

INTENSE PULSED LIGHT COMBINED WITH 0.5% LIPOSOME ENCAPSULATED 5-ALA FOR FACIAL ACNE IN ASIAN: A PILOT STUDY

CK Yeung, Samantha Shek, Carol Yu, Taro Kono, Henry H Chan, University of Hong Kong, Chinese University of Hong Kong, Hong Kong, China, Tokyo Women's Medical School, Tokyo, Japan

Background and Objectives

Photoinactivation of *Propionibacterium acnes* is induced by converting topical 5-aminolevulinic acid (ALA) into protoporphyrin IX which is activated by intense pulsed light (IPL).

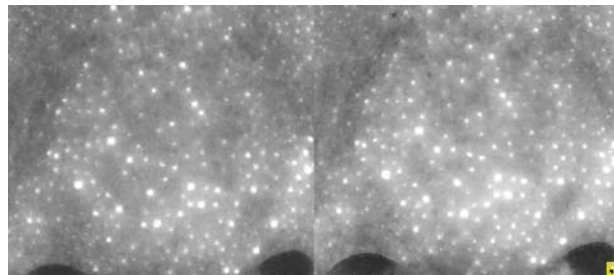
Liposomes are used in spray form to encapsulate and enhance the carriage of 5-ALA into the epidermis.

This enables a reduction in the concentration of topical 5-ALA to 0.5%, and a corresponding reduction in risk of phototoxicity.

This pilot study was to evaluate the improvement of facial acne in Asians using photodynamic therapy with the liposomal ALA spray.

Baseline fluorescence

30 minutes after Photospray



Facial Acne at Baseline



1 month after last treatment



Study Design and Methods

12 Chinese (10 males) of phototypes IV or V and mild to moderate acne were enrolled

3 treatments were given 3 weeks apart with IPL combined with the liposomal 0.5% 5-ALA spray as monotherapy during this period.

The entire face was sprayed every 5 minutes for one hour prior to IPL.

IPL device from the Ellipse Flex system (Danish Dermatologic Development, Denmark) emitting wavelengths of 400-720 nm was used with 3 passes of 5 J/cm² and pulse duration of 50 ms.

Fluorescence intensity and acne lesion counts were evaluated by blinded assessment using standardized and UV photography before each treatment and 4 weeks after the final treatment.

Results and Conclusions

All 12 patients completed three liposomal ALA-IPL treatments.

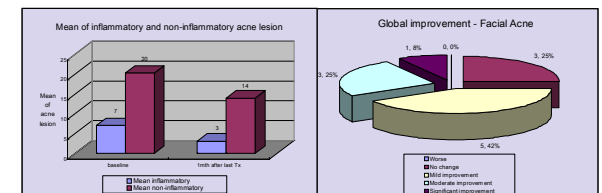
Increased fluorescence was generally noted in patients 15 to 30 minutes at the end of spraying.

Most had reduction of facial acne at 1 month after treatment with mean clearance of 58% in inflammatory lesions ($p=0.018$) and 31% in non-inflammatory lesions ($p=0.026$).

Mild (44%) to moderate (33%) improvement of facial acne by subjective evaluation.

No significant side effects including pain were observed.

The use of liposomal 5-ALA spraying at 5 minute-interval for one hour in the treatment of facial inflammatory acne in Asian with IPL seems to be promising.



Correspondence: Henry Chan M.D., e-mail: hhchan@hku.hk

¹Loan of intense pulsed light device for clinical study. Content discusses non-FDA approved device or off-label use.