Spectra Laser Peel Effective for Treatment of Acne

The Spectra VRM II (Lutronic Corporation; formerly MAX Engineering, Ilsan, South Korea) is a frequency doubled, Q-switched Nd:YAG laser; and by altering the laser parameters in the primary 1064 nm line, two completely different bioreactions can be achieved in the target skin following the application of a topical carbon lotion photo enhancer. The combination of these two mechanisms has been found to be extremely effective in the treatment of acne, not only of active acne lesions and associated inflammation, but also of enlarged pores. The carbon lotion acts as an exogenous target chromophore, and with the first set of laser parameters, induces a controlled photothermal reaction which provides gentle thermal stimulation of the skin and its component cells. The second set of parameters results in highly precise photoablation of the outermost layer of the epidermis, which also helps to destroy the plugs blocking affected hair follicles. Because of the controlled nature of this unique dual approach, which is termed the Spectra Laser Peel, side effects such as erythema are minimal and transient.

For the past several years, Takahiro Fujimoto, M.D., *et al.*, have reported the successful application of the use of carbon assisted laser peel for facial rejuvenation with a Q-switched Nd:YAG laser. In regards to pore size reduction of the face, Gi-Yang Jung, M.D., of Yonsei University recently reported

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this finding at the 2005 *American Society for Dermatologic Surgery* (ASDS) meeting.

The Spectra VRM II is a two-in-one laser system that combines a 300 microsecond quasi-long pulse (Spectra mode) with a five nanosecond pulse width (Q-switched mode). This combination treatment has been

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called Spectra Laser Peel and is directed at the removal of the superficial epidermis to correct different types of acne lesions. It has numerous applications such as improving non-inflamed and inflamed acne, including cystic lesions. It is also very effective in the reduction of large pores and sebum on the oily face.

A complete Spectra Laser Peel procedure consists of using the Spectra VRM II in the Spectra mode followed by the Q-switched mode. The procedure involves lasing at an even pace across the surface of the area to

be treated with minimal overlapping in the Spectra mode (300 µs pulse duration, fluence 1.5 to 2.0 J/cm^2). The first pass is followed by three additional passes with a 50% overlap in the Q-switched mode (pulse duration 5 ns, fluence 2.0 to 2.5 J/cm^2). The fluence setting is primarily based on the skin's response and the patient's level of tolerance. The ideal endpoint can be judged by the appearance of slight erythema of the treated area.

According to Soo Il Chun, M.D., who has many years of experience in using Spectra Laser Peel, "In my personal experience, Spectra Laser Peel is a very effective and safe treatment modality for non-inflamed and inflamed acne. Nodular and cystic lesions begin to reduce in size after a Spectra Laser Peel treatment. Since most acne patients have yellow pigments from excess sebum deposition around the T-zone of their face, Spectra Laser Peel is also a very good treatment for sebum reduction and yellow to dark pigments. After the first Spectra Laser Peel treatment, yellow or dark skin becomes notably lighter. Any inflamed red spots that remain also improve and become significantly lighter after a Spectra Laser Peel. In patients that undergo three or more treatments in a three to four week interval, their enlarged pores become smaller as well as a notable reduction of sebum on the face. The reason why Spectra Laser Peel is an excellent treatment for acne is the deliberate manipulation of the laser parameters so that the same laser system can cause two distinct consecutive bioreactions in the target tissue with the help of the topical carbon lotion: the controlled pure photothermal stimulation of the epidermis and dermis, and the precise photoablation of the outer layer of the epidermis and unblocking of the hair follicles."

Dr. Fujimoto is highly impressed with Spectra Laser Peel's multiple clinical functions. "It is an easy operation and a simple procedure for the treatment of inflamed acne lesions, nodules and even cysts without any need for systemic or topical medication, such as isotretinoin and so on. In nearly all patients, their maximum improvement was achieved after just four

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treatment sessions. My patients are extremely pleased with Spectra Laser Peel because of its multiple clinical benefits and no downtime. Spectra Laser Peel adaptation not only controls inflammatory acne, but also improves enlarged pore size and redness from post-inflammatory acne at the same time." ■

Soo Il Chun, M.D.

Soo Il Chun, M.D. is a board-certified dermatologist and is known nationally and internationally for his work with skin lasers and dermatopathology. After receiving his medical degree from Yonsei University, Dr. Chun became a professor of the department of dermatology at Yonsei University, College of Medicine. He is now on the editorial board of the *American Journal of Dermatopathology* and an active member of the *International Society of Dermatopathology*. Dr. Chun has published over 100 academic articles in various well known Korean and international dermatological journals and has presented over twenty international lectures.

Takahiro Fujimoto, M.D.

Takahiro Fujimoto, M.D. is one of the most recognized authorities on medical lasers in Asia, especially in Q-switched Nd:YAG laser peel treatments. He has led a number of clinical studies and has been honored many times by ASLMS and EADV. Every year Dr. Fujimoto receives invitations as a lecturer for international conferences. He is passionate at addressing new treatments, such as minimizing pain for laser treatments and provides the world's most advanced techniques for both his patients and fellow physicians.