

Melasma treatment protocol

5 September 2008

The following treatment protocol was developed by Dr Kim Hyunjung, Yonsei University, Korea. This protocol is for use with software version 24-D

Background:

Dr Kim has determined that melasma has certain vascular characteristics which make it most suited to treatment by the Dual Yellow laser system¹ and as a result, has developed this protocol taking advantage of the 578nm (yellow) output from the Dual Yellow laser which is primarily used to treat vessels². Use of this wavelength has the additional advantage of very low incidence of Post Inflammatory Hyper pigmentation (PIH) in Asian skin.

It is important to inform the patient that little results will be seen until the 4 treatments are complete.

Method:

Three or four treatments are required.

1. First treatment

- a. Ensure that the skin is lean and free from makup etc.
- b. Select Treatment -> Pigmented lesions -> Melasma 1st.
- c. Fit the 0.6mm hand piece set the fluence to 15 to 20 J/cm² (Lower fluences for darker skin) Pulses per second (PPS) to about 5 PPS.
- d. Carefully and slowly cover the entire area of the lesion.
- e. Some erythema should be present after treatment and some slight graying of the lesion. Avoid any sign of whitening (denaturing)!
- f. Wait 2 weeks before the second treatment.

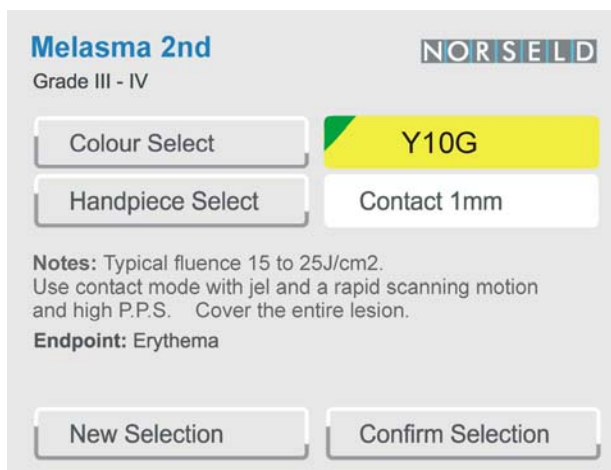
The screenshot shows the NORSELD software interface for the 'Melasma 1st' treatment. The title is 'Melasma 1st' with 'Grade III - IV' below it. The 'Colour Select' button is highlighted in yellow and labeled 'Y10G'. The 'Handpiece Select' button is labeled '0.6mm'. Below these are 'Notes' and 'Endpoint' sections. The 'Notes' section states: 'Typical fluence 15 to 25J/cm2. Use very light or no pressure so as to not blanch any vessels treat by carefully covering the entire lesion.' The 'Endpoint' section states: 'Erythema Slight greying of lesion, vessels dissappear'. At the bottom are 'New Selection' and 'Confirm Selection' buttons.

¹ Kim E.H., Kim Y. C., Lee E. S. The vascular nature of melasma: *J Dermatol science* 2007 46,111-116

² McCoy, S. Copper Bromide Laser Treatment of Facial Telangiectasia: Results of Patients Treated Over Five Years *Lasers in Surgery and Medicine* 1997; 21: 329-340

2. Second treatment

- a. Select Treatment-> Pigmented lesions-> Melasma 2nd, follow the recommended settings Y10G and the 1mm hand piece.
- b. Clean the skin and apply a thin coat of gel to the area to be treated.
- c. Slowly scan the entire area at a speed which places each 1mm spot adjacent to the previous spot. At 5PPS it should take about 20 seconds per cm^2 . apply minimal pressure so as not to blanch underlying vessels.
- d. If excessive erythema is not apparent then a second pass can be performed scanning 90degrees from the first pass.
- e. Wait 3 weeks before the third treatment.



3. Third and fourth treatment

Follow the same treatment as above for the second treatment , allow 3 weeks between treatments.

Notes:

1. Always apply sun block after treatment and insist that the patient uses sun block every day.
2. Some prefer to wash the area clean then leave it wet and treat though the remaining water rather than use gel, it is claimed that a lower fluence can be used.