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Mark of Distinction

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Assessing the Safety and Efficacy of Combined Facelift and Laser Resurfacing

A single-surgeon study of 238 patients

By Joseph Niamtu III, DMD, FAACS

Facelift surgery and full-coverage, ablative, high-fluence, high-density, CO₂ laser resurfacing (FCAHFHDCO₂) are both extremely powerful procedures for facial rejuvenation in their own right. Facelift surgery serves to restore a youthful jawline and neck, while laser skin resurfacing rejuvenates the facial skin in its entirety. A facelift, while addressing skin quantity, does nothing for skin quality. A facelift makes a tighter face, but does little to address rhytids and nothing to address actinic damage.

Surgical facial procedures such as facelift, blepharoplasty, brow lift, and facial implants are like rebuilding a vintage car. This is the bodywork. Full-face laser skin resurfacing is like painting the car. Both are important to achieve the best “restoration” or rejuvenation.

Facelift surgery has been performed for almost a century, and laser skin resurfacing procedures have been popular for about 20 years. Both remain mainstays of comprehensive facial rejuvenation around the world. Both procedures have also undergone permutations to decrease recovery time—hence, short-scar facelifts and fractional lasers. Yes, there is now

a smaller surgery that can be done on an awake patient with a faster recovery, but the final result cannot equal the comprehensive final result and longevity of traditional facelift or traditional “old school” (FCAHFHDCO₂) CO₂ laser resurfacing.



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OBJECTIVES

Three main questions face cosmetic facial surgeons, and have for the past several decades:

- 1) Can traditional facelift and traditional CO₂ (FCAHFHDCO₂) be performed simultaneously?
- 2) Is this combination safe, in terms of flap viability and repeatable outcomes?
- 3) Is the simultaneous use of laser and facelift the standard of care, and is it defensible in a lawsuit if flap necrosis or other complications ensued?

Having opined as a defense expert on several facelift/laser malpractice suits, I can attest that there is no shortage of surgeons willing to testify that simultaneous laser and facelift have no business in the same operative report. This presents that sticky legal subject of what is more valid: the standard of care or the evidence-based literature. Some surgeons require separate operations—one for facelift, and a later operation for laser (or vice versa). This involves a duplication of surgery, anesthesia, finances, and, most importantly, recovery.

Aggressive CO₂ laser recovery rivals 2 weeks, which is similar to that of a comprehensive facelift. It is hard enough for patients to take 2 weeks off for a procedure, let alone to double this.

A facelift as a sole procedure is a relatively straightforward recovery. A facelift with other procedures such as brow, bleph, and facial implants up the recovery ante. Adding a laser to all of this really intensifies the recovery and postsurgical care. Some patients cannot tolerate this.

An additional relative advantage of the combined treatment is the fact that facelift patients are numb in the immediate

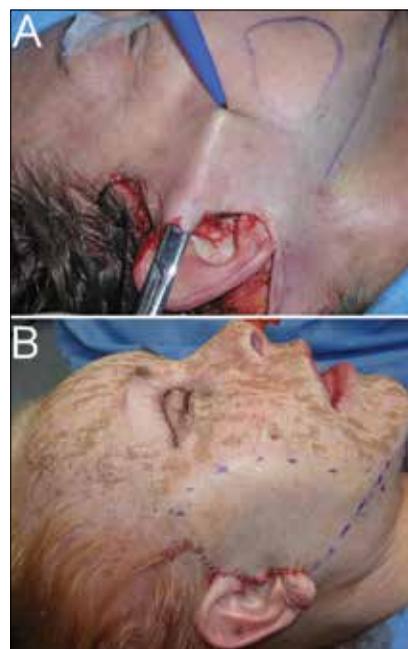


Figure 1. In all cases, the terminus of the undermined facelift flaps were marked to serve as a guide for laser density adjustment.

postop period, so laser pain is diminished. This study seeks to quantify the risks and complications associated with combined facelift surgery and FCAHFHDCO₂ laser resurfacing, including flap necrosis.

METHODOLOGY

This article spans 15 years of experience by a single surgeon performing 792 facelifts. Of these, 238 (30%) had simultaneous (FCAHFHDCO₂) laser resurfacing. Thirty (12.6%) of the 238 patients were admitted cigarette smokers



Figure 2. This patient is shown 24 hours after facelift/CO₂ laser and four-quadrant blepharoplasty. The central oval of the face is treated with two to three passes of full-coverage, ablative, high-fluence, high-density, CO₂ laser resurfacing, and the flaps are treated with a single pass at the same power but with a lower density.



Figure 3. This patient is shown 14 days after facelift with simultaneous CO₂ laser skin resurfacing.

All facelifts were standard anterior and posterior approaches with platysmaplasty and SMAsectomy. The average distance of circumferential dissection of the flaps was about 8 cm from the external auditory canal. Several cases had lower power fractional resurfacing performed on the anterior neck (one pass of 40 mJ (3.5 j/cm²) and a density of 2). This was only a few cases, and it is not statistically significant.

At the end of the case (the laser is always performed last), the demarcation of the undermined and nonundermined areas were marked (Figure 1).

In all cases, the Luminis Encore Ultrapulse laser was used in a fully ablative manner with a computer pattern generator set at 80 mJ (6.0 J/cm²) with a density of 6 and 600 Hz. In most cases, the central oval of the face was treated with two to three passes of laser, and the perioral region was treated with three to five passes at the same settings. The skin surfaces were *not* debrided between passes, as I have shown this to

be a safe procedure in the past¹ (Figure 2).

At this point, the laser settings are decreased in density from D6 (30% overlap of laser beam) to D4 (20% overlap of laser beam). Although not all surgeons adjust power or density settings, I find it safe and predictable. Next, a single pass is made over the undermined anterior facial flap with the same power setting of 80 mJ but a reduced density of 4 (Figure 3). This pass is not debrided, either.

The lasered area is then coated with Vaniply ointment (Pharmaceutical Specialties Inc, www.psico.com), and no facelift dressing is placed. The discontinuance of traditional facelift dressings was a gradual choice. As 30% of my facelifts had simultaneous laser resurfacing, the traditional bulky full facelift dressing was irritating the lasered skin. I began using smaller and smaller dressings until it became apparent that there was no detriment to eliminating the dressing totally. This has not increased my hematoma rate

or produced any negative healing or recovery problems.² This deletion is appreciated by me, my staff, and most of all, by my patients.

I have never used drains in any facelift, but several years ago I began using two 14-gauge IV catheters in the submental region that are removed the next morning. This has eliminated my post-facelift seroma drainage.²

The post-facelift/laser regimen consists of vinegar soaks (1 tsp/cup of water) every several hours, and Vaniply application continually. The face is washed BID with Vanicream cleanser. When the skin is re-epithelialized (usually by day 9 to 10), the Vaniply is discontinued and Vanicream moisturizer is used continuously until healed. I use the "Vani" products (Pharmaceutical Specialties Inc) exclusively, as they do not contain dyes, lanolin, masking fragrance, fragrance, parabens, or formaldehyde, and have simplified my post-laser regimen.

Re-epithelialization occurs at the same rate as full-face CO₂ laser without facelift (Figure 3, page 21). Patients resume Retin-A and hydroquinone at about 4 weeks or when tolerated.

RESULTS

A total of 792 consecutive facelifts were performed within this 15-year period. Of these patients, 554 underwent facelift only (70%) while 238 patients underwent facelift with simultaneous laser resurfacing (30%). Out of the total group (N=792), nine of these patients experienced preauricular flap breakdown (1.14%), defined as a preauricular necrosis greater than 1 cm². Six patients with flap breakdown did not undergo simultaneous laser resurfacing (1.08%), while three of these patients did (1.26%) (Table 1).

CONCLUSION

This preliminary data shows that the incidence of wound breakdown is similar in the two groups, suggesting no increased complication rates when performing facelift with simultaneous CO₂ laser resurfacing. Of further interest, 30 of the facelift/laser patients (12.6%) were cigarette smokers.

Laser skin resurfacing is a safe procedure when combined with cervicofacial rhytidectomy if performed by surgeons experienced with both modalities.

This data and results support my experience that simultaneous facelift and ablative CO₂ skin resurfacing is a safe and effective procedure that enhances the total rejuvenation of the case

Although this combination of procedures is safe, it does increase post-facelift recovery and patient home care, and this must be communicated to all patients preoperatively. ■

Author note: This article represents preliminary data from an ongoing 15-year study that I intend to submit for journal publication when all data is analyzed.

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Table 1: Facelift complications with and without simultaneous laser resurfacing

Technique	Number of Patients	Flap Breakdown*	Complication Rate
No laser	554	6	1.08%
Laser	238	3	1.26%
Total	792	9	1.14%

*Preauricular skin flap necrosis greater than 1cm²

Figures 4 and 5 detail typical post facelift/laser treatments



Figure 4. This patient is shown 90 days after facelift and laser. The benefit to sagging skin as well as skin rejuvenation is evident.



Figure 5 shows a patient 90 days after simultaneous facelift and full-face CO₂ laser resurfacing.