Effective and Safe Ephelides Treatment for Darker Skin Type with PQX 1064 nm

Dr. Wong Yeut Sun

Introduction:

A 27-year-old female with Fitzpatrick skin type 5 came to the clinic with epidermal pigmentation that began several years earlier. According to the patient, she regularly participates in diving sports, and sunscreen cream was not used in order to protect the coral. She came to us to remove the epidermal pigmentation, but she did not care about uneven skin tone. Picosecond 1064 nm laser was used in this case as the patient had outdoor activities that would make downtime from 532 nm difficult to handle. Another thing to note is that using KTP in type 5 skin is not recommended.

Laser	StarWalker PQX		
	Step 1	**Step 2**	**Step 3**
Wavelength	Nd:YAG (1064 nm)	Nd:YAG (1064 nm)	Nd:YAG (1064 nm)
Handpiece	Black	Black	Black F5
Mode	PICO	PICO	PICO
Spot size	4 mm	10 mm	5x5 px, 5 mm
Fluence	3-3.5 J/cm^2	0.2 J/cm^2	4 mJ/px
Frequency	3 Hz	10 Hz	10 Hz
Pass	3-5 stacks	Multiple passes	Multiple passes
Endpoint	Lightening of pigment	-	Mild erythema
Anesthesia	Numbing cream		
Target	Epidermal pigment	Whole face	Whole face
Sessions	1 session		

Dr. Wong Yeut Sun completed his medical training at the National Defense Medical Center in Taipei, Taiwan in 2011. From 2011 to 2013 he performed internships in the Dermatology Department of Tainan ChiMei Hospital and the Plastic Surgery Dept. of Taipei Veteran General Hospital. After working as a Medical Officer at the Sungai Buloh and Tawau hospitals, he began his current position in 2017 as an aesthetic physician in the Davinci Clinic at the National Taiwan University Hospital in Taipei.

CLINICAL CASE:

EMLA cream was applied for 30 minutes on the area of interest prior to the treatment. The first step was to target epidermal pigment with the BLACK handpiece, 4 mm spot, at 3-3.5 J/cm2. Three stacks were done on the pigment and the end point was lightening of the pigment. The second and third steps were done with parameters shown in the table to improve the skin tone of the patient.

Moisturizer and sunscreen were applied to the patient after treatment. Advice given to the patient was to avoid extreme or long period of sun exposure.

The after pictures were taken after 1 month. However, the patient went to another diving session 1 week after the laser. As you can see from the pictures, the patient's skin tone became darker due to sun exposure, however, there was no post-inflammatory hyperpigmentation or rebound of pigmentation noted. In fact, the epidermal pigments were almost eliminated with the laser. If 532 nm laser were used, patient would probably have developed PIH or prolonged erythema

The patient was happy with the result with just 1 session. This demonstrated that 1064 nm picosecond laser is effective and especially safe with treating epidermal pigment in darker skin-type patients.

Before	After last session