AARS HOT TOPICS MEMBER NEWSLETTER

April 15, 2019 Issue

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AARS Events

April is Rosacea Awareness Month!

Check out our website and social media postings this month for new video stories from rosacea patients! Stay tuned for more Rosacea Awareness Month news, including our new upcoming peer-reviewed publication 'Updated on the Management of Rosacea from the American Acne & Rosacea Society' to be featured in the *Journal of Clinical and Aesthetic Dermatology*.

Register Now for the 8th Annual AARS Scientific Symposium at the Society for Investigative Dermatology to be held on Wednesday, May 8, 2019 in Chicago!

This will feature acne, HS, and rosacea presentations during a luncheon symposium on Wednesday, May 8, 2019 from 10:00 AM – 2:00 PM at the Hilton Chicago in the Waldorf Room, 3rd floor. Join AARS Scientific Symposium Co-Chairs Mark Jackson, AARS President and Diane Thiboutot, AARS Past President for fascinating talks and a chance to meet new and old friends in acne and rosacea research! This is free to all SID attendees and AARS members. Register Here!

Industry News

Derm students improve Wikipedia entries on skin disease, boost views. DermWire, Practical Dermatology. April 8, 2019. https://practicaldermatology.com/news

The students improved 40 skin-specific articles on Wikipedia largely by adding paraphrased conclusions and background information from 60 Cochrane Reviews. A group of medical students recruited to improve Wikipedia articles on skin-related diseases and saw millions more views of those stories following their editing, a new study shows. "We tried to make the articles more readable, while adding more relevant information," says Olivia Hutton, BS, a medical student at the University of Colorado School of Medicine who led the project. "The articles we edited have been viewed 10 million times since adding the new information." The research letter was published online March 28 in the Journal of the American Academy of Dermatology. Medical stories on Wikipedia receive 10 million views daily and the top 500 skin-related articles saw more than 16 million views during August 2018 alone. In an effort to make those articles more complete and accurate, an editing partnership was set up between the evidence-based medicine organization Cochrane and Wikipedia in 2014. Cochrane Review Groups work with Wikipedia to recruit and train editors to share high-quality Cochrane Review evidence in Wikipedia stories. In this case, five students were trained to beef up the articles on skin-diseases. They learned Wikipedia editing, were mentored by an experienced Wikipedia medical editor and were given a list of articles to improve. The project was supervised by Robert Dellavalle, MD, PhD, MSPH, professor of dermatology at the CU School of Medicine. The trainees improved 40 skin-specific articles on Wikipedia largely by adding paraphrased conclusions and background information from 60 Cochrane Reviews. The 40 edited stories earned millions more views. The top five most viewed articles dealt with psoriasis, leprosy, cellulitis, melanoma and molluscum contagiosum. "Criticisms of Wikipedia include concerns over the quality of shared content," Hutton says in a news release. "It is important to ensure that Wikipedia's content is evidence-based, unbiased and up-to-date. We have shown that a small Wikipedia editing initiative has the potential to share evidence-based information with many people." Dellavalle, who is also a joint-coordinating editor of Cochrane Skin,

said the students' work with Wikipedia in this regard "is the most expansive provision of public health dermatology information in the world." The next step, he said, is to recruit more trainees, improve skin-related Wikipedia content in other languages and make further improvements in articles to increase accuracy and understandability.

New Medical Research

Fractional CO2 laser versus combined platelet-rich plasma and fractional CO2 laser in treatment of acne scars: image analysis system evaluation. Galal O, Tawfik AA, Abdalla N, Soliman M. J Cosmet Dermatol. 2019 Apr 9. doi: 10.1111/jocd.12909. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30964227

Background: Fractional CO2 laser and platelet-rich plasma (PRP) treatments have been used in the treatment of acne scars. However, an objective method of assessment has been lacking. Objective: To evaluate the efficacy of CO2 laser versus the combination of PRP and fractional CO2 laser in treatment of acne scar. Patients and methods: Thirty patients with atrophic acne scar lesions were included in this study. Patients were randomized to receive fractional CO2 laser therapy to one side of the face while the other side of the face was treated with fractional CO2 laser followed by intradermal PRP injection. Follow-up using the skin analysis camera system and photography was done for three months. Results: A dramatic improvement was observed in the scar depth on both sides of the face. However, the combined fractional CO2 laser and PRP showed more significant improvement. Improvements in the scar appearance and skin texture were reported by the patients. Although 70% of our patients were of a dark skin type, no hyperpigmentation was reported. Conclusion: The combined use of fractional CO2 laser and PRP achieved better results. It reduced the downtime of the fractional CO2 laser. The use of the skin analysis camera provided an objective assessment of the results.

Preparation of in situ hydrogels loaded with azelaic acid nanocrystals and their dermal application performance study. Tomić I, Juretić M, Jug M, et al. Int J Pharm. 2019 Apr 6. pii: S0378-5173(19)30272-8. doi: 10.1016/j.ijpharm.2019.04.016. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30965120

Azelaic acid (AZA) is a dicarboxylic acid that is topically used in the treatment of acne and rosacea since it possesses antibacterial and keratolytic activity. The primary objective of this study was to develop an AZA nanocrystal suspension. It is expected that improved solubility and dissolution rate will result in advanced biopharmaceutical properties, primarily the dermal bioavailability. Furthermore, a topical nanocrystal AZA-loaded hydrogels composed of Pluronic® F127 and hyaluronic acid mixture that are able to deliver AZA into the stratum corneum and deeper skin layers were considered. This study was conducted in order to: 1) determine the effect of non-ionic Polysorbate 60 on the stabilization and particle size of the AZA nanocrystals, as well as the effect of Pluronic® F127, used as an in situ gelation agent, and hyaluronic acid on the viscoelastic properties and the drug release of composed hydrogels, 2) determine the relationship between the rheological properties of the gels and the penetration of AZA into the stratum corneum. The composed hydrogels revealed pseudoplastic flow behavior. The increase in Pluronic® F127 concentration induced a domination of elastic over viscous behavior of the gels. The gel containing 15% of Pluronic® F127, 1% of hyaluronic acid and lyophilised 10% nanocrystal AZA suspension was considered to be an optimal formulation, since it possessed the rheological and drug delivery properties desirable for an in situ gelling platform for dermal application.

Efficacy and safety of moisturizer containing 5% panthenol, madecassoside, and copper-zinc-manganese versus 0.02% triamcinolone acetonide cream in decreasing adverse reaction and downtime after ablative fractional carbon dioxide laser resurfacing: a split-face, double-blinded, randomized, controlled trial. Lueangarun S, Srituravanit A, Tempark T. J Cosmet Dermatol. 2019 Apr 4. doi: 10.1111/jocd.12951. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30945430

Introduction: Fractional carbon dioxide (FrCO2) laser is effective for atrophic acne scar treatment, but unavoidable downtime. Meanwhile, postoperative topical steroid decreases the downtime, yet still possibly increases other steroid side effects. Objective: To evaluate the efficacy and safety of moisturizer containing 5% panthenol, madecassoside, and copper-zinc-manganese (experimental cream) versus 0.02% Triamcinolone acetonide (TA) cream in decreasing adverse effects and downtime after FrCO2 laser, with wound healing improvement and prevention of certain steroid-related side effects like postinflammatory hyperpigmentation (PIH). Methods: We conducted a double-blinded, split face, randomized controlled trial in 20 subjects receiving FrCO2 laser on both sides of the faces and randomly treated with two posttreatment regimens on each side for 7 days. Clinical, expert panel assessment of photography, downtime, side effects, and biometric evaluation for erythema and melanin were performed on baseline, immediately after treatment, day 3, 5, 7, 14, 30 and, 60 postoperatively. Results: Both experimental cream (EC) and 0.02% TA cream could significantly reduce postlaser downtime including swelling, redness, crusting, and scaling in 5-7 days, with comparable efficacies in decreasing downtime and adverse reactions, as well as wound healing improvement and lower PIH without statistically significant difference between the two treatments. The incidence of PIH was 60% in the EC treated group with minimal intensity. Conclusion: The moisturizer with anti-inflammatory ingredients could be a novel treatment modality for reduction of postablative laser downtime by using nonsteroidal anti-inflammatory agents to avoid adverse effects and improve wound healing process with lower PIH.

Novel tretinoin 0.05% lotion for the once-daily treatment of moderate-to-severe acne vulgaris: assessment of safety and tolerability in subgroups. Harper JC, Roberts WE, Zeichner JA, et al. J Dermatolog Treat. 2019 Apr 2:1-8. doi: 10.1080/09546634.2019.1587884. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30935257

Background: Topical tretinoin's role in acne has been established through evidence-based guidelines. Cutaneous irritation and potential to cause or exacerbate postinflammatory hyperpigmentation (PIH) may limit use. Objective: Evaluate safety and tolerability of novel polymeric formulation of tretinoin 0.05% lotion in moderate-to-severe acne. Methods: One thousand six hundred and forty patients randomized to tretinoin 0.05% lotion or vehicle in two double-blind placebo-controlled 12-week studies. Investigator-evaluated cutaneous safety (erythema and scaling) and patient-reported tolerability (itching, burning/stinging) assessed using a scale of 0 (none) to 3 (severe). Hyper- and hypo-pigmentation evaluated at each study visit. A number of subpopulations were investigated. Results: Tretinoin 0.05% lotion was considered safe and very well tolerated. Only application site pain (3.1%), dryness (3.7%) and erythema (1.4%) were reported by >1% or patients. Treatment-related adverse events were particularly rare (≤2%) in Hispanic and male subpopulations, and lower in adult females. The severity of cutaneous safety and tolerability scores remained <0.5 (where 1 = mild) and were generally lower than baseline severity. Tretinoin 0.05% lotion did not appear to cause or exacerbate PIH. Conclusions: A novel polymeric formulation of tretinoin 0.05% lotion provides a highly favorable safety and tolerability profile, with an incidence of erythema, dryness, and skin burning lower than that previously reported with other formulations of tretinoin.

Effect of recombinant bovine basic fibroblast growth factor gel on repair of rosacea skin lesions: a randomized, single-blind and vehicle-controlled study. Luo Y, Luan XL, Sun YJ, et al. Exp Ther Med. 2019 Apr;17(4):2725-2733. doi: 10.3892/etm.2019.7258. https://www.ncbi.nlm.nih.gov/pubmed/30930972

The aim of the present study was to assess the effect of topical use of recombinant bovine basic fibroblast growth factor (rbFGF) gel on the repair of facial skin lesions in patients with rosacea. In the present single-blind study, a total of 1,287 patients with Demodex mite-induced rosacea who received treatment with ornidazole tablets were randomized to rbFGF gel treatment group (n=651) or control group (n=636) without revealing the group identity. Patients in the treatment group were treated with topical application of rbFGF gel over the skin lesions (0.2 g/cm2) for up to 8 weeks, whereas patients in the control group received gel vehicle treatment unless ulceration occurred. Skin lesions of all patients were scored prior to and following treatment with rbFGF gel and subjected to histological analysis. All patients were followed up for 6 months. Significant improvement in the total effective rates for erythema, papules, desquamation and dryness were observed in the rbFGF treatment group. At the end of the 2, 4 and 6 months of follow-up, the total effective rates for patients in the treatment group were significantly higher than those in the control group (81.67 vs. 28.84%; 85.11 vs. 40.81%, and 96.56 vs. 55.82%, respectively). Following treatment for 6 months, none of the patients in the rbFGF group exhibited ulceration or scar formation. In the control group, 61% of patients experienced exacerbation of skin lesions, of which, 12% exhibited ulceration and were treated with rbFGF gel to prevent scar formation. Histological analysis revealed gradual reduction in epidermal hyperplasia and resolution of dermal edema in skin lesions treated with rbFGF gel. In conclusion, rbFGF gel may improve the repair of facial rosacea skin lesions in patients treated with anti-Demodex.

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Effectiveness of interventions for optimizing adherence to treatments for the prevention and management of scars: protocol for a systematic review and meta-analysis. Killey J, Simons M, Kimble RM, Tyack Z. BMJ Open. 2019 Mar 30;9(3):e023904. doi: 10.1136/bmjopen-2018-023904. https://www.ncbi.nlm.nih.gov/pubmed/30928928

Introduction: Treatments used in the management of scarring following wounds of the skin can be complex and time consuming, and patients may experience difficulties adhering to these treatments. Therefore, the aim of this systematic review is to identify the types of interventions that have been used to optimize adherence to treatment for preventing or reducing skin scars in adults and children and to determine the effectiveness of these interventions. Methods and analysis: Databases (PubMed, Embase, the Cumulative Index to Nursing and Allied Health Literature, PsycINFO, Web of Science and OTSeeker) will be searched using the developed search strategy to identify eligible randomized trials. Adults and children using scar treatments to prevent or manage scarring as a result of a dermal wound (which may occur following burn injury, surgery, lacerations, piercings, vaccinations, acne and other conditions affecting the skin) will be included. Any intervention with the potential to effect adherence will be included. Titles and abstracts located through searching will be screened by two independent reviewers. Full text of studies will also be screened to determine eligibility for final inclusion. Two reviewers will assess the quality of included studies using the Cochrane 'risk of bias' tool. Data extraction forms will be developed and two reviewers will extract the data. A third reviewer will be used at each stage to ensure consensus is achieved. Meta-analysis and meta-regression will be completed if appropriate, otherwise a narrative synthesis of results will be undertaken. Ethics and dissemination: No ethical approval is necessary for this systematic review as no patients will be directly involved. Results of this systematic review will be disseminated through journal publications and relevant conference presentations. Prospero registration number: CRD42018095082

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Propionibacterium acnes susceptibility to low-level 449 nm blue light photobiomodulation. Boyd JM, Lewis KA, Mohammed N, et al. Lasers Surg Med. 2019 Mar 28. doi: 10.1002/lsm.23087. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30919507

Background and objective: Recent advances in low-level light devices have opened new treatment options for mild to moderate acne patients. Light therapies have been used to treat a variety of skin conditions over the years but were typically only available as treatments provided by professional clinicians. Clinical application of blue light has proven to be effective for a broader spectral range and at lower fluences than previously utilized. Herein, we tested the hypothesis that sub-milliwatt/cm2 levels of long-wave blue light (449 nm) effectively kills Propionibacterium acnes, a causative agent of acne vulgaris, in vitro. Materials and methods: Two types of LED light boards were designed to facilitate in vitro blue light irradiation to either six-well plates containing fluid culture or a petri plate containing solid medium. P. acnes. Survival was determined by counting colony forming units (CFU) following irradiation. P. acnes was exposed in the presence and absence of oxygen. Coproporphyrin III (CPIII) photoexcitation was spectrophotometrically evaluated at 415 and 440 nm to compare the relative photochemical activities of these wavelengths. Results: 422 and 449 nm blue light killed P. acnes in planktonic culture. Irradiation with 449 nm light also effectively killed P. acnes on a solid agar surface. Variation of time or intensity of light exposure resulted in a fluence-dependent improvement of antimicrobial activity. The presence of oxygen was necessary for killing of P. acnes with 449 nm light. CPIII displayed clear photoexcitation at both 415 and 440 nm, indicating that both wavelengths are capable of initiating CPIII photoexcitation at low incident light intensities (50 uW/cm2). Conclusion: Herein we demonstrate that sub-milliwatt/cm2 levels of long-wave blue light (449 nm) effectively kill P. acnes. The methods and results presented allow for deeper exploration and design of light therapy treatments. Results from these studies are expanding our understanding of the mode of action and functionality of blue light, allowing for improved options for acne patients.

Prospects of acne vaccines targeting secreted virulence factors of cutibacterium acnes. Keshari S, Kumar M, Balasubramaniam A, et al. Expert Rev Vaccines. 2019 Mar 28:1-5. doi: 10.1080/14760584.2019.1593830. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30920859

Acne vulgaris afflicts many people, and despite the multitude of the anti-acne products on the market, there is still no effective treatment that can prevent and cure this disease. The severity of acne vulgaris is highly associated with the inflammatory response to Propionibacterium acnes (P. acnes) now referred to as Cutibacterium acnes (C. acnes), an opportunistic skin bacterium in the human skin microbiome. Areas covered: We here provide the prospects of creating acne vaccines targeting secreted virulence factors of C. acnes including secretory Christie-Atkins-Munch-Peterson (CAMP) factor. Neutralization of secreted virulence factors by either active or passive vaccination may have a lower risk of disturbing the microbial ecosystem in the human skin microbiome. Expert opinion: Major steps could be taken to start a public vaccination program at an early age to prevent the future occurrence of acne vulgaris. Future therapeutic monoclonal antibodies can be designed to specifically neutralize virulence factors of C. acnes including CAMP factors without disrupting the optimal balance of C. acnes in the human skin microbiome and lowering the risk of creating drug-resistant C. acnes. Targeting secreted virulence factors without disturbing the commensal relationship of host can be a novel gateway towards the therapeutic treatment of acne vulgaris.

755 nm picosecond laser for facial atrophic scar-case reports of long-term clinical efficacy following up. Huang CH, Hsieh FS, Chang HC, et al. J Cosmet Dermatol. 2019 Mar 28. doi: 10.1111/jocd.12925. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30924284

Introduction: Acne vulgaris is one of the most common dermatological problems in Asia. While the disease itself is self-limited and temporary, the dystrophic texture changes after the inflammatory process are often a serious aesthetic concern. Many energy-based devices have seen good results in treating atrophic acne scars, and the picosecond laser with specific lens is one of the newer options, and lack reports on its long-term efficacy. Materials and methods: We report three Taiwanese cases who, to our knowledge, consist of the longest clinical follow-up times for atrophic scar treatment with the 755 nm diffractive lens picosecond laser. Photographs were compared on a by-session basis by two blinded dermatologists independent of the primary treating physician and given an improvement range of <25%, 25%-50%, 50%-75%, and >75%. Results: While there are minor (<25%) improvements in all cases after the first four treatment sessions, all three cases saw the greatest improvement in skin texture (>75% in two cases, 50%-75% in one) when they were followed up 6, 13.5, and 28 months post-last treatment. Conclusion: Our results demonstrate excellent, long-onset, and long-term efficacy of the picosecond laser with diffractive lens in the treatment of acne atrophic scars. It also demonstrates the safe use of the device on Asian skins without symptoms of postinflammatory hyperpigmentation.

Combination therapy using subcision, needling, and platelet-rich plasma in the management of grade 4 atrophic acne scars: a pilot study. Bhargava S, Kroumpouzos G, Varma K, Kumar U. J Cosmet Dermatol. 2019 Mar 28. doi: 10.1111/jocd.12935. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30924301

Background: Multimodality therapies including minimally invasive modalities are increasingly used in atrophic scarring. Objective: To evaluate the role of platelet-rich plasma (PRP) as adjunctive therapy to a combined subcision and needling treatment in severe (grade 4) atrophic acne scarring. Methods: A total of 30 patients with grade 4 acne scars were randomly divided into two groups, 15 patients each: Group A underwent three sequential treatments of subcision and needling while Group B, three sequential treatments of subcision, needling, and topical application of PRP that were performed at 3-week intervals. Scar grading was assessed 3 months following the final session. Participant's assessment of treatment response was registered. Results: Scar improvement ≥50% was reported significantly more often by Group B than Group A patients (P = 0.025). Regarding physician-based assessment of scar grading post-therapy (number of patients with two grades improvement vs one grade or no improvement), there was a trend toward more improvement in Group B (P = 0.195). Physician's evaluation of acne scar improvement correlated with the patient's assessment of improvement: 60% of Group A and 66.6% of Group B patients appreciated an improvement of 25%-49% and 50%-74%, respectively. Mean duration of postprocedure erythema/edema was shorter among Group B than Group A patients (16.1 vs 32.9 hours, respectively). Overall, substantial improvement was noticed in rolling and boxcar scars with only a mild change in icepick scars. Conclusion: Platelet-rich plasma appears to add to the improvement of grade 4 atrophic acne scars when combined with needling and subcision. These findings require further evaluation by future studies.

Clinical Reviews

The contradictory inefficacy of methotrexate in hidradenitis suppurativa: a need to revise pathogenesis or acknowledge disease heterogeneity? Frew JW. J Dermatolog Treat. 2019 Apr 4:1-8. doi: 10.1080/09546634.2019.1601668. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30945961

The pathogenesis of Hidradenitis Suppurativa (HS) centers around Th17/Treg dysfunction illustrated by lesional elevation of IL-17A, IL-6, and other inflammatory mediators resulting in a chronic feed-forward inflammatory cascade. Similar inflammatory mechanisms have been identified in psoriasis and rheumatoid arthritis (RA) in which traditional immunosuppressants (including methotrexate) are routinely used with reasonable levels of disease control. Methotrexate's mechanism of action in these instances include downregulation of the Th17 axis via alterations in dendritic cell and T-cell activity and maturation. Published data suggests methotrexate in an ineffective therapy in HS, which does not pair with our current understanding of the mechanisms of disease. The reasons behind this, including are discussed. Some HS patients may benefit from drugs such as methotrexate, and acknowledgement of the potential of disease heterogeneity will allow exploration of which factors may enable identification of such individuals.

Adalimumab every other week combined with dexamethasone pulses for the treatment of refractory hidradenitis suppurativa. Molina-Leyva A. Dermatol Ther. 2019 Apr 4:e12885. doi: 10.1111/dth.12885. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30945795

Adalimumab is the only approved biological treatment to treat moderate to severe HS (EMA, 2018; FDA, 2015). Treatment consists of an induction phase with a dosage of 160mg and 80mg on weeks 0 and 2 respectively, followed by a maintenance phase with 40 mg qw. Maintenance dosage regimen has been recently updated to 80mg eow (EMA, 2018). This represents an evident advantage for the patients since it reduces the number of injections. But it also enables the implementation of new therapeutic strategies, as proposed next. We showcase two patients with severe HS and insufficient response to adalimumab. Patient 1, 36-year-old woman with genital HS treated with s.c adalimumab 40mg qw for 64 weeks, Hurley III; IHS4 12, Numeric Rating System (NRS) for pain 9/10, Dermatology Life Quality Index (DLQI) 22, progressive loss of response with insufficient control of the disease (Zouboulis et al., 2015). Patient 2, 62-year-old man with a HS in gluteal location, treated with s.c adalimumab 40mg qw for 48 weeks with incomplete disease control. Hurley III; IHS4 16, NRS for pain 7/10, NRS purulent discharge 8/10, DLQI 14. In both patients, treatment was modified according to the following regimen: adalimumab was adjusted to 80mg eow and, in the weeks with no treatment with adalimumab, dexamethasone pulses of 8mg were applied for two consecutive days. Additionally, monthly oral cholecalciferol, 25.000 UI was supplied to prevent bone resorption. After 12 weeks, an improvement was observed in patients reported outcomes. Patient 1, NRS pain 4/10, DLQI 12. Patient 2, NRS pain 4/10, NRS purulent discharge 5/10, DLQI 7. Both patients were satisfied and did not report any adverse effect, so the treatment was maintained. We propose this as a potential cost-effective and safe alternative for treatment intensification for patients with HS with insufficient or loss of response to adalimumab.

Review on characteristics and analytical methods of tazarotene: an update. Gaikwad J, Sharma S, Hatware KV. Crit Rev Anal Chem. 2019 Apr 3:1-7. doi: 10.1080/10408347.2019.1586519. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30942085

Tazarotene (TZR) is the first topical receptor-selective retinoid prodrug derived from vitamin A used for management of plaque psoriasis and efficacious in dealing of acne vulgaris, and photo aging. As per US food and drug

administration (FDA), 0.1% strength of TZR is permitted for the treatment of acne. This article draws attention to various advanced and conventional analytical methods. The hyphenated and conventional chromatographic techniques such as LC-MS/MS and HPTLC, HPLC respectively. Moreover, spectrophotometric methods like UV/visible spectroscopy also used to quantify TZR as active pharmaceutical ingredient and its formulations, especially in topical preparations. Moreover, the TZR is required alternative methods for routine quality control and to estimate TZR in pharmaceutical dosage form especially in pharmacokinetic studies of topical preparation. This write up focus on critical review of characteristics, uses and the information about the physicochemical, pharmacokinetics properties, mechanisms of action and more emphasis on different analytical methods for estimation of TZR in pharmaceutical formulations.

Proceeding report of the third Symposium on Hidradenitis Suppurativa Advances (SHSA) 2018. Posso-De Los Rios CJ, Sarfo A, Ghias M, et al. Exp Dermatol. 2019 Mar 29. doi: 10.1111/exd.13928. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30924968

The 3rd Annual Symposium on Hidradenitis Suppurativa Advances (SHSA) took place on October 12-14, 2018 at the Women's College Hospital in Toronto, Ontario, Canada. This symposium was a joint meeting of the Hidradenitis Suppurativa Foundation (HSF) founded in the USA, and the Canadian Hidradenitis Suppurativa Foundation (CHSF). This cross-disciplinary meeting with experts from around the world was an opportunity to discuss the most recent advances in the study of hidradenitis suppurativa pathogenesis, epidemiology, classification, scoring systems, radiologic diagnosis, treatment approaches, and psychologic assessment. Two special sessions this year were HS as a systemic disease and HS management guidelines. There were focused workshops on wound healing and ultrasound. There were two sessions primarily for patients and their families in the HS School program: one workshop focused on mindfulness, and the second involved discussion among clinicians and patients about various disease aspects and the latest management. To facilitate networking between clinical and research experts and those early in their career, a mentoring breakfast was held.

Assessment of topical corticosteroid prescribing, counseling, and communication among dermatologists and pharmacists. Millard AN, Stratman EJ. JAMA Dermatol. 2019 Mar 27. doi: 10.1001/jamadermatol.2018.5353. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/?term=30916731

Importance: Topical corticosteroids (TCs) are common treatments for many dermatologic conditions. Anecdotal experience and literature suggest that dermatologists and pharmacists differ in their beliefs about TCs and approach to TC counseling, creating the opportunity for patient confusion. Objective: To examine interprofessional practice gaps between dermatologists and pharmacists with regard to how each group views TCs, counsels patients on TC use, and communicates modifications to TC prescriptions. Design, setting, and participants: An electronic survey was disseminated statewide in Wisconsin to 117 board-certified or eligible dermatologist members of the Wisconsin Dermatological Society and 2954 licensed pharmacists. The survey was performed from October 11, 2017, to January 2, 2018. Survey responses and demographic information were compiled and analyzed for each population. Exposures: Study participants completed and returned a 17-question survey recalling experiences with TC prescribing from the past year along with self-reported demographic information. Main outcomes and measures: Dermatologists' and pharmacists' self-reported counseling of patients regarding TC application, duration of use, and adverse effects; frequency of communication of changes to TC prescriptions and instructions; and demographic data were tabulated and compared. Results: Of the 117 dermatologists, 52 (44.4%) completed and returned the survey; of the 2954 pharmacists, 111 (3.8%) returned the survey. Those no longer in active practice (3 dermatologists, 1 pharmacist)

were excluded from analysis. A substantial proportion of pharmacists (51 [46.4%]) advised patients to limit TC use to 2 weeks or less, which was an uncommon strategy among dermatologists (3 [6.1%]) (P < .001). Discordance also was noted in the adverse effects that are emphasized in counseling, pharmacist-perceived and dermatologist-observed adverse effects in patients, and resources that inform counseling content. Only 8 (16.3%) dermatologists perceived that pharmacists made no unauthorized modifications to their TC prescriptions or instructions; however, 77 (70.0%) pharmacists reported not doing so (P < .001). Conclusions and relevance: An interprofessional practice gap appears to exist between dermatologists and pharmacists in Wisconsin regarding TC beliefs and counseling strategies. Collaborative education and improved communication between the 2 groups may be necessary to ensure that patients receive a unified, clear message about TC application and adverse effects. Larger studies are needed to further investigate this potential practice gap.

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Real-world drug usage survival of spironolactone versus oral antibiotics for the management of female patients with acne. Barbieri JS, Choi JK, James WD, Margolis DJ. J Am Acad Dermatol. 2019 Mar 21. pii: S0190-9622(19)30452-9. doi: 10.1016/j.jaad.2019.03.036. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/?term=30905798

Acne often persists into adulthood, particularly for female patients. For those with persistent moderate-to-severe disease requiring treatment with systemic agents, it is important to identify which options can provide a durable treatment effect over time. Spironolactone is emerging as a potential alternative to oral antibiotics. However, little is known about long-term outcomes with spironolactone for those who have an initial positive response and how it compares to other alternatives. To understand the drug usage survival of spironolactone compared to oral antibiotics for acne, a retrospective analysis using the OptumInsight™ Clinformatics™ DataMart (OptumInsight, Eden Prairie, MN) was performed between January 1, 2010 and December 31, 2016 among female patients ages 12-40 with at least two diagnosis codes for acne. Prescriptions for spironolactone and oral antibiotics were identified by their National Drug Codes. The primary outcome was drug usage survival (duration of therapy) for patients who received treatment for at least 12 months. In addition, multivariate Cox proportional hazard models were used to evaluate for differences in drug usage survival for spironolactone compared to oral antibiotics. Statistical analyses were performed in Stata 15 (StataCorp, College Station, Texas). The study was deemed exempt by the Institutional Review Board at the University of Pennsylvania.

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The utilization of bacterial cultures in dermatology. Bienenfeld A, Kakpovbia E, Penn L, Nagler AR. J Am Acad Dermatol. 2019 Mar 21. pii: S0190-9622(19)30454-2. doi: 10.1016/j.jaad.2019.03.038. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30905797

Bacterial skin and soft tissue infections (SSTI) are frequently encountered in dermatology clinics. Initial management of SSTIs can include incision and drainage, bacterial culture and sensitivity, and empiric antibiotic therapy. Choosing Wisely®, an initiative to identify inappropriately utilized diagnostic tests, has targeted bacterial skin cultures. The utilization and impact of bacterial cultures on patient management has not been studied in dermatology. This retrospective study investigated trends in the use of bacterial cultures and their impact on patient care between 2011 and 2015 in an outpatient dermatology clinic at the Manhattan Veterans Affairs Hospital.

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Hidradenitis suppurativa: a systematic review and meta-analysis of therapeutic interventions. Tchero H, Herlin C, Bekara F, et al. Indian J Dermatol Venereol Leprol. 2019 Mar 20. doi: 10.4103/ijdvl.IJDVL_69_18. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30924446

Hidradenitis suppurativa is a chronic inflammatory condition that affects skin regions bearing apocrine glands. Although hidradenitis suppurativa is difficult to treat and cure, the currently available treatments are directed toward managing the lesions and associated symptoms. This review presents an evidence-based outline of the available treatment options. We searched four electronic databases and extracted data from retrieved studies for qualitative or quantitative analysis. Meta-analysis was conducted using the comprehensive meta-analysis software to generate pooled standardized mean differences or risk ratios. Numerous medical treatments are available for hidradenitis suppurativa such as antibiotics, retinoids, antiandrogens, immunosuppressive and anti-inflammatory agents and radiotherapy for early lesions. Adalimumab, an anti-tumor necrosis factor antibody, was superior to placebo in reducing Sartorius score (standardized mean difference = -0.32, confidence interval [-0.46, -0.18], P < 0.0001) and pain (risk ratio = 1.42, confidence interval [1.07, 1.9], P = 0.02), when given weekly (not every other week). Combination therapies (such as antibiotics and hyperbaric oxygen therapy) have been tested, which have shown promising results that are yet to be confirmed. Based on the quality of evidence, the most recommended treatments for hidradenitis suppurativa include adalimumab and laser therapy. Surgery (either by simple excision or complete local excision followed by skin graft) is the first choice for intractable disease presenting in the late stages. However, the evidence on most of these treatments is deficient and further randomized trials are needed to establish the most efficient therapies for hidradenitis suppurativa management.

Patient Counseling/Communication

Quality-of-life research in acne vulgaris: current status and future directions. Marron SE, Chernyshov PV, Tomas-Aragones L. Am J Clin Dermatol. 2019 Apr 4. doi: 10.1007/s40257-019-00438-6. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30949881

Acne patients may have significant quality-of-life (QoL) impairment, therefore assessment of health-related QoL (HRQoL) in acne patients is recommended by several national and international guidelines as an integral part of acne management. The inclusion of QoL assessment in core outcome sets is now a popular idea. Several acne-specific QoL questionnaires are available but none cover all topics presented in other instruments. The impact of acne on different aspects of QoL may vary between patients from different age groups. The European Academy of Dermatology and Venereology Task Force on Quality of Life and Patient Oriented Outcomes has initiated a study on the relevance of the different QoL topics in acne patients. Detailed recommendations on treatment goals and changes of treatment approaches based on a validated banding system and a minimal clinically important difference in HRQoL questionnaires (such as the Dermatology Life Quality Index) may be an important and promising approach.

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