

Minimally Invasive, Minimally Effective?

There is no doubt that cosmetic surgery has undergone exponential growth during the last several decades. As we look back, the phrase *minimally invasive* has been defined by the advent of productive, predictable, and valid technologies, such as botulinum toxin type A, hyaluronic acid fillers, and tumescent liposuction. These are truly paradigm shifts.

A paradigm shift occurs when existing technology is replaced by more effective technology to the point where people do not revert to the older technology. I would be willing to bet that no one sees horses on the expressway during their commute to work because the combustion engine was such an incredible advance that using animals for transportation came to an abrupt end. Both patients and doctors long for cutting-edge technology, yet they also want to get something for nothing, such as satisfying results without downtime. Using fillers and neuromodulators come pretty close to getting something for nothing.

Unfortunately, there is also bleeding-edge technology, which occurs when apparent technologic advances are heralded by doctors, patients, industry, and media but do not live up to their purported effect. We have also seen this many times in the past decade. I have boxes of contour thread in my closet that I will never use. My friend, who is an oculoplastic surgeon, recently purchased a plasma resurfacing machine only to have the company go out of business 2 weeks after he purchased the device. The company responsible for manufacturing a filler containing polymethylmethacrylate that was once heralded as an advanced permanent filler is no longer in business. I have another friend who uses a laser as an expensive doorstop. These are just a few examples of technologies that appeared great at first but did not pan out.

Due to the fact that thousands of baby boomers are turning 60 years old every day, we are at a point in history where there will be a significant push for minimally invasive procedures. Forty years ago, Clairol coined the catchphrase "Only her hairdresser knows for sure." At that time, even dyeing one's hair was considered secretive. Cosmetic surgery was unmentionable. Social mores and values have also undergone a paradigm shift.

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The taboo of clandestine cosmetic surgery for men and women has come out of the closet. Today, there are many more women in the workplace and they have expendable income to spend on health, beauty, and cosmetic surgery. This has provided an increase in cosmetic surgery procedures; however, taking time off from work because of an extended recovery trumps a woman's expendable income.

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All of these factors have contributed to the push for advances in fractional resurfacing, radiofrequency skin tightening, and the development of various devices and machines to reduce the appearance of fat, cellulite, and wrinkles. As good as this all sounds, I have been largely unimpressed by much of this new technology. When many of these new minimally invasive techniques are published in a journal or presented at a meeting, arrows are shown in the diagrams to point out the small areas of improvement. If a surgeon needs arrows to point out improvements, the technology is probably not all it is cracked up to be.

As I perused the educational program for the upcoming American Society for Laser Medicine and Surgery meeting, I noticed that there is an endless list of talks concerning fractionated resurfacing. This is currently all the rage. However, in my practice, this procedure has proven to be less than dramatic, meaning the expectations of patients are directly proportional to the type of practice that a

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doctor maintains. For instance, my practice is limited to cosmetic facial surgery. I performed more than 80 face-lifts last year. I also perform a large number of blepharoplasties, laser resurfacing, facial implants, and other cosmetic facial procedures. Patients come to my practice expecting a big change, and if I cannot provide them with noticeable before and after pictures (eg, a significant change), they are disappointed. I have many friends in other specialties who have less surgically oriented practices and they provide many of these minimally invasive techniques. Their patients are largely happy with the small changes provided.

I think it is grossly unfair for me or any practitioner to berate any new technology without personally trying it or waiting for studies to confirm its benefit. I perform a significant amount of aggressive laser resurfacing procedures in my practice and I feel that it is still the gold standard for the effacement of facial rhytides, photodamage, and skin aging. Yes, this technology has significantly extended recovery periods. Yes, in the early days of dermatologic surgery, there were significant problems with hypopigmentation and scarring. Using randomized pattern generators, which limit lateral thermal damage, not debriding between laser passes, and practicing open wound care have made high fluence, multipass CO₂ laser recovery much easier for me, my patients, and my staff.¹ I tell my patients that if they cannot devote 2 weeks to recovery to reverse half a century of aging, then they certainly have unrealistic expectations. I have utilized fractionated resurfacing and although I think there is a place for it in the minimally invasive practice, I have been largely unimpressed with the results. I feel that I can generally obtain the same results with 50 cents worth of trichloroacetic acid without the expenditure of a specialized laser. I do see patients in my practice who have very small recovery windows. For those patients, fractionated resurfacing is fine; however, I continue to be in awe of media and self-serving physicians who say results from this type of laser treatment are commensurate with aggressive CO₂ laser treatment. In my experience, that is not the case. All surgeons have a vested interest in marketing. There is no doubt that minimally invasive procedures are a hot marketing topic and will bring patients to the practice. I think it is extremely important for practitioners not to let their mouth write a check that the laser cannot

cash. In other words, overpromising a result is a great way to institute a negative marketing program. This can sometimes fool patients. On a regular basis, I see patients who come to my office for retreatment of these procedures, including minimally invasive lasers and face-lifts, performed elsewhere. These patients are disappointed and embarrassed that they were sold a bill of goods by the previous practitioner.

I think these new technologies are exciting and certainly have a place in our armamentarium, but it is up to the ethics of the provider to make sure that the true results are accurately conveyed. Some physicians and medispas advertising very minimally invasive laser or skin tightening procedures tell patients they will have 2 to 3 days of downtime when in reality it is really 5 to 6 days of downtime. As an excuse for the extra recovery time, practitioners tell patients that their case was not typical. I have also seen patients who were disgruntled from previous experiences at different practices because they were told a minimally invasive laser treatment would take care of their significantly aged skin, only to see little results from the first treatment. They then return to the doctor to find out they will need to undergo 3 to 5 additional treatments in order to obtain the expected results. In my mind, 12 days of recovery with a CO₂ laser is better than multiple 3- to 5-day recoveries with less invasive laser technology.

In conclusion, I love new technology but have been burned, excuse the pun, by it more than once. New technologies keep us wanting to work and also attract new patients. Sometimes the cart gets in front of the horse and the doctor's reputation suffers while patients become disappointed. It is our duty as doctors to keep it all in balance. I think it is a good idea to wait one year before purchasing expensive technology because time will tell the success of any new technology. Also, some technology that is perfect for one doctor's practice will not work for another. Sometimes all that glitters is not gold.

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Reference

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