

PREVENTION OF MELASMA INTENSIFICATION WITH SUNSCREEN COMBINING PROTECTION AGAINST UV AND SHORT VISIBLE LIGHT

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INTRODUCTION

Melasma is an acquired hyperpigmentation on sun-exposed areas. Multiple approaches are used to prevent and treat it, all including broad ultraviolet (UV) spectrum sunscreens. Short visible light can increase pigmentation on darker-skinned patients. The objective of the study was to assess the efficacy of a sunscreen with very high UVB and UVA protection and containing mineral pigments against visible light, to prevent intensification of melasma.

METHODS

Fifty-five patients with moderate to severe melasma (epidermal, dermal or mixed) have been included and used the sunscreen over 8 weeks in real daily sun exposure (in Mauritius Island). They were assessed by a dermatologist using Melasma Area and Severity Index (MASI) and colorimetric measurements (Luminance L* and ITA° parameters) were performed at inclusion, at 4 weeks and 8 weeks.

Number	n=55
Mean Age	52 ±1 y/o
Age min	34 y/o
Age max	65 y/o
Phenotypes	
III	3
IV	33
V	19
Severity of melasma	
Moderate	n=42
Severe	n=13
Type of melasma	
Epidermal	29
Dermal	7
Mixed	19

RESULTS

Following the sunscreen use, there was no aggravation of the melasma as indicated by the MASI at 4 and 8 weeks. On the contrary, the subjects showed an improvement at 4 weeks and even more pronounced at 8 weeks.

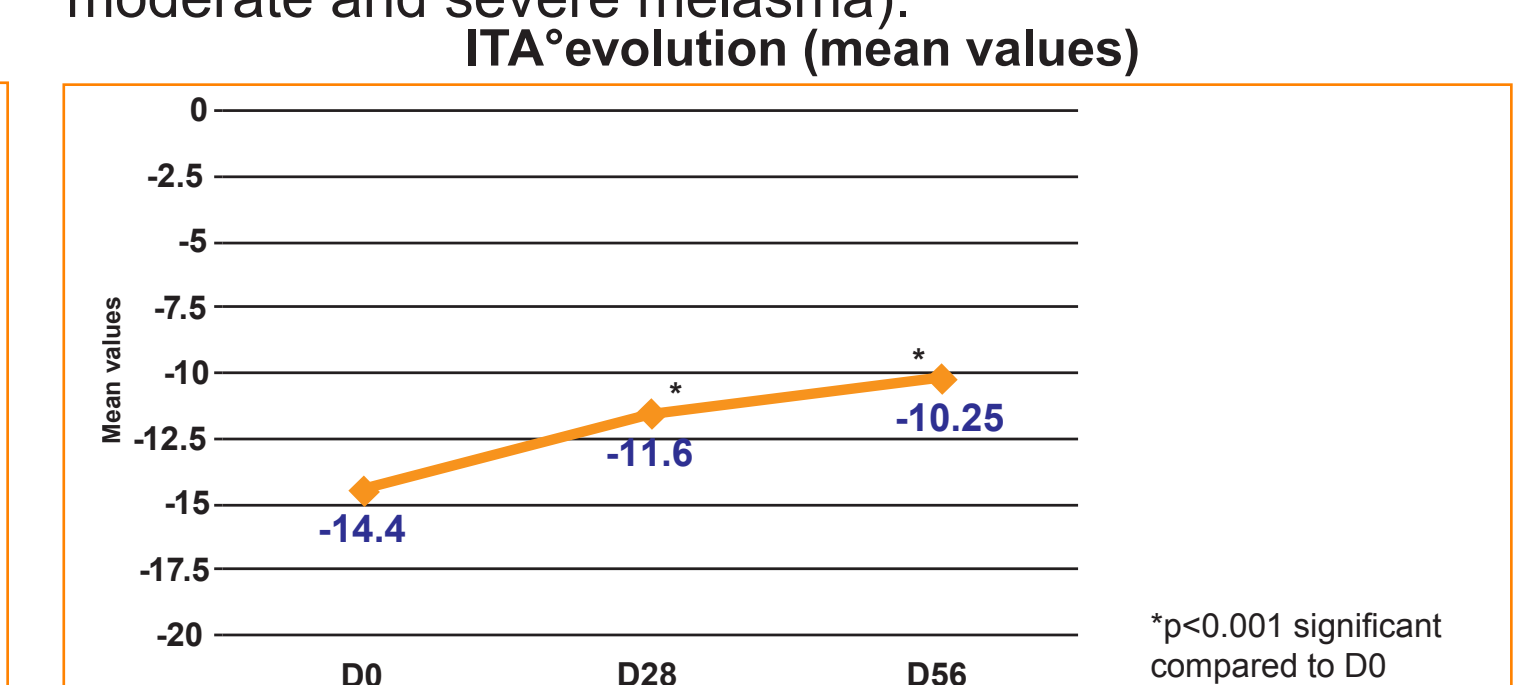
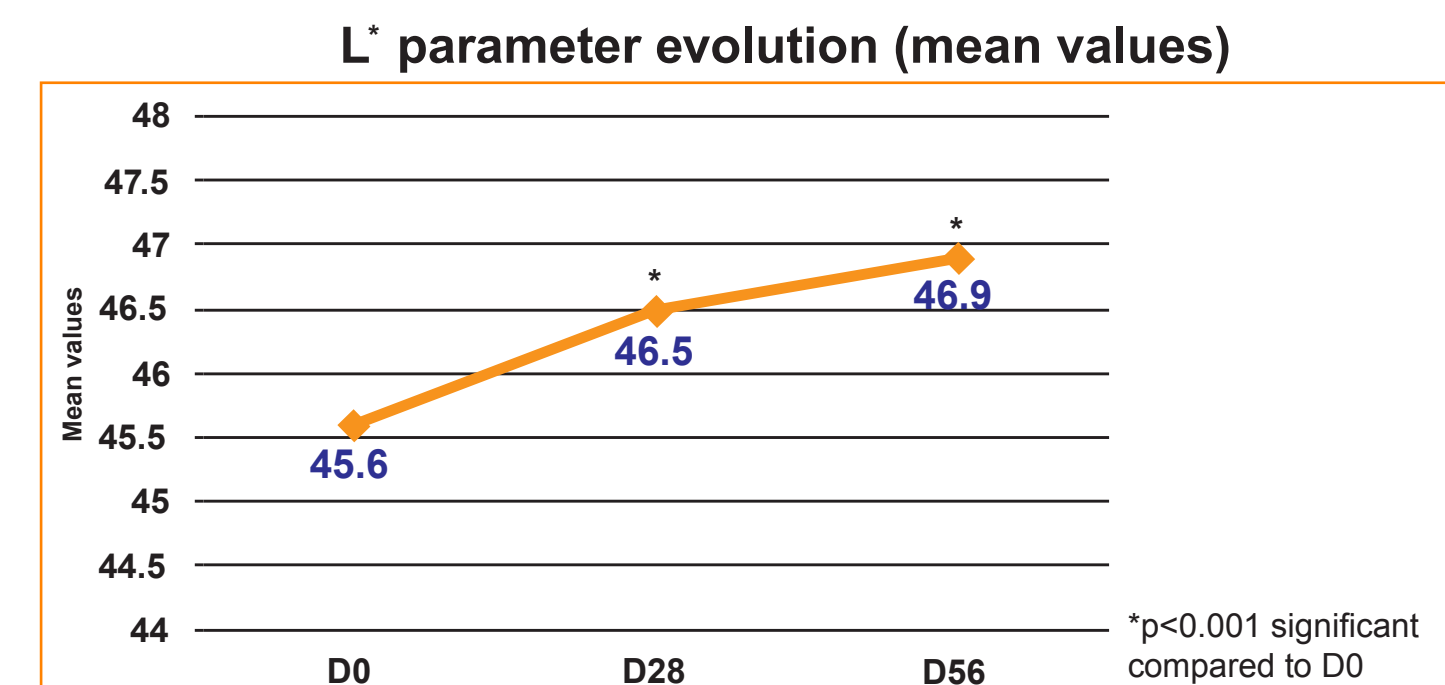
MASI (N=55)	D0	D28	D56	%D28/D0	%D56/D0
Mean	15.6	14.8*	13.5*	-5.4 %	-13.4 %
SD	4.7	5.1	5.3		
Moderate MASI (N=42)	D0	D28	D56	%D28/D0	%D56/D0
Mean	13.3	12.3*	11.0*	-7.8 %	-17.6 %
SD	2.3	2.4	2.7		
Severe MASI (N=13)	D0	D28	D56	%D28/D0	%D56/D0
Mean	23	22.8	21.7*	-1.2 %	-3.4 %
SD	1.8	1.9	2.3		

*p<0.001

This visual evaluation was confirmed by the colorimetric measurements. A significant skin lightening was measured at 4 and 8 weeks (increased L and ITA° parameters).

Significant (p<0.001) increase of the luminance at D28 and D56 showing a significant lightening of the skin (effect observed on both moderate and severe melasma).

Significant (p<0.001) increase of the ITA° values at D28 and D56 showing a significant decrease of the pigmentation level of the skin (effect observed on both moderate and severe melasma).



CONCLUSION

The use of a sunscreen product with high protection against UV radiation and short visible light can offer a good protection and reduce the melasma intensity in real sun exposure conditions in patients with dark skin and having moderate to severe melasma.