AARS HOT TOPICS MEMBER NEWSLETTER

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AARS Event

Register Now for the 8th Annual AARS Scientific Symposium at the Society for Investigative Dermatology hosted by AARS President Dr. Mark Jackson and Past President Dr. Diane Thiboutot! 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. It is complimentary, but registration is encouraged to secure your attendance.
Register Here!
Check out some of our prior presentations on the website from past symposia: AARS – Physician and Patient Education

Industry News

Ortho Dermatologics receives FDA approval of Duobrii™ (halobetasol propionate and tazarotene) lotion 0.01%/0.045% for plaque psoriasis in adults. Ortho Dermatologics. Press Room. April 25, 2019. http://ortho-dermatologics.com/about-us/press-room/
First and only topical lotion combining halobetasol propionate and tazarotene in one formulation. Safety was established in a long-term study of up to 24 weeks of continuous use and up to 52 weeks of as-needed use. Ortho Dermatologics, one of the largest prescription dermatology health care businesses in the world, today announced that the U.S. Food and Drug Administration (FDA) has approved the New Drug Application for DUOBRII™ (halobetasol propionate and tazarotene) Lotion, 0.01%/0.045%, indicated for the topical treatment of plaque psoriasis in adults. DUOBRII is the first and only topical lotion that contains a unique combination of halobetasol propionate and tazarotene in one formulation. In a year-long safety study, patients used DUOBRII Lotion for up to 24 weeks of continuous use and up to 52 weeks of as-needed use. DUOBRII is expected to be available in June 2019.
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First North American clinical guidelines for hidradenitis suppurativa released. By Jeff Craven, Dermatology News. Publish date: April 22, 2019. https://www.mdedge.com/dermatology/article/199365/medical-dermatology/first-north-american-clinical-guidelines-hidradenitis
From the Journal of The American Academy of Dermatology. Rigorous evidence is unavailable for most interventions for treating hidradenitis suppurativa (HS), so management needs to be individualized, according to the first North American guidelines from the United States and Canadian Hidradenitis Suppurativa Foundations for the management and treatment of the disorder. The guidelines were published in the Journal of the American Academy of Dermatology. In an interview, Christopher Sayed, MD, cochair of the guidelines committee, of the department of dermatology at the University of North Carolina, Chapel Hill, said in an interview that the North American guidelines vary from the British Association of Dermatologists (Br J Dermatol. 2018 Dec 15. doi: 10.1111/bjd.17537) and European guidelines (J Eur Acad Dermatol Venereol. 2015 Apr;29[4]:619-44). For example, surgery is an active treatment option for various stages of the disorder in the North American guidelines, whereas surgery is considered a last-ditch effort in the British and European guidelines. Surgical intervention is often needed “for patients to be the best they can be, and it can be difficult for medicine alone to fix [certain] patients,” Dr. Sayed said. This point that “using medical treatment alone or just surgical treatment alone often doesn’t lead to the best outcome” is stressed in the North American guidelines, he noted.
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Combined laser-topical therapy improves erythema associated with rosacea. By Doug Brunk, Dermatology News. Publish date: April 14, 2019. https://www.mdedge.com/dermatology/article/198848/rosacea/combined-laser-topical-therapy-improves-erythema-associated

Reporting from ASLMS 2019. Among patients with facial erythema associated with erythrotelangiectatic rosacea, combining a long-pulsed 532 nm laser with daily application of a topical skin care regimen achieved equivalent to superior results in fewer treatments, compared with long-pulsed laser treatment alone. The findings come from a pilot trial that Brian S. Biesman, MD, presented at the annual conference of the American Society for Laser Medicine and Surgery. "Vascular laser therapy is the standard of care for reduction of facial erythema associated with erythrotelangiectatic rosacea," said Dr. Biesman, an oculofacial plastic surgeon who practices in Nashville, Tenn. "The question was, if we combine topicals plus laser, can we get an enhanced outcome relative to laser treatment alone?" To find out, he and his colleagues conducted a blinded, controlled prospective study of 30 subjects with mild to moderate erythrotelangiectatic rosacea who were evenly split into two groups. Those in group 1 received three treatments with the Excel V 532 nm long-pulsed laser by Cutera. Those in group 2 received two laser treatments with the Excel V long-pulsed 532 nm long-pulsed laser plus concurrent daily use of the topical Jan Marini Skin Care Management System, which included a glycolic acid cleanser, vitamin C serum, active containing glycolic, salicylic and azelaic acids, peptide, and growth factor moisturizer and a broad-spectrum sunscreen. It also contained RosaLieve, a proprietary redness-reducing complex. The researchers performed laser treatments at 4-week intervals and evaluated subjects at baseline, 4, 8, and 12 weeks by physician and subject self-assessment using 5-point (0-4) standardized scales: the Clinician Erythema Assessment (CEA) and patient self-assessment as well as a dermatology Quality of Life Assessment. In both treatment groups, reduction in facial erythema as assessed by CEA and patient self-assessment showed statistically significant improvement at all measured intervals. Specifically, average CEA scores improved from 3.00 to 1.87 among patients in group 1, and from 3.07 to 1.64 among those in group 2. "These were both statistically significant from baseline," Dr. Biesman said. "What does it really say? The laser plus topical was superior to the laser-only treatment at all measured intervals. I didn't expect to see that. There was continued improvement noted from week 8 to week 12. That was more of a trend; it was not statistically significant. There were no complications or adverse reactions in either group. The study data indicate that best results may be achieved with a combination of laser and home care." He acknowledged certain limitations of the study, including its small sample size and relatively short course of follow-up. "We didn't have standardization of topical therapy in the laser-only group," Dr. Biesman said. "Those patients were told to use their usual topical regimen. They were not allowed to use retinoids. We also didn't have a control arm." He disclosed that he has received grant funding from Jan Marini Skin Research and Cutera.

New Medical Research

Evaluation of the efficacy and tolerance of artemether emulsion for the treatment of papulopustular rosacea: a randomized pilot study. Wang GJ, Gao XY, Wu Y, et al. J Dermatolog Treat. 2019 Apr 24:1-16. doi: 10.1080/09546634.2019.1610549. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/31017492

Objective: To assess the efficacy and safety of artemether emulsion in patients with papulopustular rosacea. Methods: A total of 130 (randomized 1:1) were externally administered either artemether emulsion (1%) or metronidazole emulsion (3%) twice daily for 4 weeks with an open-label 8-week follow-up. The primary endpoints included the proportion of patients who achieved clinical effective responses, as well as erythema and papule and pustule score at week 4. Results: Numerically more patients achieved an effective response at week 4 with artemether emulsion (87.1%) than metronidazole emulsion (80.0%) ($P > 0.05$). Patients with artemether emulsion had

comparable baseline erythema score (2.45 ± 0.67 vs 2.42 ± 0.70, P = 0.809) and papule and pustule score (2.11 ± 0.96 vs 2.32 ± 0.83, P = 0.264), but significantly lower papule and pustule score (0.21 ± 0.52 vs 0.42 ± 0.83, P = 0.001) and comparable erythema score (0.53 ± 0.88 vs 0.62 ± 0.88, P = 0.999) compared to patients with metronidazole emulsion at week 4. There was a significantly higher proportion of patients with metronidazole emulsion relapse compared to metronidazole emulsion during the open-label 8-week follow-up period (21.6% vs 2.4%, P < 0.01). Conclusions: Artemether emulsion improved papulopustular rosacea in the metronidazole emulsion group as early as 4 weeks, but its beneficial effect was maintained through the 8-week follow-up period compared to metronidazole emulsion.

Open-label study assessing the efficacy and tolerability of topical skin care and sun protection alone and in combination with intense pulsed light therapy. Deaver Peterson J, Katz TM. J Cosmet Dermatol. 2019 Apr 24. doi: 10.1111/jocd.12952. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/31017734

Background: Intense pulsed light therapy (IPL) decreases facial erythema and telangiectasias associated with rosacea. Topical skin care products decrease facial erythema by the action of active ingredients and masking effects. Objectives: To assess the efficacy and tolerability of combining a topical skin care regimen (TSCR) comprised of a multifunctional three-in-one facial cream and a mineral-based brush-on SPF50 powder sunscreen with a single IPL treatment for treating mild-to-severe facial redness associated with rosacea. Methods: Twenty female subjects with Fitzpatrick skin types I-III received TSCR monotherapy for 12 weeks. At that time, subjects received a single IPL treatment and continued TSCR for 6 additional weeks. Subjects were evaluated at Baseline and at Weeks 4, 8, 12, and 18. Results: Using a 7-point redness scale, the overall mean (SD) redness score significantly improved from 3.05 (0.97) at baseline to 2.05 (0.76) at Week 18 (P < 0.01). There was a decrease in investigator-rated erythema from baseline (bare skin) to Week 12 (bare skin, before IPL) when TSCR was used as monotherapy which did not achieve significance (P = 0.12). Most subjects (80%) were satisfied or Very satisfied with the TSCR at Week 18. All subjects (100%) agreed that it improved their baseline skin redness and most (85%) would recommend TSCR to others. TSCR was well-tolerated with no significant changes in skin dryness, scaling, or itching. Mild burning occurred immediately following the IPL treatment at Week 12. Conclusion: TSCR in combination with a single IPL treatment produced a significant improvement in overall facial redness in patients with rosacea. Longer-term treatment with TSCR may produce continued improvement.

A comparative study on the effectiveness of herbal extracts vs 2.5% benzoyl peroxide in the treatment of mild to moderate acne vulgaris. Lubtikulthum P, Kamanamool N, Udompataikul M. J Cosmet Dermatol. 2019 Apr 23. doi: 10.1111/jocd.12962. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/31012999

Background: Although there is a standard guideline for the treatment of acne, it is still a common skin disease, and suboptimal medication adherence is a major reason for treatment failure. Herbal extracts are an interesting alternative medicine because they consist of a variety of active ingredients. Moreover, herbal extracts may have improved therapeutic efficacy because of the combination of various herbs. Objectives: To evaluate the effectiveness of herbal extracts for the treatment of mild to moderate acne vulgaris. Methods: A total of 77 patients were randomized to receive either an herbal extract or 2.5% benzoyl peroxide, which were applied for a period of 12 weeks. Acne lesion counts, adherence, porphyrin counts, the Dermatology Life Quality Index, satisfaction and side effects were assessed. Result: At the 12-week point, the acne lesion counts decreased, with statistically significant differences from the baseline values in both groups and for all types of acne (P-value < 0.001). The adherence rate was significantly higher in the patients using the herbal extract than in the patients using 2.5% benzoyl peroxide (P-value = 0.002). There was no statistically significant difference in terms of porphyrin counts, spot scores, the Dermatology Life Quality Index or

satisfaction with efficacy between the groups; however, satisfaction with drug administration was significantly higher in the patients using the herbal extract (P-value = 0.001). Conclusion: Herbal extracts could be beneficial for anti-acne pharmaceutical preparations and may be used as an alternative medicine for patients with mild to moderate acne vulgaris who do not adhere to benzoyl peroxide treatment.

Bilosomes as a novel carrier for the cutaneous delivery for dapsone as a potential treatment of acne: Preparation, characterization and in-vivo skin deposition assay. El-Nabarawi MA, Shamma RN, Farouk F, Nasralla SM. J Liposome Res. 2019 Apr 22:1-26. doi: 10.1080/08982104.2019.1577256. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/31010357

In our study, the potential of bilosomes as novel vesicular carrier for the cutaneous delivery of the sulfone compound, Dapsone, for topical treatment of acne was investigated. The effect of different formulation variables (type and concentration of bile salt, and molar ratio of Span 60:cholesterol) on the properties of DPS- loaded bilosomes was investigated using a full factorial design. Design Expert software was used for data analysis and optimization of DPS-loaded bilosomes. The optimized bilosomes, chosen on the basis of their superior properties giving maximum entrapment, in-vitro release after different time intervals and RE% with minimum vesicle size. Results showed that the bilosome system prepared using Span® 60: Cholesterol (5:1) and containing 0.25 M sodium deoxycholate as the bile salt was found to obey these criteria, with a desirability value of 0.637. Therefore this system was chosen for further assessment for its morphological properties, zeta potential, thermal analysis using differential scanning calorimetry and X-ray diffractometry. Results revealed that the chosen bilosomes were spherical in shape with no aggregation, and contained DPS in a molecularly dispersed amorphous form. Finally, the capability of the optimized DPS-loaded bilosomes to deliver DPS through rat skin layers will be investigated and compared with that of DPS alcoholic solution. Results showed that the amounts of DPS retained in the skin treated with DPS-loaded bilosomes, and DPS alcoholic solution after 24h were found to be 170.57 ± 55.12, and 120.24 ± 10.7 µg/mL, respectively, representing about 1.5 fold higher drug retained in the bilosomes treated skin. Finally the safety and tolerability of the prepared bilosomes were assessed using histopathological examination, and revealed that the control untreated skin sections and skin sections treated with DPS-loaded bilosomes showed normal histological structures characterized by absence of defects or inflammation. Such results can be considered a good addition in the field of pharmaceutical drug delivery for effective topical therapy of acne.

Clinical assessment of topical erythromycin gel with and without zinc acetate for treating mild to moderate acne vulgaris. Sayyafan MS, Ramzi M, Salmanpour R. J Dermatolog Treat. 2019 Apr 18:1-23. doi: 10.1080/09546634.2019.1606394. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30998422

Erythromycin is an effective topical antibiotic for treating mild to moderate inflammatory acne vulgaris, especially papules acne during puberty as well as papules - pustular acne in adult women. Erythromycin is a macrolide antibiotic that has long been used as a topical dosage form to treat acne. It has favorable effects in resolving inflammatory acne lesions not only by reducing Propioni bacterium acnes density, but also by directly inhibiting neutrophil chemotactic factors and reactive oxygen species (ROS) production (1- 3). Zinc, a metallic element has bacteriostatic activity against Propioni bacterium acnes (4). Combining zinc with antibiotic (erythromycin) can reduce antibiotic resistance and increase antibiotic absorption in-to the skin (5). In the present study, erythromycin (2% w/v) with zinc acetate (1.2% w/v) as "topical gel" and erythromycin (2% w/v) gel alone were evaluated for treating mild to moderate inflammatory acne vulgaris. This double - blind study was carried out on 102 patients 13-25 years of age, divided in two groups. The group A received erythromycin and group B received erythromycin with zinc acetate topical gels

during 3 weeks. Acne grading and lesion counts for comedones, papules and pustules were performed during each visit zero, first, second and third weeks. Erythromycin treatment (with zinc acetate) gel showed to be more effective than erythromycin (alone) gel with respect to reducing the number of acne lesions and severity grade of acne. Number of lesions and severity of acne were significantly reduced at the end of 3rd week in both groups (P< 0.001). In conclusion, it can be stated that erythromycin with and without zinc acetate was clinically effective, and both formulations produced a significant reductions in acne grading as well as inflamed and non-inflamed lesion counts (P< 0.000). Statistically, there was no significant difference between formulation A and B.

The effects of isotretinoin on affective and cognitive functions are disparate in adolescent acne vulgaris patients. Botsali A, Kocyigit P, Uran P. J Dermatolog Treat. 2019 Apr 15:1-17. doi: 10.1080/09546634.2019.1606396. https://www.ncbi.nlm.nih.gov/pubmed/30985218

Background: The vulnerable brain regions to isotretinoin are represented as hippocampus and prefrontal cortex, involved in mood regulation as well as coordination of cognitive functions. Adolescence is a critical period with dynamic alterations in neurocognition. Isotretinoin brought concerns about its possible effects on executive functions, attention and memory. Objective: Evaluate the impacts of isotretinoin on neurocognitive functions in adolescents with acne vulgaris and determine the emergence of psychiatric side effects. Materials and methods: Fifty-five adolescent acne vulgaris patients were assigned to either isotretinoin (n = 38) or systemic antibiotic (n = 17) groups. The neuropsychological test battery and psychometric tests were performed before treatment and during treatment with 3-months intervals. Results: Stroop-TBAG form, verbal-auditory digit span, controlled oral word association test and trail making test results improved in the isotretinoin treatment group along with stable scores in the antibiotic group. Children Depression Scale scores of the isotretinoin group showed an increase at 6th month compared to baseline. None of the patients was evaluated as depressive by the psychiatric examination. Conclusions: In a vulnerable age group, our results demonstrate an improvement for neurocognitive functions in isotretinoin patients. The conflicting results suggest distinct mechanisms to be responsible for the effects on affective and cognitive functions.

Salicylic acid treats acne vulgaris by suppressing AMPK/SREBP1 pathway in sebocytes. Lu J, Cong T, Wen X, et al. Exp Dermatol. 2019 Apr 11. doi: 10.1111/exd.13934. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30972839

Acne vulgaris is a prevalent cutaneous disease characterized by a multifactorial pathogenic process including hyperseborrhea, inflammation, over-keratinization of follicular keratinocytes as well as Propionibacterium acnes (P. acnes) overgrowth. Salicylic acid (SA), a beta-hydroxy acid, is frequently used in the treatment of acne. SA has been found to decrease skin lipids and to possess anti-inflammatory properties. However, few studies have elucidated the mechanisms and pathways involved in such treatment of acne. In this study, we initially investigated the anti-acne properties of SA in human SEB-1 sebocytes. Treatment with SA decreased sebocyte lipogenesis by downregulating the adenosine monophosphate-activated protein kinase (AMPK)/ sterol response element-binding protein-1 (SREBP-1) pathway and reduced inflammation by suppressing the NF-κB pathway in these cells. Salicylic acid also decreased the cell viability of SEB-1 by increasing apoptosis via the death signal receptor pathway. Subsequently, histopathological analysis of a rabbit ear acne model after application of SA for three weeks confirmed that SA suppressed the levels of cytokines and major pathogenic proteins around acne lesions, which supports the mechanisms suggested by our in vitro experiments. These results initially clarified that therapeutic activities of SA in acne vulgaris treatment could be associated with the regulation of SREBP-1 pathway and NF-κB pathway in human SEB-1 sebocytes.

Target proteins of phloretin for its anti-inflammatory and antibacterial activities against propionibacterium acnes-induced skin infection. Cheon D, Kim J, Jeon D, et al. Molecules. 2019 Apr 3;24(7). pii: E1319. doi: 10.3390/molecules24071319. https://www.ncbi.nlm.nih.gov/pubmed/30987239

Phloretin is a natural chalcone with antibacterial and anti-inflammatory effects. This study investigated the anti-acne activity of phloretin against Propionibacterium acnes-induced skin infection and the potential target proteins of its anti-inflammatory and antibacterial effects. Phloretin potently inhibited the growth of P. acnes and P. acnes-induced Toll-like receptor (TLR) 2-mediated inflammatory signaling in human keratinocytes. Secreted embryonic alkaline phosphatase assay confirmed that the anti-inflammatory activity of phloretin is associated with the P. acnes-stimulated TLR2-mediated NF-κB signaling pathway. Phloretin significantly decreased the level of phosphorylated c-Jun N-terminal kinase (JNK), showing a binding affinity of 1.184 × 10-5 M-1. We also found that phloretin binds with micromolar affinity to P. acnes β-ketoacyl acyl carrier protein (ACP) synthase III (KAS III), an enzyme involved in fatty acid synthesis. Conformation-sensitive native polyacrylamide gel electrophoresis showed that phloretin reduced KAS III-mediated 3-ketoacyl ACP production by over 66%. A docking study revealed that phloretin interacts with the active sites of JNK1 and KAS III, suggesting their involvement in P. acnes-induced inflammation and their potential as targets for the antibacterial activity of phloretin. These results demonstrate that phloretin may be useful in the prevention or treatment of P. acnes infection.

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Concerns and treatment satisfaction in patients being treated with azelaic acid foam for rosacea. Williamson T, Cameron J, McLeod K, et al. J Drugs Dermatol. 2019 Apr 1;18(4):381-386. https://www.ncbi.nlm.nih.gov/pubmed/?term=31013011

Objective: To describe patient characteristics, concerns, side effects, treatment satisfaction, and quality of life (QoL) of rosacea patients currently being treated with monotherapy azelaic acid foam based on patient-reported data. Methods: The study utilized a non-interventional, prospective, observational design. Patients were recruited in the United States and were eligible if the following criteria were met: diagnosed with rosacea by a medical professional, ≥18 years of age, currently receiving monotherapy with azelaic acid foam, and able to provide informed consent. Patients using other topical treatments for rosacea during enrollment were excluded. An online tool administered a survey of 3 questionnaires including the Rosacea Treatment Preference Questionnaire, Treatment Satisfaction with Medicines Questionnaire (SATMED-Q), and Dermatology Life Quality Index (DLQI). The survey collected demographics, clinical characteristics, treatment history, adverse events, and patient-reported outcomes related to treatment with azelaic acid foam and QoL with rosacea. Results: 54 patients met eligibility criteria. Participants were primarily female (90.7%), ranging from 26 to 63 years of age. The most common subtypes reported were erythematotelangiectatic and papulopustular (74.1% each) with 59.3% of participants reporting mild symptoms (16.7% “absent”; 24.1% “moderate”) in the 4 weeks before enrollment. The majority reported no concerns (74.1%) with their treatment. The biggest concern was cost (11.1%), with a mean importance score (IS) on a 10-point scale of 9.3. A majority (77.8%) of patients reported no side effects. Side effects reported included dryness (13%; IS: 5.3), stinging (7.4%, IS: 2.5), itching (5.6%; IS: 4.7), or burning (3.7%; IS: 7.0). Global satisfaction (SATMED-Q) mean score was 79.0 and treatment effectiveness mean score was 70.8. QoL impact of rosacea was minimal (mean DLQI score: 2.35). In regression models, increasing dryness was significantly associated with worsening outcomes in SATMED-Q and DLQI. Conclusions: Patient characteristics of the study population closely mirror the distribution of rosacea by gender and subtype as in previous estimates. Findings indicate minimal patient concerns with azelaic acid foam and primarily pertained to cost. Patient-reported side effects were rare. Minor patient-reported side effects and concerns do not appear to affect rosacea-related QoL and medication satisfaction. Compared to a previously

conducted study of similar design with patients using metronidazole gel and metronidazole cream, more patients in the current study reported no concerns with their treatment, while the number of patients reporting no side effects, as well as mean SATMED-Q and DLQI scores, were similar. Further research is necessary to directly compare the results of these 2 studies.

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A randomized controlled tolerability study to evaluate reformulated benzoyl peroxide face washes for acne vulgaris. Santos-Caetano JP, Cargill MR. J Drugs Dermatol. 2019 Apr 1;18(4):350-356. https://www.ncbi.nlm.nih.gov/pubmed/?term=31012563

Introduction: This randomized, evaluator-blind, single-center, parallel-group study sought to evaluate the tolerability of two reformulated face washes containing benzoyl peroxide (BPO) in adults with mild to moderate acne vulgaris. Methods: Healthy adults with mild to moderate acne vulgaris were randomly allocated (1:1:1) to one of two reformulated test products (containing BPO at a concentration of either 4% or 10%) or an older formulation containing 10% BPO (reference product), which they applied twice daily for 21±2 days. The primary tolerability assessment was clinical assessment of signs and symptoms of cutaneous irritation by a dermatologist. The primary outcome was the total dermatologist assessment score (maximum total assessment score=12, indicating the most severe skin irritation). Secondary assessments were ophthalmologist assessments, subject self-assessments, and adverse events. Results: 133 adults were randomized and treated. The total dermatologist score changed by a mean of -0.08 (95% confidence interval [CI] -0.192, 0.038) from baseline to day 21 in the 4% BPO cleanser group, by 0.05 (95% CI -0.021, 0.121) in the 10% BPO cleanser group, and by -0.02 (95% CI -0.105, 0.059) in the reference product group. There was no clinically significant difference between the reference product and the 4% BPO cleanser or 10% BPO cleanser in the mean change from baseline. Mean changes from baseline in ophthalmologist assessment scores and subject self-assessment scores for the 4% and 10% BPO test products were also comparable to those of the reference product. Dermal responses were consistent with the known effects of topical BPO application and no serious safety issues were reported. Discussion: There was no difference in the local tolerance profile of the reformulated BPO-containing face washes when compared with an older formulation. Study registration: www.gsk-clinicalstudyregister.com (study 206239).

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Observational study of clindamycin phosphate and tretinoin gel for the treatment of acne. Ohlson J, Dakovic R, Berg M. J Drugs Dermatol. 2019 Apr 1;18(4):328-334. https://www.ncbi.nlm.nih.gov/pubmed/31012560

Introduction: Acne vulgaris can cause pain/discomfort and have a negative impact on quality of life (QOL). Clin-RA is an acne treatment consisting of clindamycin phosphate 1.2% and tretinoin 0.025%, which has been proven effective and well tolerated in clinical studies. This prospective, non-interventional study aimed to capture data on previous treatment, acne severity, and QOL in patients with acne treated with Clin-RA and assess the efficacy and tolerability of Clin-RA in routine clinical practice. Methods: The study was performed at 18 centers in Sweden and enrolled patients aged ≥15 years with acne, who were prescribed Clin-RA for the first time. The observation period was ~12 weeks. The primary objective was to assess the patient's perception of their facial acne severity before and during Clin-RA treatment using a visual analog scale (VAS; 100 mm scale). Secondary objectives included QOL evaluation before and after treatment, using the Dermatology Life Quality Index (DLQI) questionnaire. Results: 84 patients were enrolled and eligible for analyses (79.8% female; mean age 22.6 years). Patient-assessed VAS scores for acne severity decreased continuously during the study, indicating improvement: the median percentage reduction from

baseline for VAS score was 17.6% at week 4 and 63.8% at week 12, with changes from baseline being statistically significant (P=0.0004 at week 4; P<0.0001 at weeks 8 and 12). Overall, QOL improved after Clin-RA treatment, reflected by a decrease in the mean (standard deviation) DLQI sum score from 8.8 (5.8) on day 0 to 4.9 (4.2) at week 12. Seventy percent of patients were satisfied/very satisfied with treatment. Clin-RA was well tolerated, with no serious adverse drug reactions reported. Conclusions: Treatment with Clin-RA resulted in continuous improvement of facial acne over the course of 12 weeks, along with improved QOL and a tolerable safety profile, supporting the use of Clin-RA in clinical practice.

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Use of advanced imaging techniques for the characterization of oily skin. Maia Campos PMBG, Melo MO, Mercurio DG. Front Physiol. 2019 Mar 26;10:254. doi: 10.3389/fphys.2019.00254. eCollection 2019. https://www.ncbi.nlm.nih.gov/pubmed/30971936

Excessively oily skin leads to clinical signs that cause discomfort to patients, such as excessive shine, enlarged pores, acne, and an imbalance of the hydrolipidic layer. In this context, a constant demand for the research and development of products that prevent these features, has been noted in the field of cosmetics and dermatology. Thus, the objective of this study is to evaluate the cutaneous characteristics of oily skin due an excessive production of sebum through biophysical and skin imaging techniques. 19 participants with different skin types were selected and the following parameters were evaluated: pore count, determination of the number of sebaceous glands and amount of sebum in infundibulum, determination of cutaneous microrelief, count of comedones, evaluation of epidermis thickness, characterization of the cellular, and comedone size and its characteristics. These evaluations were done through biophysical and skin imaging techniques. The obtained results showed that different regions of the face presented different characteristics related to oiliness, quantity, and the appearance of pores and comedones. The malar region had a lower epidermis thickness and a larger number of large pores. Moreover, in this region excessive sebum production, which can be related to pores, not comedones, was noted. The nose region presented higher sebum content in the infundibulum and lower active sebaceous glands, showing a higher activity of sebaceous production in this region. The chin region presented a positive correlation between the sebum content, roughness parameter and the number of pores and comedones. As different skin properties are related and influence the appearance of undesirable clinical signs, we identified the need for a multifactorial approach for the effective treatment of oily skin. The rational development of multifunctional cosmetic products that promote the control of oily skin, that regulate the keratinization process, improve the microrelief and leads to a better epidermis and dermis structure, will not only improve oily skin conditions but will also allow for the reduction or disappearance of clinical signs that result from excessive oiliness, all of which causes concern and results in a relentless search for cosmetic and dermatological products that address the unaesthetic nature of these conditions.

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Treatment of moderate-to-severe facial acne vulgaris with solid-state fractional 589/1,319-nm laser. Kang A, Lyons A, Herrmann J, Moy R. J Clin Aesthet Dermatol. 2019 Mar;12(3):28-31. Epub 2019 Mar 1. https://www.ncbi.nlm.nih.gov/pubmed/30988870

Objective: The objectives of this study were to evaluate the efficacy, safety and patient satisfaction of a unique combination of wavelengths 589nm and 1,319nm for the treatment of facial acne vulgaris. Design: This was a small, randomized, prospective, split-face, single-blinded study of patients with moderate-to-severe acne vulgaris. Setting:

The study took place at a single outpatient center study in Torrance, California. Participants: Nine patients underwent four treatment sessions at 2- to 3-week intervals. Each patient received one pass with the 1,319nm laser followed by one pass with the 589nm laser only to the randomized treatment side of the face. Measurements: A blinded, board-certified dermatologist reviewed photographs and counted acne lesions on treated and nontreated sides. Results: Of the nine patients, eight were Fitzpatrick Skin Type IV. At the final visit, inflammatory acne lesions were reduced by 2.5 (-23.1%) on the treatment side and increased by 1.1 (+11.1%) on the control side. No patients experienced bruising, edema, hyperpigmentation or scarring. At the conclusion of the study, 77.8 percent of the patients reported overall satisfaction. Conclusion: This unique combination of lasers appears to be safe in patients with Fitzpatrick Skin Type IV, and might be useful in treating moderate-to-severe acne vulgaris.

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Clinical Reviews

Diet in hidradenitis suppurativa: a review of published and lay literature. Silfvast-Kaiser A, Youssef R, Paek SY. Int J Dermatol. 2019 Apr 21. doi: 10.1111/ijd.14465. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/31006861

Hidradenitis suppurativa (HS) is a chronic, recurring, inflammatory skin disorder resulting in skin abscesses and sinus tracts of the skin folds. Hidradenitis suppurativa remains a disease with limited treatment options. Management of disease activity with dietary modification has been of considerable interest to the HS patient community. Limited evidence exists to support dietary changes for treatment of HS. Strategies such as eliminating dairy products, limiting simple carbohydrate and sugar intake, and avoiding nightshades (Solanaceae) and foods containing brewer's yeast have been reported to be helpful in some patients. Several supplements have also been touted as beneficial. Herein, we review the existing dietary recommendations in both peer-reviewed and lay literature in an attempt to consolidate and evaluate existing information, while stimulating further inquiry into the role of diet in HS. Although dietary modifications are often of considerable interest to HS patients, there is a paucity of data regarding diet as it relates to HS. It is unclear whether diet may prove to be of value in limiting the severity of HS. Further research is needed to determine the potential benefits of these dietary changes.

Management of severe hidradenitis suppurativa with biologic therapy and wide excision. Lim SYD, Cheong EC, Oon HH. Arch Plast Surg. 2019 Apr 20. doi: 10.5999/aps.2018.00339. [Epub ahead of print]
https://www.ncbi.nlm.nih.gov/pubmed/31006182

Hidradenitis suppurativa (HS) is a chronic inflammatory follicular occlusive disease that involves the intertriginous areas. Treatment methods include conventional topical and systemic medication, radiotherapy, biologic agents, and surgical excision. Of late, there has been an increased focus on the use of biologic agents in patients with moderate to severe HS. Here, we present the case of a 46-year-old man with Hurley stage III HS for whom wide excision was ultimately curative, after aggressive medical therapy with the use of infliximab and adalimumab had succeeded in limiting the body surface area affected by the disease. This case demonstrates the effective treatment of severe HS with a combination of biologic therapy and surgery.

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Assessing effectiveness in acne clinical trials: steps towards a core outcome measure set. Thiboutot DM, Layton AM, Chren MM, et al. Br J Dermatol. 2019 Apr 19. doi: 10.1111/bjd.18011. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/31002382

Background: Acne ranks second to dermatitis in terms of global burden of skin disease. As such, it is essential that data on treatment efficacy are generated in a way that maximizes the opportunity for comparison among treatments. Interest in developing core outcome sets for use in clinical trials to standardize data collection in skin disease is surging. Objectives: The goal of this review is to provide an update on the efforts underway, challenges encountered and future directions in the development of an acne core outcome measure set for use in clinical trials. Methods: The activities of the Acne Core Outcomes Research Network (ACORN) are presented in the context of currently acceptable methodologies for core outcome set development. Conclusions: Emphasis is placed on following a rigorous methodology, involving patients and recognizing a role for emerging technologies.

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Nonvascular uses of pulsed dye laser in clinical dermatology. Forbat E, Al-Niaimi F. J Cosmet Dermatol. 2019 Apr 19. doi: 10.1111/jocd.12924. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/31002479

Lasers are fast becoming the vogue of dermatology ranging from ablative, nonablative, fractional photothermolysis to vascular lasers. There are a range of vascular lasers including potassium titanyl phosphate (KTP 532 nm), pulsed dye laser (PDL -595 nm), diode (810 nm), and Nd:YAG (1064 nm). PDL is a laser that emits yellow light using Rhodamine dye as it is lasing medium. Typical vascular lesions which are treated by PDL include port wine stain, hemangioma, telangiectasia, spider angioma, and rosacea. This article focuses on the use of PDL beyond primary vascular conditions. We review the evidence, or lack thereof, of the use of PDL in acne vulgaris, scars, striae, warts, molluscum, psoriasis, rejuvenation, basal cell carcinoma (BCC), and miscellaneous dermatological sequelae.

Facial cleansing with a sonic brush: a review of the literature and current recommendations. Gold M, Ablon G, Andriessen A, et al. J Cosmet Dermatol. 2019 Apr 15. doi: 10.1111/jocd.12906. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30985993

Introduction: Skin cleansing is important for removal of dirt, debris, and sebum and plays an important role in reduction of pollution-induced skin aging. Cleansing is an established part of treatment recommendations and procedures in dermatology. Different methods for facial skin cleansing are established but recommendations on use of special devices are not fully integrated into clinical practice. Aim: We review the current literature on sonic cleansing to demonstrate that a gentle and effective cleansing routine using a sonic brush followed by appropriate additional methods for rehydration and skin protection may improve both inflammatory conditions including acne vulgaris and skin damage associated with overexposure to exogenous light and pollution. Methods: A working group of experienced clinicians managing facial inflammatory skin conditions convened for a meeting. The panel reviewed the literature surrounding sonic brush cleansing and discussed clinical questions aiming to optimize facial cleansing outcomes. Results: The panel agreed there are increasing concerns over the rise of atmospheric pollution globally and its impact on health and skin aging and that cleansing in combination with nonspecific skin care is able to support physiological microenvironmental skin conditions including pH levels on the skin surface, barrier function, and hydration. Conclusion: Cleansing poses a challenge in balancing debris removal while avoiding excess sebum removal, thereby maintaining an intact stratum corneum barrier. The sonic brush may offer a safe and effective treatment for various conditions.

Acne keloidalis nuchae and obstructive sleep apnea: a retrospective case series. Haynes D, Topham C, Greiling T. Clin Exp Dermatol. 2019 Apr 13. doi: 10.1111/ced.13985. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30980729

Acne keloidalis nuchae (AKN) is an inflammatory skin disease characterized by scarring of hair follicles along the posterior neck and scalp. Most commonly, AKN is attributed to follicular irritation from hair clippers, helmets, and other external sources. Alternative explanations for disease development posit AKN as a cutaneous symptom of metabolic syndrome - similar to acanthosis nigricans in the setting of diabetes mellitus (DM). This single-center retrospective case series explores factors driving AKN development by examining patients with obstructive sleep apnea (OSA), a population at increased odds of both metabolic syndrome and chronic follicular occlusion from positive airway pressure (PAP) therapy.

Interrater and intrarater agreement and reliability in clinical staging of hidradenitis suppurativa/acne inversa. Zouboulis CC, Matusiak L, Jemec GBE, et al. Br J Dermatol. 2019 Apr 10. doi: 10.1111/bjd.17982. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30968946

Core outcome domains represent a major need in hidradenitis suppurativa/acne inversa (HS) as reliable disease classification systems and treatment outcome parameters. Thorlacius et al.1 reported recently that none of the HS classifications systems could be recommended when used with HS experts as raters without a preceding bedside training session.

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Clinical picture, diagnosis and treatment of rosacea, complicated by Demodex mites. Kubanov A, Gallyamova Y, Kravchenko A. Dermatol Reports. 2019 Mar 28;11(1):7675. doi: 10.4081/dr.2019.7675. eCollection 2019 Jan 23. https://www.ncbi.nlm.nih.gov/pubmed/31007879

The article analyzes the clinical picture and course of rosacea in patients with Demodex mites. It presents the advantages of using the method of confocal laser scanning microscopy over the method of light microscopy of facial skin scrapes. The aimes were to study the influence of Demodex mites on the clinical picture and course of rosacea; to compare laboratory and instrumental diagnostic methods for detecting Demodex mites; to evaluate the effectiveness of external therapy aimed at eliminating Demodex mites. 212 people were examined. The study included healthy patients, patients with a diagnosis of rosacea with the presence and absence of Demodex. The presence of Demodex mites was confirmed by two methods of study (light microscopy of skin scrapes and confocal laser scanning in vivo microscopy). Demodex mites promote the development of acute-inflammatory morphological elements, increase the duration of the condition (more than 5 years, $P<0.01$) and the probability of recurrence (from 1 to 3 relapses in 39.5% of patients, $P<0.05$), resulting in a decrease in the quality of life of patients (dermatology life quality index is 12.5 ± 4.5, $P<0.05$). Antiparasitic drug ivermectin, in the form of an external form, at a concentration of 1% has a high therapeutic efficacy (in 93.3% of cases). Demodex folliculorum shows signs of parasitism, while Demodex folliculorum brevis is a saprophyte. The severity of the condition does not depend on the quantitative load of the mites in the scrape. As an antiparasitic drug, it is recommended to use 1% ivertmectin.

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