



Hydroquinone-resistant Melasma Management with StarWalker PQX on an Asian patient

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Introduction:

In this study, a combination setting with the StarWalker PQX was used to manage 3 hydroquinone-resistant melasma over a 3-month interval. After 3 sessions of the fractional & full-beam combination technique, the patient was reviewed with clinical photographs to gauge improvements. We found significant overall melasma improvement and skin tone evenness, with evident skin texture improvements and no adverse events.

Laser	StarWalker PQX			
	Step 1	Step 2	Step 3	Step 4
Wavelength	1064 nm	1064 nm	1064 nm	1064 nm
Handpiece	F9	F9	Black	Black
Fluence	1.0 mJ/px	5 mJ/px	0.8 J/cm ²	1.8 J/cm ²
Spot size	9x9 mm	5x5 mm	8 mm	4 mm
Frequency	5 Hz	2 Hz	5 Hz	7 Hz
Passes	2	2-3 passes, 1000 shots	2-3 passes, 1000 shots	2-3 passes, 1000 shots
Stacking	No	No	Yes	Yes
Cooling	Yes	Yes	Yes	Yes
Sessions	1 session			



Jia Xi Chong received his MBBS degree from Manipal University and his MRCS from the Royal College of Surgeons (Ireland). He is a certified medical aesthetic practitioner based in Penang Island, Malaysia, specializing in all types of aesthetic injections, and is an experienced user of Fotona's StarWalker PQX and SP Dynamis laser systems. He actively performs minimally invasive procedures such as double-eyelid creation as well as laser surgeries to improve aesthetic concerns for his patients.

CLINICAL CASE:

Hydroquinone-resistant melasma is notorious for being one of the most difficult-to-manage dermatological conditions amongst many in the Asian population. In most cases Q-switched laser systems have proven to be unsatisfactory in bringing down the pigment loads. We have implemented the above protocol and conducted a clinical photograph comparison over 3 months on 3 Asian Fitzpatrick Skin Type III-V patients who have hydroquinone-resistant melasma. The Fotona StarWalker PQX with fractional-beam and full-beam handpieces were used, as per the settings in the table. The end point of the treatment was slight erythema of the skin and mild darkening of the pigmented areas. Post-treatment care included regular sunscreen and protection from sun exposure.

A total of 3 treatment sessions were performed, one month apart. One month after the final treatment, the patients were reviewed with clinical photographs to gauge their improvements in terms of melasma distribution, pigment intensity, as well as to record their satisfaction scores. Significant melasma improvement in terms of lesion distribution as well as pigment intensity, along with evident skin tone evenness and skin texture improvement were observed. No complications developed from the laser protocol. Patient satisfaction was good as the downtime was very minimal and highly tolerable, with mild erythema that lasted less than 24 hours. Both fractional handpieces and the Black 1064 nm handpiece appear to be effective in improving hydroquinone-resistant melasma and overall skin tone. In patients who have developed resistance to hydroquinone and are looking for a non-invasive treatment for improvement with low side effects, pico laser is a natural and safe choice for them. Most importantly, these parameters appear to be safe in darker skin types, with no adverse reaction such as PIH. The StarWalker PQX Pico laser is an effective alternative, non-invasive treatment for hydroquinone-resistant melasma in Asian skin (Fitzpatrick III-V), with low risk of adverse reactions and high patient tolerability and satisfaction.

Case 1: Before and after 1 session



Case 2: Before and after 1 session



Case 3: Before and after 1 session



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