13145

Comparative drug survival of biologics in psoriasis: A systematic review and meta-analysis

Ahmed Mourad, BSc, MD, Ahmed Mourad, University of Calgary; Robert Gniadecki, MD, PhD, DMSci

Background: Psoriasis is a chronic immune-mediated dermatologic condition. Drug survival measures the time until treatment discontinuation and has been widely applied to measure the real-world therapeutic effectiveness of various biologic therapies in psoriasis.

Methods: Using novel statistical methodology, we conducted a comparative meta-analysis of pooled hazard ratios (for adalimumab, etanercept, infliximab, secukinumab, ixekizumab, and ustekinumab) derived directly from the published Kaplan-Meier survival curves in psoriasis. Based on these pool data, overall drug survival rates including best- and worst-case biologic survival rates were calculated.

Results: The pooled analysis revealed ustekinumab to have superior biologic persistence at 2 years and 5 years, when compared with the TNF-alpha inhibitors (adalimumab, etanercept and infliximab), and secukinumab. There was no statistical difference in the pooled overall drug survival hazard ratios for secukinumab and the TNF-α inhibitors. Secukinumab was superior to ixekizumab in the pooled survival analysis at 5 years (HR: 2.27, 95% CI 1.15-4.45). Adalimumab was superior to etanercept and infliximab drug survivals at 5 years (HR: 1.13, 95% CI 1.09-1.62). Pooled 2-year drug survival rates for adalimumab, etanercept, and infliximab were 58.9%, 47.6%, and 48.9%, respectively. The pooled drug survival rates for these biologics at 5 years were 45.1%, 34.3% and 33.4%.

Conclusions: This up-to-date and comprehensive meta-analysis demonstrated ustekinumab's superior drug survival compared with the TNF-alpha inhibitors and secukinumab. Estimated pooled 2- and 5-year drug survival rates for ustekinumab, secukinumab, ixekizumab, adalimumab, etanercept, and infliximab were calculated and likely will serve as a useful tool for patient communication and treatment decision-making.

Commercial disclosure: None identified.

13188

A new Sensitive Skin questionnaire applicable to children

Clarence de Belilovsky, MD, Gaëtan Boyer, Gaëlle Bellemère, PhD, IRD Caroline Baudouin, Laboratoires Expanscience

Background: Sensitive skin (SS) affects ~50% of the adult population. Its identification is based on the description of subjective sensations (tingling, burning) and objective signs (redness, dryness) may appear. In children, a PS is often reported by the parents but there is currently no validated method of detection. This work aims at setting up an identification questionnaire by the parents of the SS of their child under 4 years old.

Methods: 1) The external aggressions were based on an international epidemiologic study on SS among more than 8000 children. 2) Erythema and symptoms observed by the parents entered a diagnostic algorithm of the SS. 3) This questionnaire was used to recruit 4 groups (children and adults with and without SS) in an exploratory study of the child's SS. 4) It has also been applied to the adult during a clinical study.

Results: 1) Skin aggression factors have been grouped into 3 classes (environmental, chemical, mechanical). 2) A reaction (at least 1 objective sign (redness) or 2 subjective signs) to at least 2 classes define SS. 3) The SS (33 children, 10 adults) is drier (clinical, corneometry) and more inflammatory than controls (44 children, 10 adults). The barrier function remains normal. 4) After 28 days of application of a cosmetic ingredient in hemi-face vs placebo, previously identified SS markers tended to nonsensitive skin.

Conclusions: This multistep exploratory work has shown that this new questionnaire, developed to identify sensitive skin in a paediatric population, is valid regardless of age.

Commercial disclosure: 100% sponsored by Laboratoires Expanscience.

13189

Evaluation of tolerability and cleansing properties of liniment in comparison to water in the diaper area skin care in a pediatric population

Clarence de Belilovsky, MD, Gaëtan Boyer, Gaëlle Bellemère, PhD, Caroline Baudouin, Laboratoires Expanscience

Background: Cleansing of babies' diaper area is necessary because multiple exposures to urine and feces alter skin barrier and may lead to diaper dermatitis.

Objective: To evaluate tolerability and washing properties of water compared with liniment for diaper area hygiene.

Methods: An open-label clinical study has been performed on 40 subjects aged from 3 to 12 months with a cross over design. During a first period of 7 days, parents used water or liniment for diaper care and switched for a second period of 7 days. At day-0 and day-7 clinical evaluations, skin hydration, TEWL, pH, and parent self-assessment were performed. Biological samples of skin surface were collected to assay cholesterol as a marker of residual feces impurity. At day 14 a comparative questionnaire was filled by the parents.

Results: Both water and liniment were well tolerated. No subject developed diaper dermatitis during the study. Liniment improved suppleness and softness significantly better than water. Parents considered at day 14 that liniment cleansed more effectively than water. Instrumental measurement showed that liniment improved hydration and trans epidermal water loss while water was devoid of beneficial effect. No pH modification was observed after either liniment or water usage. Cholesterol assessed as feces biomarker was significantly lower after 7 days with liniment usage compared with water.

Conclusions: This study demonstrates the tolerability of liniment for diaper skin cleansing. Some results suggest that it may improve both washing and diaper skin protection compared with water.

Commercial disclosure: 100% sponsored by Expanscience.

13190

Pregnant woman skin characterization

Clarence de Belilovsky, MD, Gaëtan Boyer, Gaëlle Bellemère, Caroline Baudouin, Laboratoires Expanscience

Background: Properties of the healthy abdomen skin during pregnancy and after delivery have not been documented. We studied this topic through 2 different studies.

Methods: Biomechanical properties have been measured on healthy abdominal skin by cutometry on 15 nulliparae nonpregnant women and on 26 primiparae women at 8 months of pregnancy and 4 months after delivery. Structure of healthy skin and of stretch marks has been observed using reflectance confocal microscopy (RCM) in a second study including 20 nulliparae non-pregnant women and 15 primiparae women at 8 months of pregnancy and 4 months after delivery.

Results: Abdomen skin extensibility of 8th-month pregnant women is lower and the visco-elastic component is significantly higher than the non-pregnant women. 4 months after delivery, extensibility is higher and firmness is lower than the non-pregnant women. RCM acquisitions show that the density of dermal papilla decreases during pregnancy and stays low after delivery. The collagen network (fibrillar structure appearance) and the dermal papillae shape (elongated) are modified only in stretch marks and not in healthy stretched skin. Last, we observed in most pregnant women a lack of bright cells surrounding dermal papillae, morphological characteristic typically observed in psoriasis lesions.

Conclusions: The high cutaneous stress applied during pregnancy impacts extensibility, viscoelastic component, firmness, and structure of the skin with a persistent effect several months after delivery. The stretched skin during pregnancy seems to share some inflammatory characteristics with psoriasis lesions.

Commercial disclosure: 100% sponsored by Expanscience.