Pigmentary Disorder Tx Tips for East Asian Skin

BY JEFF EVANS
Senior Writer

KISSIMMEE, Fla. — Dermal and epidermal pigmentary disorders in East Asian patients can be treated successfully in many cases without causing postinflammatory hyperpigmentation by carefully combining topical bleaching agents with either a Q-switched laser or intense pulsed light. Careful attention to the device settings as well as the patient’s skin type and any presence of melasma will help to ensure the best results with a low risk of postinflammatory hyperpigmentation (PIH), said Dr. Kie Negishi of Tokyo Women’s Medical University.

To remove epidermal pigmentation that commonly occurs in East Asians, such as solar lentigines, freckles, melasma, PIH, and pigmented seborrheic keratoses, Dr. Negishi advised using a Q-switched laser, intense pulsed light (set to specific spectral parameters, or “flat top”), and/or topical bleaching cream. Her patients are mainly Japanese, but she also sees some South Korean and Chinese patients.

If the treatment is for a small number of epidermal pigmentary lesions, she recommended using a Q-switched laser or intense pulsed light (IPL) set to a specific lesion parameter, combined with a topical bleaching cream such as hydroquinone or retinoic acid. Q-switched lasers are the only devices capable of removing dark lesions that are capable of removing dark lesions that are oriented optimally.
In Dr. Negishi’s own studies, she has found that the addition of a bleaching cream (composed of hydroquinone and retinoic acid) to Q-switched laser treatment could perhaps avoid this problem. In one study, patients were treated with 532-nm Q-switched lasers before treatment, and then an additional 3–4 weeks of bleaching cream. She also advises patients to use sunscreen every day during the treatment period.

To treat PIH with obvious erythema, she recommends using a steroid plus a mild bleaching agent, such as vitamin C derivatives. In cases without erythema, treatment with IPL at a mid setting could shorten the recovery period, in addition to 2% or 4% hydroquinone, 0.025% or 0.05% retinoic acid, and 0.025% dexethasone, if it is tolerable.

IPL for Epidermal Pigmentation

The main advantage of using IPL to treat epidermal pigmentation is its reduced risk of causing PIH, Dr. Negishi said. IPL does not disrupt melanocytes, unlike Q-switched lasers, but instead affects melanin-rich keratinocytes, inducing the formation of a microcrust and a partial turnover of the epidermis. Multiple IPL treatments might be necessary to treat pigmentation, and IPLs with a shorter wavelength range have greater efficacy.

Dr. Negishi reported that after an IPL treatment, reflectance-mode confocal microscopy reveals the rapid migration of melanocytes to the basal layer. This suggests that in order to stimulate IPL’s efficacy, it is necessary to use bleaching cream immediately after the microcrust peels off, she said. With “Q-switched lasers, bleaching creams are used to prevent the vent PIH, but they are used to stimulate treatment efficacy,” she said.

IPL also is a good choice for full-face skin rejuvenation and whitening in East Asians, she said. For each IPL treatment, Dr. Negishi first checks the patient for melasma and acquires dermal melanocytosis. She uses the UV light in a “laser’s lamp” to distinguish acquired dermal melanocytosis from subtle or hidden melasma rather than just to determine the area of melasma. She then uses a spectrophotometer to check the patient’s skin color.

She uses a mild parameter setting for full-face irradiation, consisting of longer wavelengths at low fluences. For specific lesions, she increases the fluence, shortens the pulse width, or shortens the wavelength, using white paper to cover the area surrounding the lesion. The immediate reactions for full-face treatments are very slight erythema in normally pigmented areas and a slight darkening of pigmented areas with pain remaining about 3–4 on a 10-point scale.

Particular attention should be paid when using IPL for full facial skin rejuvenation in patients with darker skin, such as those with type V skin or type IV plus sun damage, because of the risk of epidermal thinning. For patients with darker skin or melasma, it is preferable to use a long wavelength/low fluence setting for second passes over specific lesions with white paper covering the surrounding area.

In a study, Dr. Negishi and her colleagues used an ultraviolet filter to identify very subtle epidermal melasma in 63 (28%) of 242 East Asian patients who had previously not been diagnosed with melasma. The patients who did not use sunscreen had a significantly higher risk of the condition developing than those who did. "This is a new concept to be considered in the future," Dr. Negishi said. "We have found a new way to treat those with increased risk of developing melasma, and the patients who do not use sunscreen are at higher risk for developing melasma than the group who use sunscreen."