Cosmeti-QoL: A tool for assessing quality of life in cosmetic dermatology
(Poster reference number 5435)

Charles Taieb, MD, Pierre Fabre, Boulogne Billancourt, France; Vincent Sibaud, MD, Laboratoires Avene, Boulogne Billancourt, France

Context: The assessment of quality of life (QoL) in dermatology is becoming increasingly popular as demonstrated by the creation and development of numerous questionnaires for the principal diseases of the skin. Paradoxically, although cosmetic dermatology is rapidly developing, there is no questionnaire to assess the impact of these products on the QoL of the women that use them.

Objective: There was therefore a need for the creation of the Cosmeti-QoL.

Methods: This therefore involved four successive and complementary steps: creation of an exhaustive list of items created from a wide-reaching literary review, the experiences of each member of the working group, and the answers obtained from a representative sample of women aged 25 years and over initially; analysis of the validity of the content and a comprehension test; condensation of the items for easier use; and finally determine how the scores are to be calculated and the psychometric validation. Using cross-over experiences, an initial list of 24 first expressions concerning the preoccupations of women regarding their skin was defined. Secondly, each listed expression was reworked and several expressions were grouped together for their similarities. The 24 items were reduced to 12, and it was these 12 items that were formulated as questions.

Results: The comprehension and reproducibility of the questionnaire was confirmed over the course of 4 successive evaluations (days 0, 6, 15, and 21). The questionnaire is easy to use. One thousand and two French women (representative sample) were asked to complete the Cosmeti-QoL. The Cosmeti-QoL was correlated to age: 36 was recorded in the 25-44 year, 40 in 45-64, and 42 in 65 years and over. The observed QoL was lower the more sensitive the skin: the Cosmeti-QoL score was 36, 37, 39, and 46 in subjects who reported that their skin was not sensitive, slightly sensitive, sensitive, or very sensitive, respectively ($P < .001$). The Cosmeti-QoL score was 50.73 in women who claimed to have crumpled facial skin (vs 37.46) and 50.17 in women who declared having rough facial skin (vs 38.41).

Discussion: The Cosmeti-QoL scale, which is essentially based on the women's point of view, is a valid, pertinent, and well accepted tool enabling the assessment of QoL perceived through the skin. The Cosmeti-QoL is more altered the more intense the signs of aging on the face, wrinkles, skin sagging, or dark or brown spots are observed, and this is the case irrespective of the age range

Commercial support: 100% is sponsored by Laboratoires Avene.

Design of repellent-free water/oil emulsions against tiger mosquito
(Poster reference number 5424)

Laia Campderros, Antonio Puig SA, Barcelona, Spain; David Panyella, PhD, Antonio Puig SA, Barcelona, Spain; Javier Lucientes, PhD, University of Zaragoza Department of Animal Pathology, Zaragoza, Spain; Joan Vilaplana, MD, PhD, Hospital Clinic, Barcelona, Spain

Background: *Aedes* (Stegomyia) *albopictus* is an invasive mosquito from Southeast Asia which has become increasingly present in Spain. The tiger mosquito, as it is commonly known, is an epidemiologically important vector for transmission of diseases, such as malaria, dengue, etc, and its bites provokes significant skin manifestations. N,N-diethyl-3-methylbenzamide (DEET) is generally considered the "criterion standard" repellent, providing long-lasting protection of up to 8 hours from time of application. However, some reports of severs reactions have been described. Furthermore, many consumers find the odor and sensation on the skin unpleasant. Natural alternatives, such as those based on plant extract (citronella and lemon eucalyptus essential oils) have good repellent properties, but are made up off relatively volatile constituents and may give rise to sensitization and allergenic reactions.

Purpose: The objective was to test whether water in oil emulsion per se could provide comparable mosquito repellency than 5% to 10% DEET formulations.

Methods: Experiments were conducted using an autochthonous colony of *A albopictus*. Adult mosquitoes were kept inside cages measuring 30 cm $\times$ 30 cm $\times$ 30 cm (Bugdorm) in a separate room, where temperatures were maintained at 25 $\pm$ 1°C and a relative humidity at 80%. Twenty- to 22-day-old nulliparous females, starved for 24 hours, were selected for the experiment. Pig blood was transferred to a chamber of Hemotek feeding apparatus that maintains the blood heated and which the original membrane was replaced with a 5 cm $\times$ 5 cm piece of chicken skin, to simulate human skin and be able to apply the emulsions at 2 mg/cm^2. Two different water/oil emulsions, containing 0%, 5%, and 10% of DEET plus a negative control were tested using 4 cages with 30 female mosquitoes in each one. Membranes were exposed to mosquitoes for short periods of time up to 5 hours. The total number of landing, probing, and feeding attempts was recorded along with the time taken before each first attempt.

Results: The formulated emulsion 1 gave around -85% of landing, -82% of probing, and -86% of feeding versus negative control. The formulated emulsion 2 gave around -59% of landing and -54% of probing versus negative control. It is noteworthy that 100% repellency (0% mosquito bites) was maintained for 5 hours.

Conclusions: Repellent-free water/oil emulsion containing specific film-forming ingredients confers excellent barrier properties that provide per se in vitro protection against *A albopictus* for up to 5 hours.

Commercial support: None identified.

Defining pharmacologic treatment failure in tinea infections using medical claims data
(Poster reference number 5280)

Rajesh Balkrishnan, PhD, Colleges of Pharmacy and School of Public Health, Ann Arbor, MI, United States; Alan Fleischer, MD, Merz Pharmaceuticals, Greensboro, NC, United States; Bhushan Hardas, MD, MBA, Merz Pharmaceuticals, Greensboro, NC, United States; Justin Gatwood, MPH, Colleges of Pharmacy and School of Public Health, Ann Arbor, MI, United States; Stefan Plaum, MD, Merz Pharmaceuticals, Greensboro, NC, United States

Objective: Tinea cruris, tinea pedis, and tinea corporis are prevalent skin conditions, and a variety of antifungal agents are used in their treatment. However, efficient mechanisms do not exist to determine the population-wide comparative effectiveness of various pharmacologic treatments available.

Methods: An algorithm was developed to define treatment failure based on clinical expertise to define treatment failure in tinea infections based on relapse of infection as evidenced by follow up visits to dermatologists. Adherence was estimated to antifungal medications based on pharmacy refill records. All analyses used data from the Medical Expenditure Panel Survey for the years 2007 and 2008.

Results: Preliminary results of the analyses show that treatment failure is common in tinea infections as evidenced by relapse of infection, which in turn is associated with treatment switches, discontinuations, and increased medical provider visits. An association also exists between decreased treatment adherence and increased rates of treatment failure, which could suggest variations in the comparative effectiveness of pharmacologic treatments available in the market with better adherence profiles, which in turn are cost effective in the long run.

Conclusions: The combination of relatively high treatment failure rates and infection relapse rates warrants consideration of ways in which antifungal therapy can be delivered so that treatment failure can be avoided. Claims data offer evidence to support the growing incidence of treatment failures and infection relapse in fungal skin conditions.

Commercial support: Supported by Merz Pharmaceuticals, LLC.

Determinants and rates of referral to dermatologists amongst newly diagnosed psoriasis patients in the United Kingdom
(Poster reference number 4802)

Javaria Mona Khalid, MS, PhD, United BioSource Corporation, London, United Kingdom; Andrew Maguire, MS, United BioSource Corporation, London, United Kingdom; Dina Chau, PharmD, Amgen Inc, Thousand Oaks, CA, United States; Gary Globe, PhD, MBA, Amgen Inc, Thousand Oaks, CA, United States; Kathleen Fox, PhD, MHS, Strategic Healthcare Solutions LLC, Monkton, MD, United States

Background: In the UK, referrals to specialists are initiated by primary care general practitioners (GPs). The study objective is to identify determinants of GP referrals to dermatologists for patients with psoriasis.

Methods: Patients referred to a dermatologist were identified in The Health Improvement Network (THIN) database amongst a cohort of 10,832 newly diagnosed patients with psoriasis between July 1, 2007 and October 31, 2009. A nested case-control design was applied with referred cases matched to four nonreferred controls by GP practice. Conditional logistic regression was used to calculate adjusted odds ratios (ORs) to identify determinants of referral.

Results: Overall referral rate was 18.10 (range, 17.32-18.92) per 100 person-years. The referred cohort (N = 1950) was 49% male and had an average age at diagnosis of 48 years. 61% were referred within 30 days of diagnosis (N = 1183), while 39% were referred after 30 days (later referrals; N = 767). Median time to referral from diagnosis was 5.6 months (interquartile range, 2.8-11.5) for later referred patients. For these later referred patients, after adjusting for demographics and comorbidities, an increase in the number of GP visits before referral increased the likelihood of referral (OR, 1.87; 95% CI, 1.73-2.01) compared to controls. A prescription of vitamin D_3 analogues 30 days before referral also increased the likelihood of being referred (OR, 4.67; 95% CI, 2.78-7.84), as did corticosteroids (OR, 2.45; 95% CI, 1.45-4.07) and tar products (OR, 1.95; 95% CI, 1.02-3.75), compared to controls.

Conclusion: This study describes newly diagnosed patients with psoriasis in primary care who were referred to dermatologists. Most patients were referred immediately after a diagnosis, possibly indicating greater severity of disease. An increase in the number of GP visits, and a prescription of vitamin D_3 analogues, corticosteroids, or tar products was associated with an increased likelihood of referral for those who were not immediately referred.

Commercial support: Sponsored by Amgen Inc.