AARS HOT TOPICS MEMBER NEWSLETTER

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Industry News

Spironolactone may be an alternative to antibiotics in female acne. Monday, June 04, 2018. DermWire. http://practicaldermatology.com/dermwire/2018/06/04/spironolactone-may-be-an-alternative-to-antibiotics-in-female-acne

The diuretic drug spironolactone may be just as effective as antibiotics for the treatment of women's acne, report researchers from the Perelman School of Medicine at the University of Pennsylvania. The study, published in the Journal of Drugs and Dermatology, found patients who were originally prescribed spironolactone changed to a different drug within one year at almost the same rate as those who were prescribed antibiotics. The prescription change is a proxy for ineffectiveness, since switching is often the result of treatment failure due to lack of efficacy, side effects, cost, or other factors. Oral antibiotics are the most common systemic treatment for acne, and when combined with the large patient population, the result is that dermatologists prescribe the highest level of antibiotics per provider among all medical specialties, according to the Centers for Disease Control – a fact that contributes to concerns about increased resistance to antibiotics across all fields of medicine. "It's clear that a safe alternative to oral antibiotics could have a huge benefit, and our data show spironolactone may be that alternative," says the study's lead author John S. Barbieri, MD, MBA, Dermatology chief resident at Penn, in a news release. David J. Margolis, MD, PhD, a professor of Dermatology, was the study's senior author. To arrive at their findings, researchers compared data on 6,684 women and girls taking spironolactone to 31,614 who were prescribed antibiotics. Within a year, 14.4 percent of spironolactone patients and 13.4 percent of antibiotic patients had switched to alternative treatments, suggesting each treatment was working at almost the same rate, despite the fact that tetracycline-class antibiotics are prescribed five times as frequently. "These numbers suggest dermatologists should consider spironolactone first instead of antibiotics when it comes to women with acne," Barbieri says. In addition to the benefits for antibiotic stewardship, Barbieri pointed to several studies showing long-term oral antibiotic use may be associated with antibiotic resistance, lupus, inflammatory bowel disease, and even colon and breast cancer. "This indicates spironolactone may have a better safety profile than oral antibiotics, which is another factor that makes it such an appealing option," Barbieri says. He also noted spironolactone is less expensive, which may be relevant to patients with high deductibles or who are uninsured. Spironolactone is not approved for the treatment of acne by the U.S. Food and Drug Administration despite expert opinion supporting its use, and Barbieri says the findings of this study should be confirmed by a randomized controlled trial that directly compares the two treatment options.

New Medical News

Is maintenance treatment in adult acne important? Benefits from maintenance therapy with adapalene, and low doses of alpha and beta hydroxy acids. Chlebus E, Serafin M, Chlebus M. J Dermatolog Treat. 2018 Jun 6:1-13. doi: 10.1080/09546634.2018.1484874. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29873567

Background: Adult acne is a chronic disease with uncontrolled exacerbations, associated with a psychological burden of the patient and medical expenses. AIMS: The aim of the study was to check the efficacy of maintenance therapy of adult acne. It is essential part of treatment as adult acne usually has a long-lasting and recurring course. Methods: In the study the efficacy of maintenance therapy in patients with adult acne is evaluated. In this study, 100 patients (aged 25-39 years of age) with mild and moderate adult acne were enrolled. Results: The maintenance therapy (adapalene 0.1% three times a week and low doses of alpha and beta hydroxy acids) led to a significant decrease in

the number of acne lesions (from 31.3 to 12.25; $p < 0.001$) and severity of seborrhoea ($p < 0.001$). Conclusions: Maintenance therapy brings significant improvements in the reduction of non-inflammatory and inflammatory lesions in patients with mild and moderate adult acne.

IL-1α and MMP-9 tear levels of patients with active ocular rosacea before and after treatment with systemic azithromycin or doxycycline. Lam-Franco L, Perfecto-Avalos Y, Patiño-Ramírez BE, Rodríguez García A. Ophthalmic Res. 2018 Jun 6:1-6. doi: 10.1159/000489092. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29874670

Aims: The purpose of this paper was to determine the lacrimal concentration of IL-1α and MMP-9 in patients with active ocular rosacea before and after systemic treatment with azithromycin or doxycycline. Methods: After 4 weeks of therapy with azithromycin (500 mg/day, 3 days a week PO) or doxycycline (200 mg/day PO), lacrimal samples were analyzed using an enzyme-linked immunosorbent assay multiplex. Results: There was a significant difference between baseline IL-1α (37.9 pg/mL) and MMP-9 (26.7 ng/mL) in rosacea eyes compared to controls (0.001 pg/mL for IL-1α and 0.2 ng/mL for MMP-9) ($p < 0.001$). IL-1α decreased from 47.0 pg/mL before azithromycin to 23.5 pg/mL after treatment ($p = 0.024$), but not after doxycycline therapy. On the contrary, baseline MMP-9 tear levels (10.28 ng/mL) decreased after treatment (8.36 pg/mL) with doxycycline ($p = 0.054$) but not with azithromycin. There was a strong clinical correlation of higher baseline IL-1α tear levels between patients who responded to doxycycline therapy and those who failed ($p = 0.043$). Patients unresponsive to azithromycin had significantly higher baseline MMP-9 levels than those with doxycycline ($p = 0.040$). Conclusions: While IL-1α levels decreased after azithromycin therapy, MMP-9 did so after doxycycline treatment. Baseline cytokine tear levels tend to be markedly elevated in patients with antibiotic failure, suggesting their potential role as therapeutic biomarkers for the disease.

Increased expression of IL-33 in rosacea skin and UVB-irradiated and LL-37-treated HaCaT cells. Suhng E, Kim BH, Choi YW, et al. Exp Dermatol. 2018 Jun 6. doi: 10.1111/exd.13702. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29873850

Background: Rosacea is one of the most common dermatoses of adults. Although the detailed pathophysiology remains unknown, it is thought that rosacea is caused by a consistently aberrant, innate immune response, and that LL-37 plays an important role. However, involvement of the inflammatory cytokine IL-33 has not yet been studied. Objectives: We explored the role played by IL-33 in the pathophysiology of rosacea. Methods: First, we immunohistochemically evaluated the expression of IL-33 and its receptor (ST2) in rosacea skin. Second, we exposed HaCaT cells to ultraviolet B (UVB) irradiation in the presence or absence of LL-37, and measured the expression of proinflammatory cytokines including IL-33. We also analyzed VEGF (vascular endothelial growth factor) mRNA expression and protein release after co-stimulation of HaCaT cells by LL-37 and IL-33. Results: Immunohistochemically, IL-33 expression was enhanced in the skin of rosacea patients, especially with erythematotelangiectatic subtype. In vitro, UVB and LL-37 synergistically increased mRNAs expression of proinflammatory cytokines, especially IL-33 and IL-1β. IL-33 protein release was also synergistically increased by LL-37 and UVB treatment. LL-37 and IL-33 stimulated VEGF mRNA expression and VEGF release from HaCaT cells. Conclusions: Our findings suggest that rosacea skin with abundant LL-37 may robustly produce and release IL-33 when exposed to UV radiation. IL-33 may participate in the angiogenesis and vasodilation of rosacea skin by enhancing VEGF release.

Sustained benefit after treatment of acne vulgaris using only a novel combination of long-pulsed and Q-switched 1064-nm Nd: YAG lasers. Bakus AD, Yaghmai D, Massa MC, et al. Dermatol Surg. 2018 Jun 5. doi: 10.1097/DSS.0000000000001565. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29877931

Background: Acne vulgaris remains a challenging disease to treat in many patients. Traditional therapies may have limited successes with potential side effects. Laser and light energy devices may offer a desirable alternative. Objective: To evaluate the effectiveness and safety in using a combination laser approach with both long-pulsed (LP) and Q-switched (QS) Nd:YAG lasers in the treatment of active acne. Methods: Twenty patients with moderate to severe inflammatory acne were treated with LP YAG laser followed immediately with QS YAG laser. Patients received at least 8 treatments. Follow-up evaluation occurred at a minimum of 12 months. Pre- and post-treatment photographs were graded by blinded physicians. All topical acne medications and oral antibiotics were discontinued throughout the therapy and follow-up period. Results: There was a 81% reduction in acne lesions, with 60% of patients having 90% or greater reduction. Overall appearance was graded at 84% improvement at follow-up. Follow-up occurred at a mean of 22.7 months after completion of therapy. Aside from transient erythema, there were no other adverse effects. Conclusion: Active acne can be treated successfully with a combination of LP and QS YAG lasers with patients remaining off acne medications throughout laser therapy and the follow-up period.

Clinical and dermoscopic evaluation of combined (salicylic acid 20% and azelaic acid 20%) versus trichloroacetic acid 25% chemical peel in acne: a RCT. Abdel Hay R, Hegazy R, Abdel Hady M, Saleh N. J Dermatolog Treat. 2018 Jun 4:1-22. doi: 10.1080/09546634.2018.1484876. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29862871

Background: Combined azelaic acid (AA) and salicylic acid (SA) has not been previously used for acne. Objective: To compare the efficacy of this combination versus trichloroacetic acid (TCA) 25% peel in acne. Methods: 34 patients were included in this trial. Patients received four sessions two-weeks apart. The combined solution was applied to one side of the face while TCA was applied to the other. Our outcomes were physician-reported clinical improvement, dermoscopic assessment of the erythema and patient's satisfaction. Results: After 2 sessions, a significant clinical improvement was observed in non-inflammatory lesions in the TCA treated side treated TCA and in inflammatory lesions in the SA/AA treated side. At the end, both modalities led to significant improvement, with no significant difference in between. Patients reported more discomfort with the TCA treated side. There was no significant different clinical improvement in both treated sides as regards SPT. Erythema improved in both sides. Patients were more satisfied by the SA/AA treated side. Conclusion: Chemical peeling is effective in controlling mild-moderate acne in SPT III-IV. Combined SA 20% and AA 20% is recommended at early stage of treatment if patients have more inflammatory lesions, while TCA is recommended if patients have more non-inflammatory lesions.

Clinical experience with once-daily dapsone gel, 7.5% monotherapy in patients with acne vulgaris. Stockton TC, Tanghetti EA, Lain E, et al. J Drugs Dermatol. 2018 Jun 1;17(6):602-608. https://www.ncbi.nlm.nih.gov/pubmed/29879247

Background: Dapsone gel, 7.5% is a topical medication approved for acne in patients aged 12 years and older. Clinical trials have demonstrated the safety and efficacy of once-daily dapsone gel, 7.5% in patients with moderate acne. OBJECTIVE: The objective of this report is to describe the clinical course of 8 patients who participated in a 12-week program using once-daily dapsone gel, 7.5% as monotherapy for acne in a real-world clinical setting. Monotherapy program: Male and female adults and adolescents with facial acne, representing a broad range of ages, skin

phototypes, and ethnicities, and with no prior use of dapsone gel, 7.5% applied the product once daily for 12 weeks as monotherapy for acne. Photographs were taken at baseline and at 12 weeks. The treating dermatologists recorded observations of baseline disease, treatment tolerability, and outcomes. An independent rater assessed Global Acne Assessment Score (GAAS) at baseline and at 12 weeks based on photographs. Patients provided testimonials of their experience with treatment. Program outcomes: Acne improvement was evident in the photographs of the 8 patients. Changes in GAAS at week 12 of treatment, as assessed by an independent rater, ranged from 1- to 3-grade improvement from baseline. Conclusion: Photographs, dermatologist reports, and patient commentary in an office-based practice demonstrated that 12 weeks of treatment with only topical dapsone gel, 7.5%, applied once daily, was effective and well tolerated as a stand-alone treatment in 8 patients with facial acne vulgaris, with results that are consistent with the phase 3 pivotal trials.

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Clinically relevant reduction in persistent facial erythema of rosacea on the first day of treatment with oxymetazoline cream 1.0. Tanghetti EA, Dover JS, Goldberg DJ, et al. J Drugs Dermatol. 2018 Jun 1;17(6):621-626. https://www.ncbi.nlm.nih.gov/pubmed/29879249

Background: Persistent facial erythema is a clinically challenging feature of rosacea. Objective: To evaluate persistent erythema reduction on the first day of treatment from pooled data from two pivotal trials of topical oxymetazoline cream 1.0% (oxymetazoline) in persistent facial erythema of rosacea. Methods: In two identically designed, phase 3, multicenter trials, adults with moderate to severe persistent facial erythema of rosacea (Clinician Erythema Assessment [CEA] grade ≥3 and Subject Self-Assessment [SSA] grade ≥3) were randomized 1:1 to once-daily topical oxymetazoline or vehicle; the primary efficacy endpoint was ≥2-grade composite CEA and SSA improvement from baseline on day 29. This post hoc analysis evaluated the proportion of patients achieving ≥1-grade composite and individual CEA and SSA improvement at 1, 3, 6, 9, and 12 hours post dose on day 1 (N=885). Results: Significantly more patients achieved ≥1-grade composite and individual CEA and SSA improvement with the first application of oxymetazoline than with vehicle (P less than 0.001) at all post dose time points, beginning with hour 1. Day 1 safety assessments were similar between treatments. Limitations: Short-term, post hoc analysis. Conclusions: A ≥1-grade improvement in persistent erythema achieved after the first dose of once-daily topical oxymetazoline demonstrated clinically meaningful improvement from the beginning of therapy. J Drugs Dermatol. 2018;17(6):621-626.

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The efficacy and safety of azelaic acid 15% foam in the treatment of facial acne vulgaris. Hashim PW, Chen T, Harper JC, Kircik LH. J Drugs Dermatol. 2018 Jun 1;17(6):641-645. https://www.ncbi.nlm.nih.gov/pubmed/29879251

Background: Azelaic acid demonstrates anti-inflammatory, anti-oxidative, anti-comedogenic, and anti-microbial effects. Azelaic acid 20% cream is currently approved for the treatment of acne vulgaris, and azelaic acid 15% foam has recently been approved for rosacea. Given the favorable tolerability profile of foam preparations, it is reasonable to assume that azelaic acid 15% foam could serve as a viable treatment option for facial acne. Objective: To examine the efficacy and safety of azelaic acid 15% foam in the treatment of moderate-to-severe facial acne Methods: Twenty subjects with moderate-to-severe facial acne vulgaris were enrolled in this two-center, open-label pilot study. All study subjects were treated with azelaic acid 15% foam for 16 weeks. Efficacy analyses were based on the change in facial investigator global assessment (FIGA) and changes in total, inflammatory, non-inflammatory lesion counts between baseline and week 16. Results: There was a significant reduction in FIGA scores from baseline to week 16 (p =

.0004), with 84% of subjects experiencing at least a 1 grade improvement, and 63% of subjects achieving a final grade of Clear or Almost Clear. All subjects experienced reductions in inflammatory and total lesion counts by week 16, and 89% of subjects experienced reductions in non-inflammatory lesions. Azelaic acid 15% foam was well tolerated, with almost all instances of erythema, dryness, peeling, oiliness, pruritus, and burning being of mild or trace degree, and most adverse effects resolving by the end of the study. Conclusion: Azelaic acid 15% foam is effective and safe in the treatment of facial acne vulgaris. Given the convenience of foam vehicles, azelaic acid 15% foam should be considered as a viable treatment option for this condition. J Drugs Dermatol. 2018;17(6):641-645.

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The evaluation of contact sensitivity with standard and cosmetic patch test series in rosacea patients. Erdogan HK, Bulur I, Saracoglu ZN, Bilgin M. Ann Dermatol. 2018 Jun;30(3):290-295. doi: 10.5021/ad.2018.30.3.290. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5929945/pdf/ad-30-290.pdf

Background: Rosacea is a common dermatosis characterized by erythema, telangiectasia, papules and pustules. Objective: We aimed to evaluate contact sensitivity in the rosacea patients. Methods: We included 65 rosacea patients and 60 healthy volunteers in the study. The patient and control groups were patch tested with European baseline series and cosmetic series. Results: A positive reaction to at least 1 allergen in the European standard series was found in 32.3% of rosacea patients and 20.0% of subjects in the control group while the relevant numbers were 30.8% of rosacea patients and 10% of controls with the cosmetic series (p=0.08). In total, we found a positive reaction to at least 1 allergen in 38.5% of patients and 25.0% of controls (p=0.15). We did not find a statistically significant relationship between a positive reaction to 1 allergen in total and the gender, skin type, rosacea type, ocular involvement, age and disease duration. There were more symptoms in patients with a positive reaction to allergens (p<0.001). Conclusion: Contact sensitivity was detected more common in rosacea patients. Patch testing may be useful in the treatment and follow up of rosacea patients especially if symptoms such as itching, burning and stinging are present.

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Intense pulsed light therapy for acne-induced post-inflammatory erythema. Mathew ML, Karthik R, Mallikarjun M, Bhute S, et al. Indian Dermatol Online J. 2018 May-Jun;9(3):159-164. doi: 10.4103/idoj.IDOJ_306_17. https://www.ncbi.nlm.nih.gov/pubmed/29854634

Background: Intense pulsed light (IPL) is a comparatively new system of practice in treating acne-induced post inflammatory erythema (PIE) which is a difficult condition to treat, and variations exist in the results from published studies with insufficient or limited scientific evidence of IPL on Indian skin. Aim: To study the efficacy of IPL in the treatment of acne-induced PIE and to document adverse effects of the procedure. Settings and Design: A hospital-based retrospective observational study on 33 patients with acne-induced PIE who completed treatment with IPL during the time period of July 2015 to June 2017. Patients and Methods: All 33 patients were treated with vascular mode of IPL using 560-nm filter every 3 weeks for three to six sessions. Grading of PIE was done by Clinician Erythema Severity Score, and the objective parameters were assessed statistically for improvement using photographs. Adverse effects were noted and followed up. Statistical Analysis: Wilcoxon sign rank test and Pearson's correlation. Results: There was statistically significant reduction in mean erythema score from 2.57 ± 0.66 to 1.21 ± 0.48 following IPL (Z = -5.295, P < 0.001-Wilcoxon sign rank test). Excellent improvement was noted in 11 (33.33%), good in 15 (45.45%), fair in 4 (12.12%), and poor in 3 (9.09%), and the results were consistent on follow-up. Adverse

effects included erythema, hyperpigmentation, and hypopigmentation which were all transient and resolved completely in all patients on follow-up. Conclusion: IPL is an effective and safe alternative to otherwise difficult-to-treat acne-induced PIE.

Indicators of phagocytosis in women with acne during comprehensive treatment that included immunotherapy and probiotics. Syzon OO, Dashko MO. Wiad Lek. 2018;71(1 pt 2):144-147. https://www.ncbi.nlm.nih.gov/pubmed/29883344

Objective: Introduction: Acne is one of the most common dermatological diseases. It may have a chronic course, leaving permanent marks, and in last years has been tending to have more and more severe clinical course with widespread skin lesions. According to recent studies, the development of acne is due to the combined effect of endogenous and exogenous factors, among which endocrine diseases (quite a significant aspect), disorders of metabolic processes, reduced systemic immunity and phagocytic ability of mononuclear phagocytes and granulocytes at various stages of phagocytosis of pyogenic cocci, which contributes to more severe clinical course, and frequent relapse of this diseases. It was also proved that the intestinal microbiota plays an important role in the formation of homeostasis and immune response. The aim of the study is to determine the evolution of phagocytosis indices in patients with acne under different comprehensive treatments, using oral antibiotics, immunotherapy, probiotics and low-dose birth control pills. Patients and methods: Materials and methods: We observed 93 women with acne aged from 18 to 25 years old. In 19 (20,43 %) patients mild acne was diagnosed, in 41 (44.09%) - moderate acne, in 33 (35.48 %) persons - severe acne, 54 (58,06%) persons suffered from acne up to 1 year, 39 (41,93%) - from 1 to 3 years. To assess the state of phagocytosis in patients with acne vulgaris, we determined phagocytic activity (PA) and phagocytic index (PI) of polymorphonuclear leukocytes, nitro blue tetrazolium recovery test (NBT test spontaneous) and NBT-test pyrogenal stimulated by the recognized methods. Results: Results: Analysis of the studied parameters of phagocytosis at the end of treatment showed a significant increase in patients of the core group who were administered a comprehensive treatment which included oral antibiotic, probiotic, low-dose birth control pills and autohemotherapy, as compared with the patients of other groups under study. Conclusion: Conclusions: Using combined therapy for women with acne occurring against the backdrop of a sluggish process of phagocytosis and concomitant intestinal dysbiosis leads to normalization of the leading indices of phagocytosis (PI, PA, NBT tests both spontaneous and stimulated), and enhances their phagocytic activity both during capture and formation of bactericidal activity and in the final stages of phagocytosis justifying the feasibility of a combined use of antibiotics, probiotic, low-dose birth control pills and autohemotherapy in the treatment of acne.

Long-term adalimumab efficacy in patients with moderate-to-severe hidradenitis suppurativa/acne inversa: 3-year results of a phase 3 open-label extension study. Zouboulis CC, Okun MM, Prens EP, et al. J Am Acad Dermatol. 2018 May 31. pii: S0190-9622(18)30836-3. doi: 10.1016/j.jaad.2018.05.040. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29860040

Background: The long-term optimal dosing strategy for adalimumab in hidradenitis suppurativa/acne inversa (HS) was evaluated by pooling the results of the PIONEER phase 3 trials and an open-label extension (OLE) study. Objective: To assess response and tolerability of long-term adalimumab in HS. Methods: The durations of PIONEER I/II periods A, B, and OLE were 12, 24, and ≥ 52 weeks, respectively. Patients who entered the OLE and received adalimumab 40 mg every week continuously (ADAew) and responders plus partial responders (PRR) were evaluated. Primary efficacy assessments included HS Clinical Response (HiSCR) measure, lesion counts, skin pain, and Dermatology Life Quality Index (DLQI). Treatment-emergent adverse events were assessed. Results: At week 12,

52.3% (ADAew) and 73.0% (PRR) of patients achieved HiSCR. Achievement of HiSCR was maintained through week 168 in 52.3% of ADAew patients and 57.1% of PRR patients. Sustained improvement in lesion counts, skin pain, and DLQI were also observed. The safety profile throughout the OLE was similar to the profiles observed in the PIONEER studies. Limitations: The OLE was uncontrolled. CONCLUSION: Continuous weekly dosing with adalimumab 40 mg is a reasonable treatment option for long-term control of moderate-to-severe HS.

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Daily oxymetazoline cream demonstrates high and sustained efficacy in patients with persistent erythema of rosacea through 52 weeks of treatment. Gold MH, Lebwohl M, Biesman BS, et al. J Am Acad Dermatol. 2018 May 31. pii: S0190-9622(18)30833-8. doi: 10.1016/j.jaad.2018.05.037. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29860043

Persistent facial erythema, which may worsen over time, is one of the most common and therapeutically challenging characteristics of rosacea. Exacerbations and periods of remission characterize the chronic nature of rosacea; therefore, treatments that have efficacy and safety with long-term daily use are needed. We describe results of a post hoc analysis of a previously published phase 3, multicenter, 52-week open-label study in 440 patients with persistent facial erythema of rosacea (the REVEAL long-term trial; Clinicaltrials.gov identifier NCT02095158) that demonstrated the safety and efficacy of long-term, once-daily, topical oxymetazoline hydrochloride cream 1.0% (Rhofade™, Allergan plc, Dublin, Ireland). This analysis evaluated the proportion of patients who responded to oxymetazoline from day 1 through week 52 and the probability of response between visits.

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Carboxytherapy versus skin microneedling in treatment of atrophic postacne scars: A comparative clinical, histopathological, and histometrical study. Moftah NH, El Khayyat MAM, Ragai MH, Alaa H. Dermatol Surg. 2018 May 24. doi: 10.1097/DSS.0000000000001560. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29846342

Background: Acne scarring has been a challenge to treat. Microneedling gained popularity in treatment of such scars. Meanwhile, carboxytherapy (CXT) is considered a novel treatment modality for acne scars. Objective: To evaluate efficacy of CXT versus microneedling in treatment of acne scars. Methods and materials: Thirty-two patients with atrophic acne scars received 6 sessions of microneedling and CXT on right and left sides of face, respectively. Clinical evaluation with histopathological and computerized morphometric analysis was performed at 2 months after treatment. Results: After either microneedling or CXT, there was significant decrease of total acne scars and its 3 types separately (icepicks, boxcar, and rolling) ($p \leq .001$). Comparing both sides of face, there was no significant difference regarding grading response and reduction percentage of total scars and its types ($p > .05$). Histopathologically, there was an improvement of character and organization of collagen and elastic fibers in addition to significant increase in epidermal thickness on both sides of face, with no significant difference between them ($p > .05$). Conclusion: Both CXT and microneedling are equally effective, tolerable, safe, and noninvasive treatment modalities of atrophic acne scars. Similar histopathological changes were observed after both modalities, helping in better understanding their action.

Association between leptin gene rs7799039 polymorphism and lipid profile changes induced by isotretinoin treatment in acne patients. Khabour OF, Alzoubi KH, Firoz AS, Al-Awad RM. Ther Clin Risk Manag. 2018 May 23;14:949-954. doi: 10.2147/TCRM.S165712. eCollection 2018. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5973407/pdf/tcrm-14-949.pdf

Introduction: Isotretinoin, a vitamin A-derived medication, is one of the effective treatments for severe acne. However, in a fraction of patients, this treatment causes significant adverse effects. Leptin is a pro-inflammatory cytokine that plays a role in apoptosis of adipose cells and sebaceous lipid metabolism. Thus, genetic polymorphisms in the leptin (LEP) gene may modulate the response to isotretinoin therapy. Here, we explore the contribution of rs7799039 polymorphism of the LEP gene in the adverse effects of the oral isotretinoin therapy among acne patients. Materials and methods: Clinical parameters were obtained from 200 patients before and after isotretinoin treatment for acne. In addition, circulatory lipid profile and aspartate transaminase (AST) and alanine aminotransferase (ALT) enzymes from acne subjects before and 1 month after oral isotretinoin treatment were also measured. Results: An association between the rs7799039 polymorphism and the following lipid parameters: high-density lipoprotein (HDL) at baseline and after treatment, HDL % change, low-density lipoprotein % change and total cholesterol % change ($P < 0.05$). In addition, there was an association between the LEP polymorphism and higher AST and ALT at baseline and after treatment ($P < 0.05$). Conclusion: In conclusion, rs7799039 LEP polymorphism might modulate lipid parameters and liver enzymes, but not other major side effects of oral isotretinoin therapy.

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Clinical Reviews

Facial rejuvenation and acne scar treatment with polymethylmethacrylate-collagen gel alone and in combination with other modalities. A Roundtable Discussion with W. Philip Werschler, MD, FAAD, FAACS; Edward M. Zimmerman, MD; Anita Mandal, MD; E. Victor Ross, MD; Craig F. Teller, MD; and Gregory Laurence, MD. J Clin Aesthet Dermatol. 2018;11(6 Suppl):S3–S7 http://jcadonline.com/june-2018-supplement/

Abstract: Injectable fillers provide a more youthful facial appearance by replacing lost volume, recontouring lines, and repositioning sagging structures associated with aging. Fillers are also used to repair scars from acne, trauma, or surgery, particularly scars that are soft and distensible. Efficacy of polymethylmethacrylate (PMMA)-collagen (Bellafill, Suneva Medical, San Diego, California) has been reported for the treatment of acne scars, and its safety has been evaluated in four United States clinical trials, including a five-year, post-approval safety study. Bellafill is the only PMMA filler approved by the United States Food and Drug Administration for the treatment of nasolabial folds and correction of acne scars. This article presents the transcript of a roundtable discussion on the use of Bellafill, alone and in combination with other procedures, for facial rejuvenation and the treatment of acne scars. Funding: Funding for this roundtable discussion was provided by Suneva Medical, Inc. Disclosures: Suneva Medical Inc. assisted in the development of this article. This article is based on a roudtable discussion that took place during the 2017 Annual Aesthetic & Medical Dermatology Symposium in Coeur d'Alene, Idaho. This article did not undergo peer review.

Topical vehicle formulations in the treatment of acne. Hoffman LK, Bhatia N, Zeichner J, Kircik LH. J Drugs Dermatol. 2018 Jun 1;17(6):s6-s10. https://www.ncbi.nlm.nih.gov/pubmed/29879262

Topical treatment is the mainstay of acne therapy. The most commonly prescribed topical medications for acne include benzoyl peroxide, clindamycin, and retinoids. Despite their effectiveness in treating mild to moderate acne vulgaris, these topical medications are found to be irritating, and are historically associated with poor tolerability and diminished patient adherence. Thus, choosing the right formulation that will be effective and well tolerated is essential. Novel formulations that optimize drug concentration and utilize improved delivery vehicles have helped to enhance the tolerability and efficacy, and allow for less frequent application or co-application of drugs that were previously considered incompatible. This article will review the goals of topical therapy for the treatment of acne, in addition to common therapies and their challenges. Advanced formulations and combination formulations of benzoyl peroxide, clindamycin, and tretinoin will also be discussed.

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Frequency of treatment switching for spironolactone compared to oral tetracycline-class antibiotics for women with acne: A retrospective cohort study 2010-2016. Barbieri JS, Choi JK, Mitra N, Margolis DJ. J Drugs Dermatol. 2018 Jun 1;17(6):632-638. https://www.ncbi.nlm.nih.gov/pubmed/29879250 Background: Long-term oral antibiotic use in acne may be associated with a variety of adverse effects including antibiotic resistance, pharyngitis, inflammatory bowel disease, and breast and colon cancer. Spironolactone may represent an effective and safe alternative to oral antibiotics for women with moderate to severe acne, however comparative studies are lacking. Methods: Using the OptumInsight™ Clinformatics™ DataMart, we conducted a retrospective analysis of the frequency of switching to a different systemic agent within the first year of therapy among women with acne who were started on either spironolactone or an oral tetracycline-class antibiotic between 2010-2016, after controlling for age, topical retinoid, and oral contraceptive use. Results: Among women with acne who were started on spironolactone, 14.4% were prescribed a different systemic agent within one year, compared with 13.4% started on an oral tetracycline-class antibiotic. After adjusting for age, topical retinoid, and oral contraceptive use, the odds ratio for being prescribed a different systemic agent within one year was 1.07 (95% CI 0.99-1.16) for those prescribed spironolactone when compared with oral tetracycline-class antibiotics and the risk difference was 0.007 (95% CI -0.002-0.017). Conclusions: Based on the observation of similar switching between the two groups, spironolactone may have similar clinical effectiveness to that of oral tetracycline-class antibiotics. While ultimately large clinical trials are needed to determine the optimal management strategy for women with moderate to severe acne, these results provide additional support that spironolactone represents an effective treatment for women with acne.

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Applying the phenotype approach for rosacea to practice and research. Tan J, Berg M, Gallo RL, Del Rosso JQ. Br J Dermatol. 2018 May 25. doi: 10.1111/bjd.16815. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29799114

Background: Rosacea diagnosis and classification have evolved since the 2002 National Rosacea Society (NRS) expert panel subtype approach. Several working groups are now aligned to a more patient-centric phenotype approach, based on an individual's presenting signs and symptoms. However, subtyping is still commonplace across the field and an integrated approach is required to ensure widespread progression to the phenotype approach. Objectives: To provide practical recommendations that facilitate adoption of a phenotype approach across the rosacea

field. Results: Through a review of the literature and consolidation of rosacea expert experience, we identify challenges to implementing a phenotype approach in rosacea and offer practical recommendations to overcome them across clinical practice, interventional research, epidemiological research and basic science. Conclusions: These practical recommendations are intended to indicate the next steps in the progression from subtyping to a phenotyping approach in rosacea, with the goals of improving our understanding of the disease, facilitating treatment developments, and ultimately improving care for patients with rosacea.

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Update in the management of acne in adolescence. Mwanthi M, Zaenglein AL. Curr Opin Pediatr. 2018 May 24. doi: 10.1097/MOP.0000000000000649. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29846254

Purpose of review: This review will update the pediatric provider on recent data on the pathogenesis and treatment of acne in adolescent patients. A special focus was made to summarize recent guidelines and fill in several identified practice gaps. Recent findings: Our understanding of the pathogenesis of acne is greatly expanding and data is emerging to tie diet, particularly the role of IGF-1 with inflammation in acne. Additionally, stronger recommendations to limit antibiotic usage in acne are being made worldwide. Although retinoids are considered the base of most effective acne treatment strategies, data suggests that all providers need to emphasize their importance in maintenance of acne. Summary: An effective acne management strategy targets multiple pathogenic factors in acne, using a retinoid as the foundation. Systemic antibiotics for moderate-to-severe acne should be used for acute management, then discontinued at 3-4 months, while maintaining on topical treatments. If therapy is ineffective, alternate treatments, such as combined oral contraceptives in females or isotretinoin, should be promptly employed to prevent prolonged psychological impact and cutaneous scarring.

Patient Counseling/Communication

Who is accountable when patients do not achieve successful treatment for their acne? Del Rosso JQ. J Drugs Dermatol. 2018 Jun 1;17(6):599-600. https://www.ncbi.nlm.nih.gov/pubmed/29879246

Acne vulgaris (AV) is a very common inflammatory facial disorder that is complex in its pathophysiology, heterogenous in clinical presentation, and affects children and adults of all ethnicities, races, and skin types.

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Fifteen minute test may save 15% or more on rosacea treatment. Darwin E, Cervantes J, Lev-Tov H. J Drugs Dermatol. 2018 Jun 1;17(6):692-693. https://www.ncbi.nlm.nih.gov/pubmed/29879260

Rosacea is a common inflammatory skin condition that impacts a large portion of fair-skinned populations. The redness associated with rosacea can be a significant challenge. Brimonidine sulfate and oxymetazoline HCL were both recently approved by the FDA for the management of facial redness. These agents, however, are costly, and not all patients respond to the medication. Herein, we describe a clinical pearl that helps to optimize patient selection for the medications. This saves the patient and the health care system both time and money. J Drugs Dermatol. 2018;17(5):692-693.

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