

### Combining Injectables with Laser Skin Rejuvenation in a Single Treatment Session, Using a Novel 650-microsecond Pulsed Nd: YAG 1064nm Laser

Yelena Kipervas, DO, & Tatyana Martinho  
Comprehensive Family Practice, Laser & Cosmetic Center  
Bartonsville, PA

#### Abstract

This study was conducted to evaluate the safety of the use of a novel 650 microsecond pulsed Nd: YAG 1064nm laser for skin rejuvenation, when used in combination with injectables in a single treatment session. Seven subjects were enrolled and were treated with the laser first, then were given injections afterwards. It was observed that there was a reduction in the pain, bruising and swelling from the injections with the use of the laser prior to the injections. Patient satisfaction was High or Very High in all cases. The use of this laser and this protocol has the potential to increase client retention and to attract new clients who prefer less treatment discomfort and who prefer a single visit rather than two for skin rejuvenation.

#### Background and Objective

Laser skin rejuvenation and injectables are known to be complementary modalities in aesthetic medicine, but the application of both in a single treatment session is generally avoided. This is because some lasers for skin rejuvenation are associated with significant treatment discomfort, and to combine that with multiple needle injections in the same session is too traumatic for many patients. Meanwhile, many clinicians who inject patients find that some are lost to followup treatments due to the pain, bruising and swelling caused by the injections. This study was conducted to evaluate a novel 650 microsecond pulsed Nd: YAG 1064nm laser, in terms of its ability to provide laser skin rejuvenation without discomfort, and thus combine it safely in the same session with injectables to improve the overall skin rejuvenation effect.

#### Study Design/ Materials and Methods

Seven subjects with skin types I-VI and an average age of 49.7 – four males and three females – were enrolled for a single treatment of laser skin rejuvenation combined with injectables (CaHA or pLLa). Treatments involved facial areas including nasolabial, mid and upper cheek areas. All subjects were treated with the laser first and given injections immediately afterwards. Laser treatment was performed as follows: (a) two passes at fluences of 18-31 joules/cm<sup>2</sup> on a 6mm spot size, in a painting motion across treatment areas, for deep collagen remodeling; and (b) treatment as needed, at fluences of 159-191 joules/cm<sup>2</sup> on a 2mm spot size,

on skin types I-IV, for both skin tightening (one pass on lax skin and wrinkled areas) and removal of vascular & pigmented lesions (spot treatments). All laser treatments were performed using a 1064nm Nd: YAG laser, LightPod Neo (Aerolase, Tarrytown, NY) with a novel 650 microsecond pulse duration. All subjects confirmed that they were not using Accutane or other photosensitizing medications, and were not pregnant; subjects had all makeup and lotions removed immediately prior to treatment. No anesthetics, cooling, gel or lotions were used regardless of skin type, as the laser does not require any numbing or skin cooling.

Immediately after completion of the laser skin rejuvenation treatment, all subjects received mild cooling (Ice packs) and injections. The injections followed the treatment protocols from the injectables manufacturer; with each subject, the degree of treatment discomfort, bruising and swelling was observed during and immediately after treatment.

All subjects were asked to rate their satisfaction with the procedure after the treatment, on a scale of Low, Moderate, High or Very High.

#### Results

The laser treatment was well tolerated without any anesthesia or any form of skin cooling during treatment; subjects reported little or no treatment discomfort and no complications were observed. Skin tone and texture was improved in the treatment areas, together with improvements in skin contour uniformity (reduction of large creases and depressions) related to the injectables.

The combined effect of the laser skin rejuvenation and the injections produced positive outcomes in terms of overall skin rejuvenation; of the seven subjects, five rated their satisfaction as High and two rated it as Very High.

All subjects reported a pleasant warming sensation as a result of the laser treatment, and low discomfort from the ensuing injections. In addition, the amount of post-injection bruising and swelling was observed to be extremely minimal.

#### Conclusion

This study shows that a novel 650 microsecond pulsed Nd: YAG 1064nm laser can provide skin tone and texture improvement, removal of pigmented spots and vascular lesions with little or no treatment discomfort and no complications, and thus can be combined in the same treatment session with injectables to enhance the overall skin rejuvenation effect. Furthermore, it was observed that the laser skin rejuvenation treatment appeared to stimulate a tissue healing effect, because of the noted substantial reduction in the pain, bruising and swelling that is otherwise typically seen with the injections.

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