression of where we're going in the cosmetic dental industry. With proper training, these procedures are easy for general dentists to accomplish. Patients are motivated to accept these therapies and excited about having them done under local dental anesthesia, making dentists the health-care professionals of choice to deliver these procedures. This is the perfect complement and the next step in complete cosmetic dentistry.

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