AARS HOT TOPICS MEMBER NEWSLETTER

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Industry News

The 7th Annual AARS Scientific Symposium was a great success! Special thanks to Diane Thiboutot and Amanda Nelson for co-chairing a great series of presentations during the SID/IID meeting in Orlando, Florida. For those talks available to review online, visit www.acneandrosacea.org and view more on the AARS YouTube channel. Don't forget to like our channel!

New Dermatologic Surgery textbook by McGraw-Hill enters second printing less than one week after publication. Tuesday, May 29, 2018 DermWire. http://practicaldermatology.com/dermwire/2018/05/29/new-dermatologic-surgery-textbook-by-mcgraw-hill-enters-second-printing-less-than-one-week-after-publication
McGraw-Hill has just released Jonathan Kantor's new 1,440-page textbook, Dermatologic Surgery, the most comprehensive and richly illustrated dermatologic surgery textbook ever published, and the first new major multimedia textbook in the field in 13 years. With section editors including John Albertini, Jeremy Bordeaux, Leonard Dzubow, Naomi Lawrence, and Stanley Miller, this new first-of-its-kind text bridges a general dermatologic surgery textbook and a specialized flap reference book. The text includes 81 chapters addressing the full range of reconstructive and cosmetic dermatologic surgery, and includes numerous first-in-class features such as chapter-opener structured summaries with illustrations, hundreds of pages on Mohs surgery, over 400 pages of flap repairs, and chapters based both on flap classification and regional repair approaches to improve the experience for novices and experts alike. The book includes over 3,000 photos and professional medical illustrations and more than 12 hours of video.

Is acne cool now? How celebrities and influencers are changing the stigma of having acne. May 28, 2018. The New York Times. By Andrea Cheng. https://www.nytimes.com/2018/05/28/style/is-acne-cool-now.html

"You're ugly." "Do you even wash your face?" Those are just a couple of the insults Hailey Wait, an 18-year-old student and influencer, has had to endure since she began to develop acne seven years ago. "I was ashamed of my acne because of the shame people would place on it," Ms. Wait said. Her acne affected her self-esteem, prompting her to raid the Walgreens makeup aisle for cover-ups, even if they did little but aggravate her skin condition. Seven months ago, she had had enough, and instead of hiding behind cheap foundation or highly edited selfies, she did the opposite: She revealed her blemishes to her 15,000 followers on Instagram for the first time. "I realized that my appearance wasn't the thing that made me who I am, which minimized the importance I put on the spots on my face," Ms. Wait said. "I didn't expect it to blow up the way I did. I was just posting selfies like every other teen." But it was more than "just posting selfies." She amassed thousands of new followers (her count is now 151,000), who began to send daily messages, sharing their own struggles and thanking her for helping them accept their acne. Pimple Positivity: The New Thing. Megan Collins, a trend forecaster at Trendera in Los Angeles, said that skin positivity has been brewing for a while — as far back as 2015, in fact, when the beauty influencer Em Ford of the popular My Pale Skin blog recorded a video, "You Look Disgusting," that went viral for shedding light on how much hate she received from showing her real skin. Cut to present day and acne acceptance has only gained traction, propelled by the momentum of the body positivity movement and backlash against two things: unrealistic beauty advertising and the many readily available photo-editing apps. "Consumers — Gen Zs, especially — are sick of being told by these huge companies that they need to look a certain way, that they need to buy so-and-so products to fix their flaws," Ms. Collins said. "They're rejecting traditional forms of advertising that don't do anything but tear down your confidence." Yet a movement that points to social media as a culprit is also using the same platforms to get its message across. "There's

a cultural shift happening where people are becoming more honest," said Matt Traube, a psychotherapist in San Luis Obispo, Calif., who specializes in skin conditions. "Tampering with photos on social media has become such a phenomenon that people are beginning to see how destructive it is. At the same time, social media gives us the opportunity to create these powerful social movements." And now, in the latest wrinkle, celebrities have joined the skin-positivity cause, with Justin Bieber (who recently posted on his Instagram Story that "pimples are in"), Kendall Jenner, Lili Reinhart, Lucy Hale and SZA openly embracing their acne. How Acne Got Its Bad Rap. About 40 to 50 million Americans have acne at any one time, making it the most common skin condition in the United States, according to the American Academy of Dermatology. Doris Day, a clinical associate professor of dermatology at NYU Langone Medical Center, sees about four patients a day with acne concerns. A quarter of Mr. Traube's patients come in with acne-related problems. So for an issue so common, why does it carry such a harmful stigma? Dr. Day believes the reason exists on a primal level: We judge each other by appearance, and the healthier you look, the more fertile you seem. "Discussions about acne aren't out in the open, either," Mr. Traube said. "People are embarrassed to talk about it because, unlike other medical issues, there tends to be a lot of judgment around skin since the experience can be subjective. Most skin conditions are often dismissed, trivialized and underreported." The Link to Mental Health. Earlier this year, a study published by the British Journal of Dermatology found that there is a 63 percent increased risk of depression in someone with acne compared with those with clear skin. Mr. Traube is quick to point out that having acne isn't going to "instantly create depression." But if you're genetically predisposed, feelings of disappointment at not meeting the "perfect" expectations of beauty can trigger depressive episodes. "Acne is incredibly debilitating," Mr. Traube said. "The mind and body are intimately connected. And when you're already depressed, acne presents an extra challenge to the situation." For many, blemishes are only part of the problem. Dr. Day said that in some instances she has found that patients blame the condition for everything that's wrong in their lives, or they use it as an excuse to sit out social activities. Conversely, depression can trigger breakouts. "The stress of having acne can exacerbate the condition," said Rachel Milstein Goldenhar, a clinical psychologist in La Jolla, Calif. "Or when someone's depressed, they're not in a place where they're able to take care of themselves, which could make acne worse, too." So Will the Stigma of Acne Change? The proliferation of makeup-free selfies, along with a new "boy beat" beauty trend that highlights "flaws" like acne, freckles, dark circles and rosacea, points to how much has shifted. And with celebrities joining the skin-positivity movement, the acceptance of acne has accelerated. "Celebrities have the same insecurities, so for them to give people the opportunity to see their human qualities, it changes everything," Mr. Traube said. "We're social creatures, we want to belong — and when we have that social support, that feeling of community, that will help reduce the risk of depression." But at the end of the day, as Dr. Day reminds us, acne is still a medical condition that scars. "I don't think acne will ever be cool, any more than Selena Gomez having lupus would be cool," she said. "But if this movement helps people accept it, boosts their confidence so they don't feel ostracized, then I'm all for it." Even if the movement doesn't deter consumers from buying acne products or seeing their dermatologist, what is likely to change is how brands market themselves. "The message will be more about self-care and how you can feel good about yourself, even if you have acne," Ms. Collins said. And for Ms. Wait, that's the ultimate goal. "I don't wake up and think, 'Oh, I want acne today,' but if you have it, there's no reason to hate it," she said.

New Medical News

Efficacy and safety of oxymetazoline cream 1.0% for treatment of persistent facial erythema associated with rosacea: Findings from the 52-week open label REVEAL trial. Draelos ZD, Gold MH, Weiss RA, et al. J Am Acad Dermatol. 2018 Jun;78(6):1156-1163. doi: 10.1016/j.jaad.2018.01.027. Epub 2018 Jan 31.

https://www.ncbi.nlm.nih.gov/pubmed/?term=Efficacy+and+safety+of+oxymetazoline+cream+1.0%25+for+treatment+of+persistent+facial+erythema+associated+with+rosacea%3A+Findings+from+the+52-week+open+label+REVEAL+trial

BACKGROUND: Limited treatments are available for persistent erythema of rosacea. OBJECTIVE: To examine the long-term safety and efficacy of oxymetazoline cream 1.0% in patients with rosacea with moderate-to-severe persistent erythema. METHODS: Patients applied oxymetazoline once daily for 52 weeks. Safety assessments included treatment-emergent adverse events (TEAEs), skin blanching, inflammatory lesion counts, telangiectasia, disease severity, and rebound effect. Efficacy was assessed by the Clinician Erythema Assessment and Subject Self-Assessment composite score at 3 and 6 hours after the dose on day 1 and at weeks 4, 26, and 52. RESULTS: Among 440 patients, 8.2% reported treatment-related TEAEs; the most common were application-site dermatitis, paresthesia, pain, and pruritus. The rate of discontinuation due to adverse events (mostly application-site TEAEs) was 3.2%. No clinically meaningful changes were observed in skin blanching, inflammatory lesions, or telangiectasia. At week 52, 36.7%, and 43.4% of patients achieved a 2-grade or greater composite improvement from baseline in both Clinician Erythema Assessment and Subject Self-Assessment 3 and 6 hours after a dose, respectively. Less than 1% of patients experienced a rebound effect following treatment cessation. LIMITATIONS: A vehicle-control group was not included. CONCLUSION: This long-term study demonstrated sustained safety, tolerability, and efficacy of oxymetazoline for moderate-to-severe persistent erythema of rosacea.

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The efficacy and tolerability of 5-aminolevulinic acid 5% thermosetting gel photodynamic therapy (PDT) in the treatment of mild-to-moderate acne vulgaris. A two-center, prospective assessor-blinded, proof-of-concept study. Serini SM, Cannizzaro MV, Dattola A, et al. J Cosmet Dermatol. 2018 May 22. doi: 10.1111/jocd.12670. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29790262

BACKGROUND: Acne vulgaris is a chronic inflammatory skin disease, commonly treated with topical or systemic drugs, according to the severity of the condition. Retinoids and antibiotic compounds are considered cornerstone approaches in this condition. However, low adherence to the therapy and the issue of bacterial resistance undermine the efficacy in the long term. Photodynamic therapy (PDT) with 20% aminolevulinic acid (ALA) has shown to be effective in the treatment of inflammatory acne. Skin tolerability, however, could be a limiting factor for a widespread use of this approach. A new formulation of 5% ALA in thermosetting gel has been recently available. This formulation allows a more convenient application procedure without occlusion and better and more efficient release of the active compound in comparison with traditional ALA formulations like creams or ointments. STUDY AIM: To evaluate in a two-center, assessor-blinded, prospective, proof-of-concept study, the efficacy, and tolerability of red-light (630 nm) PDT with a new 5-ALA "low-dose" topical gel formulation (5%) in the treatment of inflammatory mild-to-moderate acne vulgaris (AV). SUBJECTS AND METHODS: A total of 35 subjects with moderate AV of the face (mean age: 24 ± 8 years, 13 men and 22 women) were enrolled, after their written informed consent. The primary outcome was the evolution of GAG (Global Acne Grade System) score at baseline and after an average of three, 630-nm, 15-minute, PDT sessions, performed every 2 weeks. GAG score was also calculated in a follow-up visit 6 months after the last PDT session. Skin tolerability was assessed during PDT sessions with a patient-reported discomfort level evaluation score from 0 (no discomfort at all) to 3 (severe discomfort). RESULTS: At baseline, the GAG score was 21 ± 6. After the last PDT session, the GAG score evaluated in a blinded fashion (digital photographs) was significantly reduced to 6.5 ± 5.7, representing a 70% reduction (P = .0001, Wilcoxon test; mean difference 14.9; 95% CI of the difference: 12.1-17.6). At the follow-up visit, the GAG score was 6.7 ± 6.8. The 5% ALA thermosetting gel Red-light PDT was in

general very well tolerated with a discomfort mean level score of 0.5 ± 1. CONCLUSION: This proof-of-concept study supports the efficacy of 5% ALA thermosetting gel red-light PDT in inflammatory acne of the face with a relevant clinical improvement of inflammatory lesions with a very good tolerability profile. Clinical improvement was maintained in the medium term (Trial Registration Number: ISRCTN66066651).

Correlations of SOX9 expression with serum IGF1 and inflammatory cytokines IL-1α and IL-6 in skin lesions of patients with acne. Ji J, Zhang RH, Li HM, et al. Eur Rev Med Pharmacol Sci. 2018 May;22(9):2549-2555. doi: 10.26355/eurrev_201805_14946. https://www.ncbi.nlm.nih.gov/pubmed/29771405

OBJECTIVE: To study the correlations of sex determining region Y-box 9 (SOX9) expression with serum type-1 insulin-like growth factor (IGF-1), interleukin-1α (IL-1α), and interleukin-6 (IL-6) in skin lesion tissues of patients with acne. PATIENTS AND METHODS: Six patients with acne who were treated for the first time in our outpatient clinic from June 2017 to July 2017 were selected as observation group, and 6 normal subjects were selected as control group. The expression of SOX9 was detected by immunohistochemistry. The protein expressions of IGF-1, IL-1α, and IL-6 were detected by enzyme-linked immunosorbent assay (ELISA). SOX9 was detected by quantitative polymerase chain reaction (qPCR). RESULTS: Compared with that in control group, the expression of SOX9 in observation group was significantly increased ($p < 0.05$). Compared with those in control group, the expressions of IGF-1, IL-1α and IL-6 in observation group were significantly increased ($p < 0.05$). Compared with that in control group, the mRNA expression of SOX9 in observation group was significantly increased ($p < 0.05$). SOX9 was positively correlated with IGF-1, IL-1α and IL-6. CONCLUSIONS: The expressions of SOX9, IGF-1, IL-1α, and IL-6 in skin lesion tissues of patients with acne are increased, and SOX9 is positively correlated with IGF-1, IL-1α, and IL-6 and can be used as a target for the treatment of acne inflammation.

Mesotherapy with Botulinum toxin for the treatment of refractory vascular and papulopustular rosacea. Bharti J, Sonthalia S, Jakhar D. J Am Acad Dermatol. 2018 May 19. pii: S0190-9622(18)30808-9. doi: 10.1016/j.jaad.2018.05.014. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29787842

Although treatment with topical and systemic antibiotics, azelaic acid, isotretinoin, tranexamic acid, chemical peels and intense pulsed light therapy may significantly improve the papulopustular component of rosacea, in some patients the vascular symptoms of persistent erythema, mild edema, flushing and telangiectasias tend to persist. Botulinum toxin (BTX) diluted to 10 units/ml is administered intradermally in the hypervascular and telangiectatic centrofacial face as 0.05 ml microdroplet injections with 0.5 cm spacing under topical anesthesia.. Significant reduction in erythema, edema, telangiectasias, and flushing is apparent within 1-2 weeks. Any remaining papulopustular lesions also show improvement; additionally a reduction in pore-size is also noticeable within 2 weeks. The improvement lasts for 3-4 months but repeat sessions of BTX Mesotherapy are required once every 4-5 months to maintain the remission. Dermoscopy allows a more objective evaluation of therapeutic response. The therapeutic benefit of BTX in rosacea probably stems from acetylcholine blocking effects targeting arrector pili muscles (reducing pore size) and local muscarinic receptors in the sebaceous glands. Improvement in flushing, erythema and inflammation are attributable to potent blockade of acetylcholine release from autonomic peripheral nerves of the cutaneous vasodilatory system, and inhibition of the release of inflammatory mediators such as calcitonin gene-related peptide (CGRP) and substance P. In conclusion, diluted BTX mesotherapy repeated every 4-5 months is an option to relieve the vascular signs and symptoms of rosacea, although the procedure is limited by the cost, and the need for repeated injections of BTX.

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New approach in acne therapy: A specific bacteriocin activity and a targeted anti il-8 property in just 1 probiotic strain, the L. salivarius LS03. Deidda F, Amoruso A, Nicola S, et al. J Clin Gastroenterol. 2018 May 18. doi: 10.1097/MCG.0000000000001053. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29782471

GOALS: The aim of this research was to assess the antibacterial activity of Lactobacillus salivarius LS03 (DSM 22776) against Propionibacterium acnes and its anti-inflammatory properties by inhibiting P. acnes-induced interleukin-8 (IL-8) release. BACKGROUND: Acne is the most common skin disease, causing significant psychosocial problems for those afflicted. Currently available agents for acne treatment, such as oral antibiotics, have limited use. Thus, development of novel agents to treat this disease is needed. In the generation of inflammatory lesions, proliferation of P. acnes in the obstructed follicles is critical. The administration of beneficial microorganisms represents a promising approach for treating several skin alterations and can have many favorable effects. STUDY: For the inhibition assay, P. acnes was spread on Propionibacter Isolation Agar Base plates, and LS03-soaked disks were placed directly on the agar surface. Peripheral blood mononuclear cells, isolated from healthy volunteers, were preincubated with phytohemagglutinin 1 µg/mL for 1 hour and stimulated with the probiotic strains for 24 hours to simulate an in vitro IL-8 release model. The IL-8 concentration in the supernatants was analyzed in duplicate using ELISA Kit. RESULTS: L. salivarius LS03 exerted a significant inhibitory capacity against the target pathogen strain. This antagonistic activity was primarily ascribable to the feature of LS03 strain of secreting active bacteriocins against P. acnes. Concerning the IL-8 analysis, 3 different L. salivarius strains were able to inhibit the release of this chemokine by 10% to 25%. CONCLUSIONS: L. salivarius LS03 probiotic strain could be an alternative treatment to antibiotic/anti-inflammatory therapy in subjects presenting acne vulgaris.

Concomitant use of 1,550-nm nonablative fractional laser with low-dose isotretinoin for the treatment of acne vulgaris in asian patients: A randomized split-face controlled study. Xia J, Hu G, Hu D, et al. Dermatol Surg. 2018 May 16. doi: 10.1097/DSS.0000000000001546. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29781900

BACKGROUND: Nonablative fractional laser (NAFL) has been shown to improve the appearance of inflammatory acne and acne scars. Isotretinoin is effective for the treatment of moderate-to-severe cases of recalcitrant acne. However, the recommended dose of isotretinoin can have profound effects. OBJECTIVE: To investigate the clinical efficacy and safety of performing NAFL treatment in patients with moderate-to-severe acne vulgaris under treatment with low-dose oral isotretinoin. METHODS AND MATERIALS: Eighteen patients who received 10-mg oral isotretinoin per day completed 3 sessions of NAFL treatment on one half of the face and presented for each scheduled follow-up appointment. RESULTS: Low-dose isotretinoin was effective in managing papules and nodule lesions ($p < .001$). Comedo lesions were significantly improved on NAFL-treated half-faces, compared with untreated half-faces ($p < .05$) as well as on the appearance of atrophic boxcar scars (superficial boxcar scar, $p < .05$; deep boxcar scar, $p < .01$). The most common side effects of oral isotretinoin were xerostomia and cheilitis. The most common discomforts associated with NAFL treatment were mild transient erythema and edema in the treated area. CONCLUSION: The combination of NAFL with low-dose isotretinoin is a safe and effective treatment for moderate-to-severe acne.

Assessment of rosacea symptom severity by genome-wide association study and expression analysis highlights immuno-inflammatory and skin pigmentation genes. Aponte JL, Chiano MN, Yerges-Armstrong LM, et al. Hum Mol Genet. 2018 May 16. doi: 10.1093/hmg/ddy184. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29771307

Rosacea is a common, chronic skin disease of variable severity with limited treatment options. The cause of rosacea is unknown, but it is believed to be due to a combination of hereditary and environmental factors. Little is known about the genetics of the disease. We performed a genome-wide association study (GWAS) of rosacea symptom severity with data from 73,265 research participants of European ancestry from the 23andMe customer base. Seven loci had variants associated with rosacea at the genome-wide significance level ($p \leq 5 \times 10\text{-}8$). Further analyses highlighted likely gene regions or effector genes including IRF4 ($p=1.5 \times 10\text{-}17$), an HLA region flanked by PSMB9 and HLA-DMB ($p=2.2 \times 10\text{-}15$), HERC2-OCA2 ($p=4.2 \times 10\text{-}12$), SLC45A2 ($p=1.7 \times 10\text{-}10$), IL13 ($p=2.8 \times 10\text{-}09$), a region flanked by NRXN3 and DIO2 ($p=4.1 \times 10\text{-}9$), and a region flanked by OVOL1and SNX32 ($p=1.2 \times 10\text{-}8$). All associations with rosacea were novel except for the HLA locus. Two of these loci (HERC-OCA2, SLC45A2) and another precedented variant (rs1805007 in MC1R) with an association p value just below the significance threshold ($p=1.3 \times 10\text{-}7$) have been previously associated with skin phenotypes and pigmentation, two of these loci are linked to immuno-inflammation phenotypes (IL13, PSMB9-HLA-DMA) and one has been associated with both categories (IRF4). Genes within three loci (PSMB9-HLA-DMA, HERC-OCA2, and NRX3-DIO2) were differentially expressed in a previously published clinical rosacea transcriptomics study that compared lesional to non-lesional samples. The identified loci provide specificity of inflammatory mechanisms in rosacea, and identify potential pathways for therapeutic intervention.

Successful treatment of acne keloidalis nuchae with erbium:YAG laser: a comparative study. Gamil HD, Khater EM, Khattab FM, Khalil MA. J Cosmet Laser Ther. 2018 May 14:1-5. doi: 10.1080/14764172.2018.1455982. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29757041

BACKGROUND: Acne keloidalis nuchae (AKN) is a chronic inflammatory disease involving hair follicles of the neck. It is a form of keloidal scarring alopecia that is often refractory to medical or surgical management. OBJECTIVE: To evaluate the efficacy of Er: YAG laser in the treatment of AKN as compared to long pulsed Nd:YAG laser. PATIENTS AND METHODS: This study was conducted on 30 male patients with AKN. Their ages ranged from 19 to 47 years with a mean age of 36.87 ± 7.8 years. Patients were divided randomly into two groups of 15 patients, each receiving six sessions of either Er: YAG or long-pulsed Nd:YAG laser therapy. RESULTS: A statistically significant decrease in the number of papules was detected at the end of therapy in both groups, with a mean of 91.8% improvement in the Er: YAG group versus 88% in the Nd:YAG group. A significant decrease in plaques count was detected only in the Er: YAG group while a significant decrease in plaques size and consistency was recorded in both groups. CONCLUSION: The Er: YAG laser proved to be a potentially effective and safe modality both in the early and late AKN lesions.

The impact of acne and facial post-inflammatory hyperpigmentation on quality of life and self-esteem of newly admitted Nigerian undergraduates. Akinboro AO, Ezejiofor O, Olanrewaju FO, et al. Clin Cosmet Investig Dermatol. 2018 May 10;11:245-252. doi: 10.2147/CCID.S158129. eCollection 2018. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5955012/

Background: Acne and facial post-inflammatory hyperpigmentation are relatively common clinical conditions among adolescents and young adults, and inflict psychosocial injuries on sufferers. Objective: To document the psychosocial

and self-esteem implications of acne and facial hyperpigmentation on newly admitted undergraduates. Materials and methods: A cross-sectional survey was conducted among 200 undergraduates. Demographics and clinical characteristics were obtained and acne was graded using the US Food and Drug Administration 5-category global system of acne classification. Participants completed the Cardiff Acne Disability Index (CADI) and the Rosenberg self-esteem scale (RSES), and data were analyzed using SPSS 20. Results: Mean age of acne onset was 16.24 ± 3.32 years. There were 168 (84.0%) cases categorized as almost clear, 24 (12.0%) as mild acne, 4 (2.0%) as moderate acne and 4 (2.0%) as severe acne. Acne with facial hyperpigmentation, compared to acne without hyperpigmentation, was associated with significant level of anxiety in 30 participants (26.5% vs 10.3%, p=0.004) and emotional distress in 40 (35.4% vs 10.3%, p<0.001). Acne severity correlated with total CADI score but not with total RSES score. Quality of life (QoL) was significantly reduced among acne patients with facial hyperpigmentation (1.77±1.62, vs 1.07±1.02, p<0.001) compared to those without hyperpigmentation. Acne and facial hyperpigmentation was associated with social life interference, avoidance of public facilities, poor body image and self-esteem and perception of worse disease. There was no association between gender and QoL but acne was related to a reduction of self-worth. Low self-esteem was present in 1.5%, and severe acne was associated with an occasional feeling of uselessness in the male gender. Conclusion: Acne with facial hyperpigmentation induces poorer QoL and self-esteem is impaired only in severe acne. Beyond the medical treatment of acne, dermatologists should routinely assess the QoL and give attention to treatment of facial post-inflammatory hyperpigmentation among people of color.

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Prevention and reduction of atrophic acne scars with adapalene 0.3%/benzoyl peroxide 2.5% gel in subjects with moderate or severe facial acne: Results of a 6-month randomized, vehicle-controlled trial using intra-individual comparison. Dréno B, Bissonnette R, Gagné-Henley A, et al. Am J Clin Dermatol. 2018 Apr;19(2):275-286. doi: 10.1007/s40257-018-0352-y. https://www.ncbi.nlm.nih.gov/pubmed/?term=Prevention+and+Reduction+of+Atrophic+Acne+Scars+with+Adapalene+0.3%25%2FBenzoyl+Peroxide+2.5%25+Gel+in+Subjects+with+Moderate+or+Severe+Facial+Acne%3A+Results+of+a+6-Month+Randomized%2C+Vehicle-Controlled+Trial+Using+Intra-Individual+Comparison

BACKGROUND: Very few clinical trials have investigated the effect of topical acne treatment on scarring. OBJECTIVES: Our objective was to evaluate the efficacy of adapalene 0.3%/benzoyl peroxide 2.5% gel (A0.3/BPO2.5) in atrophic acne scar formation in patients with acne. METHODS: In this multicenter, randomized, investigator-blinded, vehicle-controlled study, subjects with moderate or severe facial acne (Investigator's Global Assessment [IGA] score 3 or 4; ≥ 25 inflammatory lesions; ten or more atrophic acne scars) applied A0.3/BPO2.5 or vehicle daily per half face for 24 weeks. Subjects with acne requiring systemic treatment were excluded. Assessments included investigator atrophic acne scar count, Scar Global Assessment (SGA), acne lesion count, IGA, skin roughness and skin texture, subject self-assessment of clinical acne-related scars and satisfaction questionnaire, tolerability, and safety. RESULTS: Included subjects (n = 67) had mainly moderate acne (92.5% IGA 3); mean scores at baseline were approximately 40 acne lesions and 12 scars per half face. By week 24, the change from baseline in total scar count was - 15.5% for A0.3/BPO2.5 versus + 14.4% for vehicle (approximately 30% difference), with a mean of 9.5 scars versus 13.3 per half face, respectively ($p < 0.0001$). For SGA at week 24, a total of 32.9% with A0.3/BPO2.5 versus 16.4% with vehicle ($p < 0.01$) were clear/almost clear. Inflammatory acne lesions decreased by 86.7% for A0.3/BPO2.5 versus 57.9% for vehicle ($p < 0.0001$), and 64.2 versus 19.4% of subjects, respectively, were IGA clear/almost clear ($p < 0.0001$) at week 24. Treatment-related AEs were reported by 20.9% for A0.3/BPO2.5 versus 9% for vehicle side, most commonly skin irritation (14.9 vs. 6%, respectively). CONCLUSIONS: Topical

A0.3/BPO2.5 prevented and reduced atrophic scar formation. Scar count increased with vehicle (+ 14.4%) but decreased with A0.3/BPO2.5 (- 15.5%) over 24 weeks. TRIAL REGISTRY: ClinicalTrials.gov identifier NCT02735421.

Clinical Reviews

Overall and subgroup prevalence of crohn disease among patients with hidradenitis suppurativa, a population-based analysis in the United States. Amit Garg, MD; Jessica Hundal, BA; Andrew Strunk, MA. JAMA Dermatol. Published online May 23, 2018. doi:10.1001/jamadermatol.2018.0878. https://jamanetwork.com/journals/jamadermatology/article-abstract/2682035

Question: What is the prevalence of Crohn disease (CD) among patients with hidradenitis suppurativa (HS) vs those without HS? Findings: In this cross-sectional analysis of 51,340 patients, prevalence of CD among patients with HS was 2.0% vs 0.6% among those without HS. Patients with HS have 3 times the odds of having CD as those without HS. Meaning: Relevant gastrointestinal symptoms among patients with HS warrant additional evaluation. Importance: Limited evidence supports a link between hidradenitis suppurativa (HS) and Crohn disease (CD), and this relationship has not been established in the United States. Objective: To evaluate the prevalence of CD among patients with HS in the United States and to determine the strength of association between the 2 conditions. Design, Setting, and Participants: Cross-sectional analysis of data from 51,340 patients with HS identified using electronic health records data in the Explorys multiple health system data analytics and research platform, which includes data from more than 50 million unique patients across all US census regions. Main Outcomes and Measures: Primary outcome was diagnosis of CD. Results: Of the 18,455,660 total population considered, 51,340 had HS (35 000 women). Of these patients with HS, 29 010 (56.5%) were aged 18 to 44 years; 17,580 (34,2%), 45 to 64 years; and 4750 (9.3%), 65 years or older. Prevalence of CD among patients with HS was 2.0% (1,025/51,340), compared with 0.6% (113,360/18,404,260) among those without HS ($P < .001$). Prevalence of CD was greatest among patients with HS who were white (2.3%), aged 45 to 64 years (2.4%), non-obese (2.8%), and tobacco smokers (2.3%). In univariable and multivariable analyses, patients with HS had 3.29 (95% CI, 3.09-3.50) and 3.05 (95% CI, 2.87-3.25) times the odds of having CD, respectively, compared with patients without HS. Crohn disease was associated with HS across all patient subgroups. The association was strongest for men (OR, 3.61; 95% CI, 3.24-4.03), patients aged 45 to 64 years (OR, 3.49; 95% CI, 3.16-3.85), non-obese patients (OR, 4.09; 95% CI, 3.69-4.54), and nonsmokers (OR, 3.44; 95% CI, 3.10-3.82). Conclusions and Relevance: This data suggests that patients with HS are at risk for CD. Gastrointestinal symptoms or signs suggestive of CD warrant additional evaluation by a gastroenterologist.

Japanese Dermatological Association Guidelines: Guidelines for the treatment of acne vulgaris 2017. Hayashi N, Akamatsu H, Iwatsuki K, et al. J Dermatol. 2018 May 21. doi: 10.1111/1346-8138.14355. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29782039

The Guidelines for the Treatment of Acne Vulgaris of the Japanese Dermatological Association was first published in Japanese in 2008 and revised in 2016 and 2017. These guidelines (GL) indicate the standard acne treatments in Japan and address pharmaceutical drugs and treatments applicable or in use in Japan. In these GL, the strength of the recommendation is based on clinical evidences as well as availability in Japanese medical institutions. In the 2016 and 2017 GL, some of the clinical questions were revised, and other questions were added in accordance with approval of topical medicines containing benzoyl peroxide (BPO). Rather than monotherapies of antibiotics, the 2017

GL more strongly recommend combination therapies, especially fixed-dose combination gels including BPO in the aspects of pharmacological actions and compliance in the acute inflammatory phase to achieve earlier and better improvements. The 2017 GL also indicate to limit the antimicrobial treatments for the acute inflammatory phase up to approximately 3 months and recommend BPO, adapalene, and a fixed-dose combination gel of 0.1% adapalene and 2.5% BPO for the maintenance phase to avoid the emergence of antimicrobial-resistant Propionibacterium acnes. The 2017 GL also discuss rosacea, which requires discrimination from acne and a different treatment plan.

Dairy intake and acne development: A meta-analysis of observational studies. Aghasi M, Golzarand M, Shab-Bidar S, et al. Clin Nutr. 2018 May 8. pii: S0261-5614(18)30166-3. doi: 10.1016/j.clnu.2018.04.015. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29778512

BACKGROUND & AIMS: In the past, some observational studies have been carried out on the relationship between milk and dairy intake and risk of acne occurrence; however, their results were conflicting. This study is a meta-analysis and dose-response analysis designed to evaluate the relationship between milk and dairy products and acne development. MATERIALS & METHODS: Data of the study were searched and collected from Pubmed/Medline, Scopus, Web of Science, and Embase databases. Study design, sex, age, exposure (i.e. dairy, milk, yogurt, cheese), dietary assessment method, acne ascertainment, total sample size, number of total subjects and cases in each category of exposure intake, OR, RR and PR with 95% CI in each category of exposure intake and adjusted variables were extracted. RESULTS: Highest compared with lowest category of dairy (OR: 2.61, 95% CI: 1.20 to 5.67), total milk (OR: 1.48, 95% CI: 1.31 to 1.66), low-fat milk (OR: 1.25, 95% CI: 1.10 to 1.43) and skim milk (OR: 1.82, 95% CI: 1.34 to 2.47) intake significantly was associated with the presence of acne. Results of dose-response analysis revealed a significant linear relationship between dairy, whole milk and skim milk and risk of acne and nonlinear association between dairy, milk, low-fat milk and skim milk intake and acne. CONCLUSION: In this meta-analysis we found a positive relationship between dairy, total milk, whole milk, low-fat and skim milk consumption and acne occurrence. In contrary, no significant association between yogurt/cheese and acne development was observed.

Prevalence and comorbidities associated with hidradenitis suppurativa: A nationwide population-based study. Lee JH, Kwon HS, Jung HM, et al. J Eur Acad Dermatol Venereol. 2018 May 15. doi: 10.1111/jdv.15071. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29761904 BACKGROUND: The prevalence of hidradenitis suppurativa (HS) in Asia is unknown. The associations between HS and other autoimmune disorders have rarely been reported. OBJECTIVE: We sought to determine the prevalence of and diseases associated with HS using the National Health Insurance (NHI) database. METHODS: We examined Korean NHI claim database data from 2007 to 2016. We enrolled all patients with HS and age- and sex-matched control subjects without HS. We estimated the period prevalence of HS and associated comorbidities in Korea. RESULTS: We identified 28,516 patients with HS (61.3% males and 38.7% females). The period prevalence was 0.06%, 55.8 patients (95% confidence interval 55.1-56.4) per 100,000 persons, and the female-to-male ratio was 1:1.6. HS patients were at significantly increased risk for rheumatoid arthritis, ankylosing spondylitis, type 1 diabetes, ulcerative colitis, type 2 diabetes, hypertension, hyperlipidemia, acne conglobata, pilonidal cysts, psoriasis, pyoderma gangrenosum, alopecia areata, and vitiligo. CONCLUSION: The overall prevalence of HS in Korea was lower than in Western populations, and male patients predominated.

Light therapies for acne. Posadzki P, Car J. JAMA Dermatol. 2018 May; 154(5):597-598. doi: 10.1001/jamadermatol.2018.0110. https://www.ncbi.nlm.nih.gov/pubmed/?term=29541753

Clinical Question: Are light therapies effective and safe for treating acne? Bottom Line: The evidence for all light therapies remains weak and inconclusive. Red-light methyl aminolevulinate-photodynamic therapy (MAL-PDT) was the only treatment associated with a small though clinically insignificant reduction in the number of inflamed lesions and in global improvement as assessed by an investigator in moderate to severe acne. Red-light MAL-PDT was not associated with higher rates of severe adverse effects than placebo or no treatment. Owing to inadequate reporting of adverse effects such as scarring or blistering, the safety of all light therapies remains uncertain.

Topical acne care: Can we treat active lesions and scars at the same time? New findings have intriguing implications for our approach to preventing—and managing—acne scars. Practical Dermatology, May 2018. By Hilary Baldwin, MD. http://practicaldermatology.com/2018/05/topical-acne-care-can-we-treat-active-lesions-and-scars-at-the-same-time/

Acne scarring is common, occurring in about 40 percent of all patients who have acne. Previous research has suggested that a given acne lesion has about a 5.7 percent risk of developing into a scar. Besides recognizing that acne scars can affect an individual's self-confidence, there is also evidence that acne scars can affect the perception that others have of an affected individual. Dreno, et al. conducted a study to assess perceptions of acne scarring. Photos of individuals without acne scarring were altered to show scarring. A panel of individuals then looked at either the original photos (no scars) or the enhanced images (with scars). Consistently, reviewers said that the skin was the first feature they noticed in the pictures with scars. But other features—the eyes, the mouth, the nose, the hair—were the first features noticed in the pictures without scars. Furthermore, when reviewers were asked their perceptions of the individuals in the pictures, those with scarring were described as less confident, less happy, less healthy, and even less successful. Despite promising advancements in both device-based technologies and injectable fillers, acne scars remain challenging to treat, and the consensus is that it is best to reduce the risk of developing scars in the first place. We know that the risk for scarring increases as the severity of acne increases. We also recognize that as the duration from onset of acne to successful treatment increases, the risk for scarring also increases. With these thoughts in mind, the mandate for dermatologists is to implement treatment as early in the disease process as possible and with a course of treatment suited to the level of disease severity. There are now available some energy-based devices that provide benefit in the management of active acne and may also be used to treat acne scarring. However, very few patients are treated for acne with devices alone. Therefore, topical acne therapy is a component of care for the vast majority of those individuals affected by acne. A new study provides important support for the role of early and effective topical acne treatment to reduce the risk for scar formation. Findings also have intriguing implications for our approach to preventing—and managing—acne scars.

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Patient Counseling/Communication

Prevent acne-related PIH: Treat acne early. Practical Dermatology May 2018. By Seemal R. Desai, MD http://practicaldermatology.com/acne-resource-center/prevent-acne-related-pih-treat-acne-early Supported with advertising by Ortho Dermalogics. Dr. Desai is Founder and Medical Director of Innovative Dermatology and Clinical Assistant Professor at University of Texas/Southwestern in Dallas. I have a passionate love/hate relationship with

PIH or post-inflammatory hyperpigmentation. I love it when I can make my patients better and happier and allow them to feel better about their skin. I hate it, because it can be very difficult to treat. Given the challenges of management, one of my main philosophies in approaching PIH is to take all possible measures to prevent it. One of the most common reasons patients with darker skin types develop PIH is as a result of acne. For example, one recent analysis showed that nearly 60% of acne patients from seven Asian countries had associated PIH. The analyzed population consisted mainly (80%) of individuals with mild to moderate acne. (J Dermatol. 2016 Jul;43(7):826-8) This tells us that PIH is not just a result of severe acne. When acne is left untreated or treated not aggressively from the onset, the risk for PIH increases. Once PIH develops, the patient and dermatologist face the challenge of lightening those spots. In the above mentioned Asian study, more than half of subjects had had PIH for one year and 22% had had it for five years or more. In efforts to prevent PIH from developing, I tend to treat acne very aggressively, especially in my patients with darker skin. As its name indicates, PIH is inflammatory at its core, with good evidence that inflammatory mediators drive the condition. (J Eur Acad Dermatol Venereol. 2015 Jun;29 Suppl 4:3-11) Topical therapies that target acne while providing anti-inflammatory effects are ideal. Topical retinoids can be beneficial for addressing PIH, as they are recognized to provide anti-inflammatory effects while they promote epidermal cell turnover. Clinicians should not overlook interventions like chemical peels that can also address both active acne and PIH. I tend to prefer salicylic acid peels, which seem to reduce skin oiliness, help to clear congested pores, promote exfoliation, and can help reduce PIH. It is essential that the patient stop any retinoid (tretinoin, tazarotene, adapalene, etc.) at least five to seven days before the chemical peel is performed. They can continue using other therapies, such as topical antibacterial formulations. While the retinoid may add a valuable part of the treatment algorithm, improper timing of medications could lead to an adverse event, such as peel-induced burn. It is therefore important to know when to time these products. Acne-related PIH is indeed a challenge, and we welcome development of new treatment options. In the meantime, if we start treating acne early, there's much more likelihood of success preventing PIH from even developing.