16127

Efficacy of ingenol mebutate in patients with actinic keratosis on face and scalp: Subgroup analysis of a 12-month observational follow-up study according to age (<65 and ≥65 years)

Hee Jin Kim, MD, Icahn School of Medicine at Mount Sinai; Nikeshia Dunkelly-Allen, PharmD, Jes B. Hansen, MSc, PhD, Karen A. Veverka, PhD, LEO Pharma; Mark Lebwohl, MD, Icahn School of Medicine at Mount Sinai

Objective: To assess 12-month, sustained, complete clearance of actinic keratoses (AKs) according to age after treatment with ingenol mebutate gel (IMB) 0.015% once daily for 3 consecutive days on face and scalp.

Methods: Sustained AK clearance rates and median time to recurrence were evaluated in each age subgroup (<65 and ≥65 years) using Kaplan-Meier to handle the right censoring of patients during the 12-month follow-up period. The "recurrence rate" was estimated by Kaplan-Meier "failure" estimate (the probability of having a recurrence) at the day of the visit, which was expressed as a percentage. Kaplan-Meier median estimates were computed using the Brookmeyer and Crowley method. Mean percentage sustained lesion reduction rates were analyzed in each age subgroup.

Results: At month 12, 35.3% (95% CI 23.0-48.8; $P = .3717$) and 58.5% (95% CI 43.4-70.9; $P = .1814$) of patients aged <65 y and ≥65 y sustained complete clearance. The mean percentage sustained lesion reduction was 81.4% (±21.3) for patients <65 y and 89.9% (±14.1) for those ≥65 y.

Conclusions: In patients who achieved complete clearance of AKs after treatment of the face or scalp with topical IMB 0.015%, complete clearance of AKs was sustained for at least 12 months in 35.3% and 58.5% of patients aged <65 y and ≥65 y, respectively, with no significant difference. IMB shows prolonged sustained clearance, regardless of age, even in patients who may have longer disease duration.

Commercial disclosure: Sponsored by LEO Pharma.

16150

The influence of visual aids on patient motivation to obtain recommended over-the-counter acne products

Katie B. Homan, MD, Department of Dermatology, Baylor Scott & White Medical Center; Lindsay M. Bicknell, MD, Baylor Scott & White Health, Texas A&M Health Science Center

Background: Acne is one of the most common dermatologic conditions and affects more than 80% of individuals at some point in their lifetime. Treatment can be complex, but topical therapies are an important first-line component. Unfortunately, adherence to acne treatments is poor and lack of adherence can lead to increased economic burden for both the health care system and patients. There are numerous studies discussing poor adherence, but strategies for mitigating poor adherence are lacking. We hypothesize that low adherence to topical medications in acne is due at least in part to patients not obtaining recommended products.

Objective: To evaluate the change in patients' motivation to obtain recommended over the counter acne treatment products when provided with handouts containing images of the products compared with handouts without images of the products.

Methods: We included patients diagnosed with acne vulgaris and its variations and evenly assigned them to two groups. The first group was given instructions with visual images of their recommended over the counter acne products, and the second group was given standardized written-only instructions on the same recommended products (benzoyl peroxide 10% wash and adapalene 0.1% gel). Patients were then survey at 3-month follow-up to determine if they purchased the recommended products.

Results: The results from this study, and the implications for guiding treatment in acne patients will be presented, as well as the impact the results have for other conditions in dermatology. This may provide a framework for optimized delivery of treatment recommendations in clinical medicine.

Commercial disclosure: None identified.

16202

Effect of high-mobility group box 1 on keratinocyte and fibroblast and its involvement in the development of psoriasis

Chan-Yang Lee, MD, Department of Dermatology, School of Medicine, Kyung Hee University, Seoul, Korea; In Hye kang, MD, Department of Dermatology, School of Medicine, Kyung Hee University; Ki-Heon Jeong

Background: Psoriasis is a chronic immune-mediated inflammatory skin disease, in which keratinocyte and fibroblast play an important role. High-mobility group protein B1 (HMGB1) is a nuclear protein that routinely participates in the maintenance of genomic stability and the regulation of gene transcription. HMGB1 is also a physiological activator of immune responses that can be released from keratinocyte and fibroblast nuclei in psoriatic lesions. Although it is implicated in the pathogenesis of autoimmune diseases and cutaneous disorders, the precise role of HMGB1 in psoriasis has yet to be studied.

Objective: We investigated the proinflammatory effect of HMGB1 on keratinocyte and fibroblast and its involvement in the development of psoriasis.

Methods: Keratinocytes and fibroblasts were exposed to ultraviolet (UV) B. Thereafter, release of HMGB1 were measured by RT-PCR and ELISA. Then keratinocytes and fibroblasts were treated with recombinant HMGB1 (rHMGB1) and production of inflammatory factors such as interleukin (IL) 1, -6, -8, and -18 and transforming growth factor (TGF) β1 were measured by ELISA.

Results: After UV irradiation, the mRNA level of HMGB1 was increased in the fibroblast but it was decreased in the keratinocyte. Extracellular level of HMGB1 was significantly increased in both keratinocyte and fibroblast, at 24 and 48 h. After rHMGB1 treatment, expression of inflammatory factors increased. IL-1, -6, -8, and -18 and TGF-β1 were shown to be up-regulated by HMGB1.

Conclusions: HMGB1 secreted from keratinocytes and fibroblast may promote development of psoriasis through facilitating the production and secretion of inflammatory cytokines.

Commercial disclosure: None identified.

16221

Nail and skin changes on long second toes: A study of 118 pairs of toes

Geun-Hwi Park, MD, Hoon-Soo Kim, MD, PhD, Hyun-Chang Ko, Byung-Soo Kim, Busan, Korea; Moon-Bum Kim, MD, PhD, Department of Dermatology, School of Medicine, Pusan National University

Background: Nail can be affected by trauma, infection, and systematic disorders. In particular, the toe nails are exposed to the repeated and cumulative minor traumas, which usually result in thickened, splitted, and discolorated nails. Considering these, it can be inferred that the long second toe can be related to various nail and skin changes by repeated minor traumas such as friction in shoes, but the study or report on this topic hasn't been done yet. The purpose of this study was to introduce various nail and skin changes on long second toe.

Methods: We analyzed the kinds of nail/skin changes of 59 patients with 118 long second toe, enrolled at Pusan National University Hospitals (Busan and Yangsan) from 2013 to 2019. The ratio of male to female patients was 1:2.5. There was no significant difference in the incidence of left and right toe nail and skin, and 40 (68%) patients presented bilateral distribution. The most common nail change on long second toe was nail flaking (73, 61.9%), followed by onycholysis (53, 44.9%), melanonychia (49, 41.5%), nail thickening (45, 38.1%), and subungual hyperkeratosis (40, 33.9%). The most common skin change was callus on toe tip (60, 50.8%), followed by callus on toe joints (47, 39.8%), periungual erythema (20, 16.9%), and periungual hyperpigmentation (12, 10.2%). Twenty (20/59, 33.9%) patients also showed moderate or greater hallux valgus. Through this study, the dermatologists can recognize and diagnose the nail and skin changes of long second toe.

Commercial disclosure: None identified.