AARS Hot Topics Member Newsletter
January 15-31, 2017

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We encourage you to invite your colleagues and patients to get active in the American Acne & Rosacea Society! Visit www.acneandrosacea.org to become a member and donate now on www.acneandrosacea.org/donate to continue to see a change in acne and rosacea.
Industry News


BioPharmX will present data on its new two-photon fluorescence microscopy technique for visualizing minocycline skin penetration at this year’s SPIE Photonics West, according to a press release. The recent BioPharmX BPX-01 phase 2a clinical trial demonstrated that the topical gel formulation delivered adequate minocycline to the appropriate site to target *P. acnes*. The company will have two presentations at the meeting to share details of the new method as well as research that correlates to the new visualization method. The presentations are: “Visualization of drug distribution of topical minocycline in human facial skin with fluorescence microscopy” and “Optical microscopy of targeted drug delivery and local distribution in skin of a topical minocycline.” “It is always an honor to present new research to eminent colleagues, but this is particularly exciting because we believe our novel use of two-photon fluorescence microscopy may hold significant potential for the medical and scientific communities for translational research,” Kin F. Chan, executive vice president of research and technology at BioPharmX, said in the release. “We believe it can be used to visualize and eventually quantify the distribution of multiple drugs. “This is important because it promises a major advance to researchers working to optimize the frequency, dosage and timing of topical drug treatments.” Additionally, BioPharmX announced completed enrollment for its OPAL (tOPicAL Minocycline Gel) study, a phase 2b dose-finding clinical trial to assess the efficacy and safety of BPX-01. Reference: www.biopharmx.com


Allergan plc, (NYSE: AGN), a leading global pharmaceutical company, announced today the approval of RHOFADE™ cream by the U.S. Food and Drug Administration (FDA) for the topical treatment of persistent facial erythema (redness) associated with rosacea in adults. Approval was based on two clinical studies that evaluated the primary efficacy endpoint on day 29. "The FDA approval of RHOFADE™ exemplifies Allergan's commitment to continuing to address unmet patient needs through innovation in medical dermatology," said David Nicholson, Chief R&D Officer of Allergan plc. "We know persistent facial erythema associated with rosacea is a challenge for patients and physicians and having options can help in treating the disease. RHOFADE™ is the first and only alpha1A adrenoceptor agonist approved for persistent facial erythema associated with rosacea in adults. The FDA approval of RHOFADE™ represents a new prescription treatment that can effectively help physicians and their patients manage this condition." The National Rosacea Society (NRS) estimates that approximately 16 million Americans are affected by rosacea. Persistent facial redness is cited as the most common sign of rosacea, and may resemble a flushing or sunburn that does not go away. Typical triggers include sun exposure, stress, weather, food, exercise and/or products.4 In an NRS survey, 65% of rosacea patients surveyed said their symptoms first appeared between 30-60 years of age. "Historically, there haven't been many options available to help physicians address persistent facial erythema and often we ended up just helping our patients identify and manage triggers, which can lead to frustration for both the doctor and patient,"
said Dr. Robert Weiss, Clinical Trial Investigator and Director of Maryland Laser, Skin & Vein Institute. "With the approval of RHOFADE™, doctors will now be able to provide their patients with an effective once-daily treatment option to help manage this condition." In two clinical trials, a once-daily application of RHOFADE™ was proven to reduce persistent facial erythema associated with rosacea through 12 hours. The primary efficacy endpoint was at day 29 and defined as the proportion of patients with at least a 2-grade reduction in erythema (improvement) from baseline (pre-dose on day 1) on both the clinician erythema assessment (CEA) and subject self-assessment (SSA) (composite success) measured at hours 3, 6, 9 and 12 versus vehicle. CEA and SSA also measured at Days 1 and 15 at hours 3, 6, 9, and 12. The clinical trials were identical, multicentered, randomized, double-blind, parallel-group, and vehicle-controlled in moderate or severe patients, N=885, 18 years or older. In both pivotal trials, the primary efficacy endpoint was met. The proportion of patients achieving composite success were as follows: at hours 3, 6, 9 and 12 results in study 1 were RHOFADE™ (N=222) 12%, 16%, 18%, 15% versus Vehicle (N=218) 6%, 8%, 6%, 6% and in study 2 were RHOFADE™ (N=224) 14%, 13%, 16% and 12% versus Vehicle (N=221) 7%, 5%, 9% and 6%. RHOFADE™ was proven more effective than vehicle in reducing persistent facial erythema associated with rosacea in adults. RHOFADE™ will be available for commercial supply starting May 2017 in the United States. For more information, visit www.Rhofade.com.


The first patient has been dosed in Dermata Therapeutics's Phase 2 acne rosacea study of DMT210, a topical gel specifically developed to downregulate the proinflammatory cytokines in the skin responsible for the inflammation and redness seen in acne rosacea. This clinical trial, DMT210-003, is a 12-week, Phase 2, multi-center, double-blind, vehicle controlled study designed to evaluate the safety, tolerability and efficacy of twice daily dosing of DMT210 in approximately 104 moderate to severe acne rosacea patients. Dermata expects to have top-line results in the second half of 2017.

New Medical Research


BACKGROUND: A multitude of options are traditionally used for the treatment of acne scars; however, newer treatment modalities are emerging to decrease the propensity for post-inflammatory hyperpigmentation and upregulate new collagen production. The aim of this study was to evaluate the efficacy of nanofat and platelet-rich plasma (PRP) infiltration alone and combined with fractional CO2 laser resurfacing to improve atrophic scars of the face. METHODS: From March 2014 to June 2015, 30 patients with atrophic acne scars on the cheeks were selected for this study. Patients were evaluated pre- and postoperatively by physical examination, photographs and ultrasound with a 22-MHz probe to measure subcutaneous tissue thickness. All patients were treated with infiltration of nanofat plus PRP. The production of PRP was achieved using the RegenLab THT tube® method. In 15 randomly chosen patients, a fractional CO2 laser resurfacing at 15 W was also performed right after the infiltration. An Italian version of the FACE-Q postoperative module was administered to analyze each patient's
satisfaction and aesthetic perception of the result. RESULTS: The average preoperative thickness of subcutaneous tissue of patients from group A was 0.532 cm, while the average preoperative thickness of subcutaneous tissue of patients from group B was 0.737 cm. The average postoperative thickness of subcutaneous tissue was 1.201 cm in group A and 1.367 cm in group B. The improvement of thickness was 0.668 cm in group A and 0.63 cm in group B. We applied a t test on unpaired data, comparing the difference in thickness obtained with the treatment in both group A and in group B, with a p value =0.7289 (not significant). All patients in both groups had a treatment benefit, confirmed with FACE-Q postoperative module, but without a significant difference between the two groups. CONCLUSIONS: Subcutaneous infiltration with nanofat and PRP seems to be effective to improve atrophic scars, either alone or combined with fractional CO2 laser resurfacing. The FACE-Q module confirmed the impact of treatment of facial acne scars in social life and relationships.


Propionibacterium acnes is now well-known and recognized for its implication in the pathogenesis of acne vulgaris. Here, we report the draft genome sequence of an erythromycin-resistant P. acnes strain isolated from a case of folliculitis of the scalp belonging to phylotype IA1 and sequence type 18 (ST18). [Download Reference Document](http://genomea.asm.org/content/5/4/e01490-16.full.pdf+html)


Acne vulgaris is the most common skin disorder, and is caused by Propionibacterium acnes (P. acnes) and can induce inflammation. Antibiotic therapy often needs to be administered for long durations in acne therapy, which results in extensive antibiotic exposure. The present study investigated a new treatment model for evaluating the antibacterial effects of lysozyme (LY)-shelled microbubbles (MBs) and ultrasound (US)-mediated LY-shelled MBs cavitation against P. acnes both in vitro and in vivo, with the aims of reducing the dose and treatment duration and improving the prognosis of acne vulgaris. In terms of the in vitro treatment efficacy, the growth of P. acnes was inhibited by 86.08 ± 2.99% in the LY-shelled MBs group and by 57.74 ± 3.09% in the LY solution group. For US power densities of 1, 2, and 3 W/cm2 in the LY-shelled MBs group, the growth of P. acnes was inhibited by 95.79 ± 3.30%, 97.99 ± 1.16%, and 98.69 ± 1.13%, respectively. The in vivo results showed that the recovery rate on day 13 was higher in the US group with LY-shelled MBs (97.8 ± 19.8%) than in the LY-shelled MBs group (90.3 ± 23.3%). Our results show that combined treatments of US and LY-shelled MBs can significantly reduce the treatment duration and inhibit P.-acnes-induced inflammatory skin diseases. [Download Reference Document](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5259758/)


The common skin disease acne vulgaris is caused by Propionibacterium acnes. A lipase secreted by this microorganism metabolizes sebum and the resulting metabolites evoke inflammation in human skin.
The antifungal drug ketoconazole inhibits *P. acnes* lipase activity. We previously showed that the drug also inhibits the growth of *P. acnes*. Thus, ketoconazole may serve as an alternative treatment for acne vulgaris, which is important because the number of antibiotic-resistant *P. acnes* strains has been increasing.


The antibacterial and anti-inflammatory potential of natural, plant-derived compounds has been reported in many studies. Emerging evidence indicates that plant-derived essential oils and/or their major compounds may represent a plausible alternative treatment for acne, a prevalent skin disorder in both adolescent and adult populations. Therefore, the purpose of this study was to develop and subsequently analyze the antimicrobial activity of a new multi-agent, synergic formulation based on plant-derived antimicrobial compounds (i.e., eugenol, β-pinene, eucalyptol, and limonene) and anti-inflammatory agents for potential use in the topical treatment of acne and other skin infections. The optimal antimicrobial combinations selected in this study were eugenol/β-pinene/salicylic acid and eugenol/β-pinene/2-phenoxyethanol/potassium sorbate. The possible mechanisms of action revealed by flow cytometry were cellular permeabilization and inhibition of efflux pumps activity induced by concentrations corresponding to sub-minimal inhibitory (sub-MIC) values. The most active antimicrobial combination represented by salicylic acid/eugenol/β-pinene/2-phenoxyethanol/potassium sorbate was included in a cream base, which demonstrated thermodynamic stability and optimum microbiological characteristics.


**BACKGROUND:** Acne vulgaris (acne) is the most common skin disorder producing physical and emotional scars that can persist for years. An estimated 83% of acne sufferers self-treat, but there is lack of studies documenting the effectiveness of over-the-counter (OTC) acne treatment products. **OBJECTIVE:** This study was conducted to determine the effectiveness of an OTC, 3-step, anti-acne skincare regimen in treating acne and improving the appearance of red/inflamed facial skin. **METHODS:** This 6-week, open-label clinical study included both genders aged between 12 and 35 years with mild-to-moderate acne. All subjects were required to have an acne score of 1-3 (Cook's acne grading scale: 0=clear to 7=very severe) and a moderate redness score of ≥2 (0=none and 4=severe). Subjects completed a 3-step facial treatment regimen every morning and evening using an OTC cleanser, toner, and acne treatment. Evaluations for effectiveness and safety were done at baseline and weeks 2, 4, and 6 using digital photographs (Visia-CR® digital imaging system) of the face and analyzed using Image-Pro® software for the grading of acne, red/inflamed skin, and the number and type of lesions. **RESULTS:** Thirty subjects (12 males and 18 females) were enrolled (mean age of 19 years; range 12-34 years). This skincare regimen resulted in statistically significant improvements in acne grading scores after 2 weeks of use, with mean scores continuing to improve after 4 and 6 weeks of use (P<0.001). Statistically significant improvements from baseline in red/inflamed skin, open and closed comedones, and papules were detected at all time
points and for nodules at week 6, compared to their respective baselines (P<0.05). CONCLUSION: This clinical study demonstrated the effectiveness of an OTC 3-step, anti-acne skincare regimen in significantly improving acne and the overall appearance of skin in the majority of subjects who had mild-to-moderate acne.

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BACKGROUND: Hidradenitis suppurativa (HS) is a chronic inflammatory skin disorder of the follicular epithelium. OBJECTIVES: The objective of the present study was to evaluate the effectiveness of the combination of tetracycline with colchicine in the treatment of HS. METHODS: Twenty patients (10 women and 10 men) with HS were included in an open, prospective, pilot study. All patients were treated with 100 mg minocycline administered orally once per day in combination with 0.5 mg colchicine administered twice per day for 6 months followed by a maintenance regimen of 0.5 mg colchicine administered orally twice per day for 3 months. Patients were examined at baseline and thereafter every 3 months for a total of 9 months. The efficacy of the treatment was evaluated using a physician's global assessment (PGA) scale, the Hurley scoring system, and the Dermatology Life Quality Index (DLQI). RESULTS: A significant improvement in clinical manifestation was reflected in scores on the Hurley scoring system and DLQI. According to the PGA, patients achieved substantial improvement or complete remission. Clinically, all patients started to show signs of improvement within the first 3 months of therapy and continued to improve over the next 6 months. CONCLUSIONS: This study indicates that the combination of the anti-inflammatory actions of colchicine and minocycline is effective in disease control in HS. Colchicine emerged as a safe option for the maintenance of the obtained result.


OBJECTIVE: This randomized, double-blind, placebo-controlled, Phase 2 study compared efficacy, tolerability, and safety of SB204 once or twice daily to vehicle in the treatment of acne vulgaris. METHODS: Eligible subjects were to be between 12 and 40 years old, have facial acne vulgaris with 25 to 70 non-inflammatory lesions, 20 to 40 inflammatory lesions, no more than 2 nodules, and a baseline Investigator's Global Assessment (IGA) score of moderate or severe. The co-primary efficacy endpoints were the absolute change in inflammatory and non-inflammatory lesion counts and IGA success rate (baseline to week 12). Safety assessments included reported adverse events (AEs), physical examinations, and laboratory testing. Tolerability was evaluated by the investigators based on the occurrence and severity of erythema, scaling, dryness, pruritus, and burning/stinging. RESULTS: A total of 213 subjects were randomized: 27 subjects to vehicle once daily; 29 subjects to vehicle twice daily; 53 subjects to SB204 2% twice daily; 52 subjects to SB204 4% once daily; and 52 subjects to SB204 4% twice daily. When compared to vehicle, treatment with all 3 SB204 regimens significantly reduced the absolute inflammatory lesion count and SB204 4% once daily reduced the absolute non-inflammatory lesion count. Treatment with SB204 4% once daily demonstrated a significant reduction in percent
inflammatory lesions by week 4. There were no significant differences in the IGA success rates between groups at the end of treatment. All treatment regimens of SB204 were found to be safe and well tolerated. CONCLUSIONS: When compared to vehicle, SB204 2% and SB204 4% significantly decreased the absolute inflammatory lesion count and SB204 4% once daily also significantly decreased the absolute non-inflammatory lesion count in subjects with acne vulgaris treated for 12 weeks. Treatment with SB204 2% and 4% was found to be safe and well tolerated.

BACKGROUND: Laser and light-based therapies have been used successfully in the treatment of rosacea; however, evidence is lacking regarding the efficacy of radiofrequency (RF). OBJECTIVE: This study evaluated the efficacy of RF in the treatment of rosacea compared with pulsed dye laser (PDL). METHODS: Thirty patients with rosacea (erythematotelangiectatic rosacea [ETR], n = 20; papulopustular rosacea [PPR], n = 10) were enrolled in a randomized, controlled, split-face study. The patients were treated with RF on one side and PDL on the other side. Each treatment consisted of 3 sessions at 4-week intervals and followed up until 4 weeks after the last treatment. Efficacy was assessed by rosacea severity score, erythema index, lesion counts, physician's subjective evaluation, and patient's satisfaction. RESULTS: Radiofrequency and PDL resulted in significant improvement in severity scores and erythema and 70% of the patients receiving RF treatment showed a clinical improvement of >50%. No significant difference was noted between RF and PDL treatment in ETR. However, RF treatment led to a significantly greater decrease in papulopustular lesion count and rosacea severity score in PPR compared with PDL treatment. CONCLUSION: RF therapy was effective in the treatment of rosacea. It should be considered an alternative therapeutic option, especially in PPR.

Clinical Reviews
BACKGROUND: Photodynamic therapy (PDT), using topical aminolevulinic acid (ALA), has been used for years to treat a variety of dermatologic conditions, including actinic keratosis, superficial basal cell carcinoma, and in situ squamous cell carcinoma. While there is a wide range of neoplastic and non-neoplastic skin diseases for which ALA-PDT is used in adults, there is a knowledge gap when it comes to its use in children. This review highlights what is currently known regarding the use and efficacy of this therapy in the pediatric population. METHODS: A PubMed search was conducted to identify studies including pediatric patients undergoing monotherapy PDT with topical aminolevulinate (published 2005-2016). RESULTS: 20 pediatric articles were identified. ALA-PDT has been used successfully in children to reduce the number and size of basal cell tumors, inflammatory acne lesions, plantar warts, and linear porokeratoses. CONCLUSIONS: ALA-PDT may be an attractive alternative to surgery for children with basal cell nevus syndrome, or to conventional destructive and/or topical methods used for plantar warts or linear porokeratoses. PDT can be considered for inflammatory acne when topical treatments have failed and systemic medications are not an option. Pain associated with treatment and insurance coverage may be a barrier to use.

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Acne is associated with social and psychological problems such as depression and anxiety.1,2 Isotretinoin is the most effective treatment for recalcitrant nodulocystic acne. However, the possible induction of depressive symptoms by isotretinoin as an acne treatment was first reported in 1983.3 The relationship between isotretinoin treatment for acne and depression is still controversial.


BACKGROUND: Hidradenitis suppurativa (HS) is a debilitating chronic disease that leads to inflammation and abscess formation in the involved skin, along with a malodorous discharge. Pain is a considerable aspect of HS and significantly impacts quality of life. In addition, HS is significantly associated with depression. A better understanding of contributing factors to depression and pain in patients with HS can identify opportunities to improve care for patients. OBJECTIVE: To identify factors that contribute to depression and chronic pain in patients with HS. METHODS: This is a retrospective chart review of 283 patients seen at dermatology clinics of an academic health center for HS from July 2012 to December 2015. The association between HS and depression and chronic pain was assessed in multivariate models using logistic regression analyses. RESULTS: Patients with a greater number of areas of involvement were more likely to have both chronic pain and depression. LIMITATIONS: This is a single-center retrospective chart review with a limited sample size. CONCLUSION: This study suggests that the extent of disease rather than severity plays a role in reducing the quality of life in HS patients.

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Importance: Though there have been significant shifts in US demographic data over the past 50 years, research cohorts lack full racial and ethnic representation. There is little data available regarding the diversity of dermatology research cohorts with respect to sex, race, and ethnicity. Objective: To characterize and assess the representation of racial and ethnic minorities and women in randomized controlled trials across a range of dermatologic conditions. Evidence Review: All randomized clinical trials (RCTs) were identified between July 2010 and July 2015 within the PubMed database using the following keywords: “psoriasis,” “atopic dermatitis,” “acne,” “vitiligo,” “seborrheic dermatitis,” “alopecia areata,” and “lichen planus.” Diverse study populations were defined as including a greater than 20% racial or ethnic minority participants based on US census data. The distributions of sex and race groups in studies were compared by journal type, disease type, and funding source. Findings: Of the 626 articles reporting RCTs included in this analysis, 532 (85.0%) reported the sex of study participants. Overall, 52 of 626 international (11.3%) studies and 58 of 97 studies (59.8%) conducted exclusively within the United States reported on the racial or ethnic demographics of study participants. Across all RCTs exclusively recruited within the United States that reported race, 74.4% of study participants were white. Disease type was significantly associated with the degree of racial diversity (P < .001) within a study cohort: 30.0% of US-based psoriasis had more than 20% racially or ethnically diverse research
participants as compared with 73.9% of acne studies and 91.7% of eczema studies. Conclusion and Relevance: Dermatologic clinical trials within the United States reflect the growing diversity of the US population. Reporting of both sex and racial/ethnic diversity of research cohorts is still lacking, especially among studies conducted outside of the United States.


Credited as the most common skin disease and a perennial presentation in the dermatology clinic, acne vulgaris continues to be a focus of study and is still yielding new findings. Practical Dermatology® magazine had the opportunity to sit down with Linda Stein Gold, MD, Director of Dermatology Clinical Research at Henry Ford Health System in Detroit and the Division Head of Dermatology at Henry Ford Health System in West Bloomfield, MI in late 2016 to discuss the changing way we think about acne. Hern discussing the connection between inflammation and psoriasis, vitiligo and rosacea, Dr. Stein Gold states, “We are learning more and more about the role inflammation may play in the pathogenesis of acne. As a result, we may have to reevaluate our thoughts and understand that inflammation may be the first step in the development of lesions.” In terms of treatments for acne, Dr. Stein Gold refers to studies that suggest treating the anti-inflammatory effects of acne may be just as important as the antibacterial effects. “In the world of bacterial resistance, which has become a major problem, using anti-inflammatory vs. antibiotic treatment may represent a healthier way to approach acne patients,” she says. In terms of the acne pipeline, sebum inhibitors are very promising and several are under development, including Dermira’s DRM01 and Novan’s topical nitric oxide drug candidate SB204. Regarding the best advice for healthy, acne-free skin, Dr. Stein Gold recommends the use of a gentle cleanser, gentle moisturizer and sunscreen every day. “Combination therapy targeting multiple areas in the pathogenesis of acne is the best approach while minimizing exposure to antibiotics,” she adds.


Hidradenitis suppurativa (HS) is an inflammatory skin disease. Several observations imply that sex hormones may play a role in its pathogenesis. HS is more common in women, and the disease severity appears to vary in intensity according to the menstrual cycle. In addition, parallels have been drawn between HS and acne vulgaris, suggesting that sex hormones may play a role in the condition. The role of androgens and estrogens in HS has therefore been explored in numerous observational and some interventional studies; however, the studies have often reported conflicting results. This systematic review includes 59 unique articles and aims to give an overview of the available research. Articles containing information on natural variation, severity changes during menstruation and pregnancy, as well as articles on serum levels of hormones in patients with HS and the therapeutic options of hormonal manipulation therapy have all been included and are presented in this systematic review. Our results show that patients with HS do not seem to have increased levels of sex hormones and that their hormone levels lie within the normal range. While decreasing levels of progesterone and estrogen seem to coincide with disease flares in premenopausal women, the association is speculative and requires...
Experimental confirmation. Antiandrogen treatment could be a valuable approach in treating HS, however randomized control trials are lacking.


Rosacea is characterised by a wide variety of vascular changes. Apart from telangiectasia and erythema, often so-called flushing occurs. These vascular abnormalities can be targeted with specific light and laser devices. In addition to KTP laser, pulsed dye laser (PDL) and Nd:YAG laser, also intense pulsed light devices (IPLs) are used. The described therapeutic effects include the reduction of vascular abnormalities and even improvement of papulopustular changes. While the KTP laser shows very good results in telangiectasia, the dye laser and IPL devices are used preferably in erythema. The Nd:YAG laser is also a possibility for patients with telangiectasia and erythema. However, compared to the other laser and light devices the Nd:YAG laser carries the highest risk of unpredictable scarring. Phymatous changes are another clinical manifestation of rosacea, mostly affecting the nose (rhinophyma). Moderate and severe cases are commonly treated with ablation modalities. Traditional surgery is a treatment option, but is often associated with major intraoperative bleeding. Alternative methods include electrosurgery and dermabrasion, although both methods can cause scarring. Newer methods such as CO2 laser ablation, possibly in combination with the erbium:YAG laser, are safe alternatives with a lower risk of complications.


Based on numerous trials, oral tetracyclines and most commonly their second-generation derivative doxycycline have become the main pillar in systemic rosacea treatment. However, the only preparation that has been approved so far in this setting is 40 mg doxycycline in an anti-inflammatory dosage and with a modified release formulation. With the introduction of this once-daily, non-antibiotic dosing of doxycycline, oral therapy is more commonly prescribed as first-line treatment in moderate to severe papulopustular rosacea. In addition, topical and oral strategies are often used in combination due to the more substantial improvements compared to monotherapy. Although several other non-approved oral agents like macrolides, isotretinoin, and carvedilol have been evaluated for systemic treatment and showed promising results, yet the experience with these drugs in rosacea is limited, and thus they should be reserved for special situations.


Rosacea is a common chronic inflammatory skin disorder that typically occurs in adults and affects the face. Synonyms of rosacea include "acne rosacea", "couperose" and "facial erythrosis", in German also "Kupferfinne" and "Rotfinne". The disorder is characterised by a chronic and flaring course and is caused by a genetically predisposed, multifactorial process. A higher incidence is seen in people with fair skin
and a positive family history. The characteristic rosacea symptoms manifest primarily, but not exclusively centrofacially, with forehead, nose, chin and cheeks significantly affected. Based on the various main symptoms a classification of the individual clinical pictures can be performed. However, a classification often does not reflect the clinical reality, since the various symptoms commonly coexist. The present review provides an introduction on pathogenesis and clinical manifestations of rosacea and prefers a symptom-oriented therapy approach.


Although there is presently no cure for rosacea, there are several recommended treatment options available to control many of the symptoms and to prevent them from getting worse. In addition to self-help measures like avoidance of trigger factors and proper skin care, rosacea management should include topical medications as one of the first-line choices for patients with erythematous and mild to severe papulopustular rosacea. Since mixed forms of characteristic rosacea symptoms are more common, medical treatment must be symptom-tailored for each individual case and will often involve a combination therapy. Approved topical agents for the major symptoms of rosacea encompass brimonidine for erythema and ivermectin, metronidazole or azelaic acid for inflammatory lesions, all of which have shown their efficacy in numerous valid, well-controlled trials. In addition, there are several other, not approved topical treatments which are possible options that require further validation in larger well-controlled studies.

Patient Communication / Counseling


BACKGROUND: Rosacea is common chronic skin condition and is known to have a negative impact on patient’s quality of life. The use of pulsed dye laser treatment to improve quality of life is well documented in the literature. Prior work has emphasized a single series of laser treatments but we investigated the effect of recurrent pulsed dye laser treatment on patient’s symptomatology and quality of life. METHODS: We designed an 8 question survey about patient’s rosacea symptoms, prior treatments, effectiveness of prior treatments, benefit of the laser treatments, and number of laser treatments. The survey (Figure 1) was offered to all patients over the age of 18 who were beginning or currently undergoing pulsed dye laser treatments who previously failed medical management for their erythematelangiectatic rosacea. RESULTS: Fifty patients completed the study. Patients had significant improvement in symptoms and show statistically significant benefit of repeated pulse dye laser treatment for rosacea versus a single series of treatments. CONCLUSION: Our study is unique in that it provides evidence that recurrent pulse dye laser treatments are beneficial to patients by improving quality of life and decreasing symptoms. This finding supports the notion that chronic treatment is needed for this chronic disease.

Patient-reported treatment outcomes are important for evaluating the impact of drug therapies on patient experience. A randomized, double-blind, vehicle-controlled, parallel-group, multicenter, phase 3 study was conducted in 961 participants to assess patient perception of efficacy, utility, and effect on quality of life (QOL) of an azelaic acid (AzA) 15% foam formulation for the treatment of papulopustular rosacea (PPR). Secondary end points included patient-reported global assessment of treatment response, global assessment of tolerability, and opinion on cosmetic acceptability and practicability of product use. Quality of life assessments included the Dermatology Quality of Life Index (DLQI) and Rosacea Quality of Life Index (RosaQOL). Self-reported global assessment of treatment response favored AzA foam over vehicle foam (P<.001), with 57.2% of the AzA foam group reporting excellent or good improvement versus 44.7% in the vehicle foam group. Tolerability was rated excellent or good in 67.8% of the AzA foam group versus 78.2% of the vehicle foam group. Mean overall DLQI scores at end of treatment (EoT) were improved (P=.018) in favor of the AzA foam group compared with the vehicle foam group. Both treatment groups showed improvements in RosaQOL. Treatment with AzA foam was associated with improved QOL and meaningful reductions in the patient-perceived burden of PPR, which correlates with earlier reported primary end points of this study and supports the inclusion of patient perspectives in studies evaluating the effects of topical dermatologic treatments.


Rosacea is a field within dermatology with new insight within immunological research and new treatment-algorithm. Patient education on rosacea and appropriate treatments is an important aspect in helping patients succeed with therapy. Treatment should be tailored to each individual patient, taking into account: symptoms, trigger factors, patients' wishes, most bothersome symptoms, psychological aspect, individual needs. A combination of clinical therapies to treat different symptoms concomitantly may offer the best possible outcomes for the patient. In this review article we describe these aspects.

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