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Examining psoriasis treatment patterns and temporal trends from 2012 to 2018

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Background: New psoriasis treatments have emerged without clear guidelines on their therapeutic placement. We describe real-world 2012-2018 treatment trends among newly treated patients.

Methods: We selected adults with psoriasis who initiated conventional oral treatment (COT; methotrexate, cyclosporine, azathioprine), apremilast (APR), TNF inhibitor, or IL inhibitor from January 1, 2012, to June 30, 2017, and had ≥12 months pre/post-index continuous enrollment in the Truven Health MarketScan Commercial and Medicare Supplemental Database. Treatment discontinuation (treatment gap ≥90 days) or switch (therapy other than index) ended the line of treatment. Patient characteristics and first/second-line utilization patterns were assessed until end of follow-up.

Results: Overall, 9478 patients with psoriasis were included (COT: n = 3475; APR: n = 1642; TNF: n = 3343; IL: n = 1018). Mean age was 46 years; 52.3% were female (COT and APR groups had more females). Mean follow-up was 929 days. First-line IL use remained consistent each year, while COT and TNF use decreased and APR use increased. At end of follow-up, more patients initially treated with APR (31.6%) or IL (31.4%) remained on treatment vs TNF (26.4%) or COT (10.6%). TNF had the highest switch rate to another systemic treatment (46.5%), followed by COT (38.5%), APR (31.9%), and IL (22.5%). IL had the most restarts after discontinuation (52.4%), followed by APR (22.1%), TNF (21.8%), and COT (17.1%). Second-line COT and TNF use decreased; APR and IL use increased.

Conclusions: In this claims-based analysis, first-/second-line APR treatment increased, while COT and TNF treatment decreased. More patients persisted with first-line APR or IL versus COT or TNF.

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Prevalence and impact of psychosocial comorbidities on health status among patients with moderate to severe atopic dermatitis in the United States: Analysis of the 2017 US National Health and Wellness Survey

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Background: Atopic dermatitis (AD) is strongly associated with psychosocial comorbidities; this analysis examines the relationship between the presence of these comorbidities and patient outcomes.

Design: Cross-sectional real-world study.

Methods: Data were analyzed from the 2017 US National Health and Wellness Survey, a general health survey administered to a representative sample of adults. Respondents who reported a physician diagnosis of AD/eczema and were considered moderate to severe based on DLQI ≥6 were included. Generalized linear models (controlling for demographic and health history covariates) were used to examine the relationship between psychosocial comorbidities (sleep difficulties and anxiety based on self-report, depression [Patient Health Questionnaire 9]) and health outcomes (physical and mental health status [Short Form 36 v2], work productivity [Work Productivity and Activity Impairment questionnaire], and health care resource use).

Results: Among n = 1017 respondents with moderate to severe AD (73.6% female, mean age = 37.4 years), 56.6%, 60.9%, and 27.8% reported experiencing sleep difficulties, anxiety, and moderate/severe depression, respectively. The presence of these psychosocial comorbidities were significantly associated with reduced physical health status (adjusted means: minimal depression = 47.5 vs severe depression = 41.5; no sleep difficulties = 42.5 vs severe sleep difficulties = 39.1; all $P < .05$), mental health status (minimal depression = 45.3 vs severe depression = 22.2; no anxiety = 41.7 vs anxiety = 33.5; no sleep difficulties = 37.7 vs severe sleep difficulties = 29.1; all $P < .05$), and increased overall work impairment (minimal depression = 42.4% vs severe depression = 76.5%; no anxiety = 51.9% vs anxiety = 57.6%; no sleep difficulties = 44.2% vs severe sleep difficulties = 54.7%; all $P < .05$). The same pattern was observed for health care resource use variables.

Conclusions: Psychosocial comorbidities are frequently reported and are significantly associated with health status, work loss, and health care resource use.

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Utility of 1565-nm nonablative fractional erbium laser in treatment of pediatric patients with acne scars measured by reflectance confocal microscopy

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Background: Acne is a multifactorial inflammatory disease. It affects up to 80% of adolescents. It's not a disabling disease, but it produces a high psychosocial impact. Acne resolves within an aberrant process with resorption of collagen, leaving scars. For acne scars there are multiple treatments. We use 1565-nm nonablative fractional erbium laser and confocal reflectance microscopy (CRM), which in real time offers the highest level of resolution (near histologic) of superficial skin lesions, to measure the depth of the acne scars before and after the treatment.

Objective: To describe improvement of acne scars after four sessions of 1565 nm non-ablative fractional Erbium laser mesuared by reflectance confocal microscopy.

Methods: This was conducted with a quasiexperimental design (before-after study) using CRM to measure the depth of acne scars in pediatric. We use dermal junction (DJ) and dermis (D) as reference for measures.Then we use Pearson coefficient and linear regression to analyze the data.

Results: The data suggest that mesuare of DJ and D show a decrease after treatment. DJ decreases 20% with respect to the initial measurement. D decreases 30% respect to the initial. Variables decrease in a linear behavior, suggesting that deeper in the scar is better the elevation after treatment. However, a more significant sample is required to conclude this increasing linear behavior of DJ and D.

Commercial disclosure: None identified.

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Clinical efficacy of a novel growth factor–based serum: A randomized, double-blind, placebo-controlled, cross-over study

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Topical physiologically balanced growth factors have been shown to provide improvements in skin rejuvenation. Advancements in cell culture technology have enabled harvesting of a novel growth factor blend derived from neonatal human fibroblasts cultured under hypoxic conditions, leveraging unique properties exclusive to this particular environment. To assess the efficacy and tolerability of the novel growth factor–based serum (TNSA) on subjects presenting with moderate to severe facial photodamage, a 24-week, randomized, double-blind, vehicle placebo–controlled, cross-over study was conducted. 66 women aged 37-70 with Fitzpatrick skin types I-V completed the 24-week study (Active: n = 43, Control: n = 23). During phase 1 (baseline to week 12), TNSA (Active) and vehicle (Control) were applied to the face twice daily. Both groups also used a basic skincare regimen (cleanser and moisturizer with SPF). During phase 2 (week 12-24), Control crossed-over and received TNSA while Active continued with TNSA. TNSA provided significant improvements over Control in coarse lines/wrinkles at weeks 4, 8, and 12; overall photodamage, fine lines/wrinkles and overall hyperpigmentation at weeks 8 and 12; and sagging at week 12 (all $P \leq .01$; Wilcoxon signed rank test). After Control cross-over to TNSA during phase 2, significant improvements in overall photodamage, sagging, coarse lines/wrinkles, and fine lines/wrinkles were achieved at weeks 18 and 24 compared with week 12 "baseline." Results from the validated patient reported outcome tool Face-Q and histologic analysis of biopsies support improvements observed by the investigator. Study results suggest that the novel growth factor-based serum may provide a treatment option for patients seeking facial skin rejuvenation.

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