



## Combining Nd:YAG and Er:YAG Laser with Intradermal Hyaluronic Acid and Neurotoxin for Skin Tightening and Rejuvenation

Beverly Ong-Amoranto, MD

### Introduction:

Cutaneous aging is associated with thin, fragmented collagen and elastic fibers, decreased collagen and hyaluronic acid synthesis as well as decreases in keratinocyte and fibroblast proliferation, all of which clinically manifest as wrinkles, rough skin texture, thin and lackluster skin and skin laxity. Noninvasive skin tightening with the use of combined Nd:YAG and Er:YAG laser has been shown to rejuvenate and tighten skin. On the other hand, intradermal microinjection of hyaluronic acid stimulates fibroblast and keratinocyte proliferation and increases procollagen type I and III levels, resulting in an increase in type I and III collagen synthesis and restoration of the extracellular matrix. Microhyaluronic acid injection combined with microbotox has been shown to improve skin texture, increase hydration and decrease transepidermal water loss levels up to 8 weeks post treatment. In recent years, combination treatments designed for patient convenience and to maximize results have become highly popular.

Hence, we present a 3-step synergistic treatment protocol that specifically augments several layers of the skin for rejuvenation and tightening. This is the first treatment protocol to combine all four treatment modalities: 1064 nm Nd:YAG, 2940 nm Er:YAG, microinjections of hyaluronic acid and neurotoxin in one treatment session for enhanced tightening, hydration and skin rejuvenation.

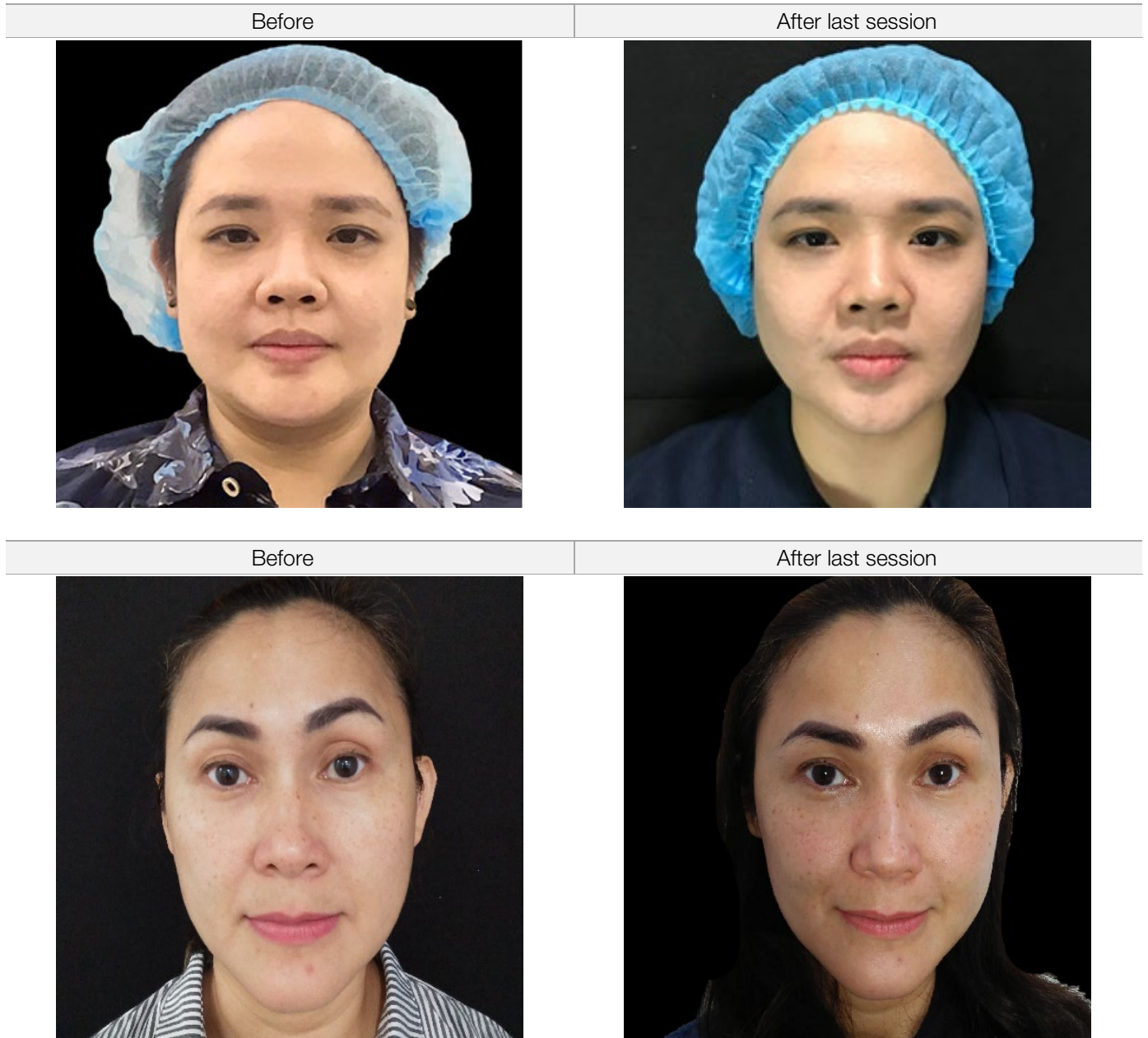
Laser	SP Dynamis	
	Step 1	Step 2
Wavelength	1064 nm Nd:YAG	2940 nm Er:YAG
Handpiece	R33-T	PS03X
Fluence	25 J/cm <sup>2</sup>	1-2 J/cm <sup>2</sup>
Mode	FRAC3	MSP
Frequency	5 Hz	5 Hz
Passes	2 complete passes	2 complete passes
Spot size	4 mm	7 mm
Sessions	1 session every 6 months	



*Dr. Beverly Ong-Amoranto is a Philippine Dermatological Society board-certified dermatologist. She is a graduate of the University of Santo Tomas Faculty of Medicine and Surgery and finished her Dermatology residency under the Skin and Cancer foundation, where she now serves as Associate professor. She completed preceptorship programs in Mohs surgery as well as fat transplant, lasers and dermatologic surgery under the American Society for Dermatologic Surgery (ASDS). Her interest in fat transplants has evolved to her main expertise of soft-tissue augmentation; she has given numerous lectures and workshops both locally and internationally. Dr. Ong-Amoranto has used the Fotona SP Dynamis and this particular technique since 2017. Aside from her clinic, Azala Dermatology, she is also a consultant at the VMV Research Centre, a key opinion leader for several companies and an active consultant at Asian Hospital and Medical Center.*

## CLINICAL CASE:

Two female patients aged 37 and 40 years old with mild photoaging received a single treatment of a combination approach of 1064 nm Nd:YAG and 2940 nm Er:YAG, immediately followed by intradermal microinjections of hyaluronic acid and incobotulinumtoxin A. The entire face was anesthetized with topical EMLA (2.5% lidocaine and 2.5% prilocaine) 30 minutes prior to the procedure. The 3-step procedure starts with bulk heating in the deep dermis with two passes of 1064 nm Nd:YAG in a crosshatch pattern. This is followed by the creation of vertical columns in the superficial epidermis by doing two passes of 2940 nm Er:YAG. For the final step, a 1 cc, 20 mg/dl cohesive, polydensified hyaluronic acid filler is mixed with 40 units of incobotulinumtoxin A using a 2-way stopcock. Once the mixture was homogenous, the solution was then injected in microdroplets, bevel up, 2 cm apart just below the skin at the level of the papillary dermis to consume 1 cc per side of the face. The intradermal level of injection is vital to ensure improvement in skin rejuvenation and hydration. A 1 cc syringe of the “soft hydrotoxin” mixture is approximately equivalent to 80 microdroplet injections (4 microinjections per 0.1 cc of material). Therefore, the amount of hyaluronic acid per injection site is approximately 0.25 cc and the amount of incobotulinumtoxin A is approximately 0.50 units per injection. There was minimal bleeding during the procedure and no serious adverse effects were noted. Antibiotic cream was immediately applied after the procedure and an emollient cream was applied for 3 days after the treatment.



Published by the Laser and Health Academy. All rights reserved. © 2021

Disclaimer: The intent of this Laser and Health Academy publication is to facilitate an exchange of information on the views, research results, and clinical experiences within the medical laser community. The contents of this publication are the sole responsibility of the authors and may not in any circumstances be regarded as official product information by the medical equipment manufacturers. When in doubt please check with the manufacturers whether a specific product or application has been approved or cleared to be marketed and sold in your country.

