ABSTRACT BOOK
INVITED SPEAKERS' ABSTRACTS

24TH WORLD CONGRESS
OF DERMATOLOGY
MILAN 2019

A new ERA for global Dermatology
10 – 15 JUNE 2019
MILAN, ITALY

LASERS

AN ULTRASTRUCTURAL-BASED COMPARATIVE STUDY ON THE EFFECTS OF LIGHT-BASED SKIN REJUVENATION MODALITIES

Tokuya Omi [1]

Queen's Square Medical Center, Dermatology, Tokyo, Japan [1]

Background: Skin rejuvenation has become a very much sought-after and patient-driven goal, and a number of light-based modalities with varying degrees of invasiveness have attracted attention. Ultrastructural assessment of post-treatment effects which suggest the mechanisms behind skin rejuvenation could be a useful way to compare a cross-section of popular modalities.

Aims: Patients increasingly require effective skin rejuvenation with minimal downtime, so minimally- to noninvasive approaches have become more sought after. The present study compares the sequence of events in the skin following treatment with minimally-invasive laser, intense pulsed light (IPL) and noninvasive light-emitting diode (LED) approaches from a histological standpoint using light microscopy and transmission electron microscopy (TEM). Systems compared were an LED phototherapy system (633 nm), an IPL system (530 nm – 750 nm), a pulsed dye laser (585 nm), and a fractional CO_2 laser (10,600 nm)

Results: From the light microscopy and TEM findings the stages after treatment were basically similar for the laser-treated skin, and followed the usual wound-healing process. In the IPL-treated group skin damage was minimal with changes more limited to the degree of pigmentation than to general architectural changes. In the LED-treated skin, a fully atraumatic response was seen with beneficial fibroplasic changes over time noted in the fibroblasts, potentially suggesting neocollagenesis accompanied bt mast cell degranulation.

Conclusions: With the laser systems used in the current study, beneficial changes in skin architecture were observed over time suggestive of rejuvenation of photoaged skin, occuring reasonable quickly.

24TH WORLD CONGRESS
OF DERMATOLOGY
MILAN 2019

International League
of Dermatological Societies
Skin Health for the World
ILDS

1885
Società Italiana di Dermatologia
(SIDeMaST)