ABSTRACT BOOK
ABSTRACTS

24TH WORLD CONGRESS OF DERMATOLOGY MILAN 2019

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

TELEDERMATOLOGY

INTEREST OF GLOBAL EVALUATION ACNE (GEA) SCALE ON FACIAL PHOTOGRAPHS FOR DIFFERENT ETHNICITIES

Sophie Seité [1] - Dominique Moyal [1] - Khaoula Abidi [1] - Guénaelle Le Dantec [1] - Amir Khammari [2] - Brigitte Dreno [2]

La Roche-posay Dermatological Laboratories, ., Levallois-perret, France [1] - Service De Dermatologie, Chu Nantes, Nantes, France [2]

Background: GEA scale is widely used to diagnose acne severity for Caucasian skin in Europe. GEA scale is validated for on face to face and on photo evaluation.

Objective: The main objective of this study was to assess the suitability of GEA scale for acne severity diagnosis on photo images for Black African and Asian (Chinese) ethnicities compared to Caucasians.

Materials and Methods: 834 subjects (397 Caucasian – 294 Black African – 143 Chinese) with all acne severities were included in this analysis.
Each subject was photographed with 2 types of smartphones (ANDROID – Samsung S8 and IOS – iPhone 7 devices) providing two sets of 3 images (face, left and right profiles).
Three acne experts using GEA scale evaluated all sets of images.
Inter- and Intra-rater reproducibility were evaluated. For intra-rater reproducibility, comparison between evaluations obtained from IOS and ANDROID sets were used.

Results: There was a substantial intra- rater reproducibility for all ethnicities and all dermatologists (Kappa from 0.65 to 0.84, P < 0.0001).
The best agreement among the three evaluators was obtained for Black African subjects on IOS pictures ("Substantial" – Alpha = 0.69 P < 0.0001). The lower agreement was obtained for Chinese subjects on ANDROID pictures ("Fair" – Alpha= 0.38 P < 0.0001).
Our results show that the agreement depends on the type of device. It seems that even if the two types of devices has the same camera quality, the color rendition has an influence on acne severity assessment.

Conclusion: Our study demonstrates that assessment of acne severity on digital photos using GEA scale is also possible for Black African and Asian (Chinese) ethnicities.