

FracRevive - holistic skin rejuvenation with a combination of full beam and fractional Q-switched Nd:YAG laser

BY LUCAS CHIA LIANG CHOONG

With increasing demand on efficient skin rejuvenation treatment associated with zero to minimum downtime, a two-step FracRevive laser rejuvenation with both full beam and fractional Q-switched Nd:YAG laser has been designed by Fotona using the Starwalker system. Starwalker's unique pulse delivers a five nanosecond Q-switched pulse that consists of a high energy train of ultra-short bursts of energy in 580 picoseconds. The peak power and pulse energy of such pulse structure synergistically exert both photoacoustic and photothermal action on targeted chromophores for neocollagenesis and reduction of pigmentary disorders.

Patient selection

The treatment can be safely provided to adult patients of all ages and Fitzpatrick skin types I to IV. For patients with higher skin types, lower laser fluence and passes must be used. Contraindications to this laser include active skin infection, skin malignancy, auto-immune skin disorders, use of isotretinoin in the past 12 months, unrealistic expectations and skin hypersensitivity conditions.

Preparation

After cleaning the face and pre-treatment photography, topical anaesthetic (Benzocaine 20%/Lidocaine 6%/Tetracaine 4%) is applied onto the face for 40 minutes. The topical anaesthetic cream is removed completely before the laser treatment.

Treatment

Step 1

Full Beam MaQx-1 Nd:YAG with 8mm spot size, 2.0J/cm² and 10 Hz. Four passes are delivered in slow brushing method to cover the entire face. Mild facial erythema should be observed after Step 1.

Step 2

With the use of FS20A handpiece, Fractional MaQx-1 Nd:YAG, 4.0mj/px energy, 3Hz is delivered. Two passes are performed to



Before treatment.

cover the entire face. An additional two passes are done at the area with more pronounced problems such as large pores, pigmentation, and uneven skin tone. Mild to moderate petechia of the skin, more marked infraorbitally and at the area with additional passes are expected. Pinpoint bleeding infrequently observed, especially on hypervascular skin.

Post-treatment care

The face is cleaned gently post laser. Moisturiser and sunblock is applied. Upon discharge, the patient is advised on the possible cutaneous reaction to this two-step laser rejuvenation. These include erythema and mild burning sensation on the first day, hygienic care is important, and antibiotic is not indicated. From day two, the patient will notice formation of minute scabbing points which will shed away three to four days later. Skin dryness is felt during this period. The patient is also advised to apply moisturiser and sunblock diligently during this period.

Result and follow-up

Full recovery from this two-step FracRevive laser rejuvenation is expected on day five. Results are noted after a single session of the treatment. These include reduction of the pore size, pigmentations, and static



After treatment.

wrinkles. Moreover, there is noticeable improvement of skin tone and texture.

The treatment can be repeated at four to six week intervals. During the subsequent session, the parameter used for Step 1 Full Beam MaQx-1 Nd:YAG remain the same while for Step 2 FS20A Fractional MaQx-1 Nd:YAG, the energy can be increased by 1.0mj/px if tolerated for a higher degree of skin rejuvenation.

Most patients will achieve satisfactory result after six sessions of treatment. Once the desirable improvement is attained, the treatment interval can be extended to three to four months as a maintenance therapy.

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Declaration of competing interests: Lucas Chia was appointed by the Laser and Health Academy (LAHA) of Fotona as an Expert Clinical Lecturer. He has received honorarium to speak at LAHA symposiums as well as conducting online and onsite Fotona laser clinical training in various countries.