

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

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Industry News

The AARS invites you to join us for the 7th Annual Scientific Luncheon Symposium.

The 7th Annual Scientific Luncheon Symposium will be held at the International Investigative Dermatology (IID) meeting on Wednesday, May 16, 2018 from 1:00PM to 4:00PM in the St. John's 22/23 Room at Rosen Shingle Creek Resort in Orlando, Florida. Participation and lunch is complimentary, however if you aren't able to attend, we offer the presentations for viewing to our Members.

Stay tuned to watch the presentations on the AARS website! <https://acneandrosacea.org/>

AARS Symposium Agenda

- 1:00** ***Antimicrobial Activity of Cytolytic Th17 Cells Targeting Propionibacterium acnes***, George Agak, PhD, University of California, Los Angeles, David Geffen School of Medicine, Los Angeles, CA, USA

- 1:20** ***Distinct C. acnes Strains Isolated from Lesional and Non-Lesional Regions of Acne Promote Differential Immune Responses***, Alan O'Neill, PhD, University of California, San Diego, Department of Medicine, Dermatology, San Diego, CA, USA

- 1:40** ***The Acne Microbiome Response to Isotretinoin Therapy***, William H. McCoy, IV, MD, PhD, Research Instructor in Medicine, Department of Medicine, Division of Dermatology, Washington University School of Medicine, St. Louis, MO, USA

- 2:00** ***Lysis by Bacteriophage Can Modulate C. acnes-Induced Immune Responses***, Laura Marinelli, MD, UCLA Department of Medicine, Dermatology, Los Angeles, CA, USA

- 2:20** ***An In Vivo Model for Post-Inflammatory Hyperpigmentation***, Taylor Braunberger, MD, Dermatology Clinical Research Fellow, Department of Dermatology, Henry Ford Hospital Systems, Detroit, MI, USA

- 2:40** ***P. acnes Carbohydrates from Acne-Associated Phylotypes Induce Distinct Inflammatory Response in Comparison to Carbohydrates from Healthy Phylotypes: A Potential Ligand Implicated in Acne Disease Pathogenesis***, Evyatar Evron, MD, University of California, Los Angeles, David Geffen School of Medicine, Los Angeles, CA, USA

- 3:00** ***Altered Metabolism of Elastic Fibers and Collagen Fibers Derived from TGF- β 1 Mediated Inflammation in Atrophic Acne Scarring***, Dae Hun Suh, MD, PhD, Department of Dermatology, Seoul National University College of Medicine, Seoul, Korea

- 3:20** ***Both Lesional and Non-Lesional Skin from Acne Patients Shows Robust IL-17 Skewing and Upregulation of Antimicrobial Peptides***, Teresa Song, BS, Mount Sinai, New York, NY, USA

- 3:40** ***Demodex Mites Modulate Skin Inflammation: Potential Role in Rosacea***, Solene Gatault, PhD, PharmD, Charles Institute of Dermatology, University College of Dublin, Belfield, Dublin, Ireland

Valeant is becoming Bausch Health Companies, Inc. Friday, May 11, 2018. Practical Dermatology, DermWire. <http://practicaldermatology.com/dermwire/2018/05/11/valeant-is-becoming-bausch-health-companies-inc>

Bausch Health Companies, Inc. will become the new name of Valeant Pharmaceuticals International, Inc., effective in July 2018. Based on the strong brand equity of the company's businesses and subsidiaries, all entities that have separate established brands will continue to operate under the corporate umbrella using their existing names. "Becoming Bausch Health Companies is a major step forward in our transformation," said Joseph C. Papa, chairman and CEO, Valeant. "The Bausch name embodies the rich history of innovation, fortitude and dedication to patient health dating back to when J.J. Bausch opened his first optical goods shop more than 165 years ago. These qualities form the foundation of who we are today as we continue to build an innovative company striving to improve the health of patients globally." In the past two years, the Company has completed more than a dozen divestitures to strategically streamline operations, has reduced debt by more than 20%, and has resolved numerous legacy issues. "Now is the right time in our turnaround to unite our Company's core businesses, subsidiaries and brands under the Bausch Health name," continued Mr. Papa. "We believe Bausch Health Companies more accurately represents the full scope of the Company today – a leader in the development and manufacture of a wide range of pharmaceutical, medical device and over-the-counter products, primarily in the therapeutic areas of eye health, gastroenterology and dermatology." As part of the name change, the Company will roll out a new corporate brand identity in July 2018, which will include new imagery and web site, and will trade under a new symbol, BHC. Until that time, the Company will continue to trade on the New York Stock Exchange and Toronto Stock Exchange under its present symbol, VRX. "We completed an extensive assessment of the name entities available from within our portfolio and also assessed several potential new names. As our review progressed, it became clear that Bausch Health Companies best represents the company we are today," said Mr. Papa. "With a history that ranges from creating revolutionary Vulcanite eye glass frames in 1861 to being the first to mass produce and market soft contact lenses globally in 1971, the Bausch brand is synonymous with innovation and quality."

Allergan appoints Carrie Strom as Senior Vice President, U.S. Medical Aesthetics. Tuesday, May 08, 2018. Practical Dermatology, DermWire. <http://practicaldermatology.com/dermwire/2018/05/08/allergan-appoints-carrie-strom-as-senior-vice-president-us-medical-aesthetics>

Carrie Strom is Allergan's new Senior Vice President, U.S. Medical Aesthetics, a portfolio of brands including BOTOX® Cosmetic (onabotulinumtoxinA), JUVÉDERM® Collection of Fillers, Natrelle® collection of breast implants, Alloderm®, SkinMedica® and CoolSculpting®. Strom will report to Allergan's Chief Commercial Officer, Bill Meury. Strom joined Allergan in 2011. Most recently she was Vice President of Marketing, Plastic Surgery and Regenerative Medicine. Strom also served as Vice President of Marketing for SkinMedica® leading the brand's digital evolution to a new e-commerce platform. "We are excited that Carrie Strom is leading our U.S. Medical Aesthetics business," says Bill Meury, Chief Commercial Officer at Allergan, in a news release. "Carrie brings valuable experience in both the US Plastic Surgery and Dermatology businesses, along with new ideas, perspectives and approaches that will help us better serve our valued customers and their practices. In her new role, Carrie will direct the entire commercial operation for U.S. medical aesthetics with a focus on ensuring that Allergan continues to develop and introduce new and innovative products and raise consumer awareness and interest for aesthetic treatments." "It's an exciting time in medical aesthetics and Allergan continues to be at the forefront of innovation and growth of the category," Strom says. "I am excited to lead our U.S. Medical Aesthetics team as we maintain our strong record of building new markets and delivering best-in-class products. I am proud of our organization and we will continue to deliver solutions to unmet needs that support and serve our customers."

New Medical Research

Structure-based design of Trifarotene (CD5789), a potent and selective RAR γ agonist for the treatment of acne. Thoreau E, Arlabosse JM, Bouix-Peter C, et al. *Bioorg Med Chem Lett*. 2018 Jun 1;28(10):1736-1741. doi: 10.1016/j.bmcl.2018.04.036. Epub 2018 Apr 15. <https://www.ncbi.nlm.nih.gov/pubmed/29706423>

Retinoids have a dominant role in topical acne therapy and to date, only RAR β and RAR γ dual agonists have reached the market. Given the tissue distribution of RAR isoforms, it was hypothesized that developing RAR γ -selective agonists could yield a new generation of topical acne treatments that would increase safety margins while maintaining the robust efficacy of previous drugs. Structural knowledge derived from the X-ray structure of known γ -selective CD437, suggested the design of a novel triaryl series of agonists which was optimized and ultimately led to the discovery of Trifarotene/CD5789.

Dose, duration, and cost: opportunities to improve use of long-term oral antibiotics for people with rosacea.

Rill JS, Lev-Tov H, Liu G, Kirby JS. *J Dermatolog Treat*. 2018 May 7:1-5. doi: 10.1080/09546634.2018.1468069.

[Epub ahead of print]

<https://www.ncbi.nlm.nih.gov/pubmed/?term=Dose%2C+duration%2C+and+cost%3A+opportunities+to+improve+use+of+long-term+oral+antibiotics+for+people+with+rosacea>

BACKGROUND: Systemic antibiotics are often used to treat rosacea and tetracyclines are the most common antibiotic prescribed; however, there is ambiguity among clinical guideline suggestions. Importantly, there is an increasing call to all clinicians to curtail antibiotic use. **OBJECTIVE:** To investigate the utilization and cost of long-term oral antibiotic use for the treatment of rosacea, including ocular rosacea. **METHODS:** This was a retrospective cohort study of MarketScan[®] Commercial Claims and Encounters database, from January 1, 2005 through December 31, 2014. Claim data were used to determine the duration and costs of antibiotic treatment among adults with rosacea. **RESULTS:** The sample included 72,411 patients. The mean (SD) duration of long-term antibiotic treatment was 87.68 (145.99) days and for patients with ocular rosacea was slightly longer, 108.34 (176.74) days [$p < .0001$]. The majority of antibiotic courses were shorter than 3 months (80.04%) for the entire sample and the subset with ocular rosacea (53.64% [$p = .007$]). **LIMITATIONS:** Patient adherence is uncertain and database lacks information on rosacea severity and clinical outcomes. **CONCLUSIONS:** The majority of oral antibiotic course durations follow guidelines. Costs of antibiotic therapy were lower for shorter courses and those utilizing generic medications; the cost-effectiveness of these modifications has not been investigated.

Comparative study of the bactericidal effects of indocyanine green- and methyl aminolevulinate-based photodynamic therapy on *Propionibacterium acnes* as a new treatment for acne. Choi SH, Seo JW, Kim KH.

J Dermatol. 2018 May 3. doi: 10.1111/1346-8138.14347. [Epub ahead of print]

<https://www.ncbi.nlm.nih.gov/pubmed/29722425>

Acne vulgaris is one of the most common dermatological problems, and its therapeutic options include topical and systemic retinoids and antibiotics. However, increase in problems associated with acne treatment, such as side-effects from conventional agents and bacterial resistance to antibiotics, has led to greater use of photodynamic therapy. The purpose of this study was to compare the bactericidal effects of indocyanine green- and methyl aminolevulinate-based photodynamic therapy on *Propionibacterium acnes*. *P. acnes* were cultured under anaerobic

conditions; then they were divided into three groups (control, treated with indocyanine green and treated with methyl aminolevulinate) and illuminated with different lights (630-nm light-emitting diode, 805-nm diode laser and 830-nm light-emitting diode). The bactericidal effects were evaluated by comparing each group's colony-forming units. The cultured *P. acnes* were killed with an 805-nm diode laser and 830-nm light-emitting diode in the indocyanine green group. No bactericidal effects of methyl aminolevulinate-based photodynamic therapy were identified. The clinical efficacy of indocyanine green-based photodynamic therapy in 21 patients was retrospectively analyzed. The Korean Acne Grading System was used to evaluate treatment efficacy, which was significantly decreased after treatment. The difference in the efficacy of the 805-nm diode laser and 830-nm light-emitting diode was not statistically significant. Although the methyl aminolevulinate-based photodynamic therapy showed no bactericidal effect, the indocyanine green-based photodynamic therapy has bactericidal effect and clinical efficacy.

Dapsone-loaded invasomes as a potential treatment of acne: Preparation, characterization, and in vivo skin deposition assay. El-Nabarawi MA, Shamma RN, Farouk F, Nasralla SM. AAPS PharmSciTech. 2018 May 3. doi: 10.1208/s12249-018-1025-0. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/29725903>

Dapsone (DPS) is a unique sulfone with antibiotic and anti-inflammatory activity. Owing to its dual action, DPS has a great potential to treat acne. Topical DPS application is expected to be effective in treatment of mild to moderate acne conditions. Invasomes are novel vesicles composed of phosphatidylcholine, ethanol, and one or mixture of terpenes of enhanced percutaneous permeation. In this study, DPS-loaded invasomes were prepared using the thin film hydration technique. The effect of different terpenes (Limonene, Cineole, Fenchone, and Citral) in different concentrations on the properties of the prepared DPS-loaded invasomes was investigated using a full factorial experimental design, namely, the particle size, drug entrapment, and release efficiency. The optimized formulation was selected for morphological evaluation which showed spherical shaped vesicles. Further solid-state characterization using differential scanning calorimetry and X-ray diffractometry revealed that the drug was dispersed in an amorphous state within the prepared invasomes. Finally, the ability of the prepared DPS-loaded invasomes to deliver DPS through the skin was investigated in vivo using wistar rats. The maximum in vivo skin deposition amount of DPS was found to be 4.11 mcg/cm² for invasomes versus 1.71 mcg/cm² for the drug alcoholic solution, representing about 2.5-fold higher for the invasomes compared to the drug solution. The AUC₀₋₁₀ calculated for DPS-loaded invasomes was nearly 2-fold greater than that of DPS solution (14.54 and 8.01 mcg.h/cm² for the optimized invasomes and DPS solution, respectively). These results reveal that the skin retention of DPS can be enhanced using invasomes.

Papulopustular rosacea: Response to treatment with oral Azithromycin. Lova Navarro M, Sánchez-Pedreño Guillen P, et al. Actas Dermosifiliogr. 2018 Apr 23. pii: S0001-7310(18)30084-X. doi: 10.1016/j.ad.2018.02.009. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/?term=Papulopustular+Rosacea%3A+Response+to+Treatment+with+Oral+Azithromycin.+Lova+Navarro+M>

INTRODUCTION: Oral tetracyclines and topical antibiotics have been used to treat papulopustular rosacea (PPR) for years, but it is not uncommon to find patients who do not respond to this standard treatment. In such refractory cases, oral azithromycin has proven to be an effective option. MATERIAL AND METHOD: We conducted a prospective pilot study of 16 patients with PPR who were treated with oral azithromycin after a lack of response to oral doxycycline and metronidazole gel. At the first visit, the patients were assessed for baseline severity of PPR on a 4-point clinical scale and started on oral azithromycin. At the second visit, response to treatment in terms of

improvement from baseline was evaluated on a 3-point scale. Patients were then scheduled for follow-up visits every 12 weeks to assess long-term effectiveness. **RESULTS:** All 16 patients experienced an improvement in their PPR following treatment with oral azithromycin. Eight weeks after completion of treatment, 14 patients (87.5%) showed complete or almost complete recovery (slight or no residual redness and complete clearance of papules and pustules). Only 2 patients experienced a new episode of inflammatory PPR lesions during follow-up. **CONCLUSIONS:** The findings of this pilot study suggest that oral azithromycin could be a very effective short-term and long-term treatment for RPP resistant to conventional treatment.

The therapeutic effect of artesunate on rosacea through the inhibition of the JAK/STAT signaling pathway.

Li T, Zeng Q, Chen X, et al. *Mol Med Rep.* 2018 Apr 16. doi: 10.3892/mmr.2018.8887. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/?term=The+therapeutic+effect+of+artesunate+on+rosacea+through+the+inhibition+of+the+JAK%2FSTAT+signaling+pathway>

Acne rosacea is a type of chronic dermatosis with the characteristics of erubescence, angiotelectasis and pustule formation. However, current treatment methods are limited due to the side effects. Artesunate demonstrated a promising therapeutic efficacy with a high safety margin. HaCaT cells were treated with antibacterial peptide LL-37 to simulate rosacea caused by *Demodex folliculorum* (*D. folliculorum*) infection. Cell Counting kit 8 and flow cytometry assays were performed to measure cellular proliferation, apoptosis, the stage of the cell cycle and reactive oxygen species generation in order to determine the level of cell damage. Then the damaged cells were treated with different concentrations of artesunate and doxycycline to determine the therapeutic effect of artesunate. Pro-inflammatory cytokines tumor necrosis factor- α (TNF- α), interleukin (IL)-6, IL-8 and C-C motif chemokine 2 (MCP-1) were measured using an ELISA, while western blotting was used to detect the expression of Janus kinase 2 (JAK2) and signal transducer and transcription activator (STAT3). As a result, LL-37 treated HaCaT cells decreased in cell viability, had an increased apoptotic rate and cell cycle arrest, indicating that cell damage caused by rosacea was simulated. In addition, upregulated concentrations of the pro-inflammatory cytokines TNF- α , IL-6, IL-8 and MCP-1 were attenuated in the artesunate group in a dose-dependent fashion, indicating the therapeutic effect of artesunate. Furthermore, higher concentrations of artesunate exhibited an improved effect compared with the doxycycline group. In addition, increased expression levels of JAK2 and STAT3 following treatment with LL-37 suggested that rosacea caused by *D. folliculorum* infection may lead to inflammation through the JAK/STAT signaling pathway. In conclusion, the potential mechanism by which damage occurs in rosacea was revealed and a promising therapeutic method against rosacea was demonstrated.

Pulsed dye laser treatment of rosacea using a novel 15 mm diameter treatment beam. Bernstein EF, Schomacker K, Paranjape A, Jones CJ. *Lasers Surg Med.* 2018 Apr 10. doi: 10.1002/lsm.22819. [Epub ahead of print]

<https://www.ncbi.nlm.nih.gov/pubmed/?term=Pulsed+dye+laser+treatment+of+rosacea+using+a+novel+15%E2%80%89mm+diameter+treatment+beam> <https://onlinelibrary.wiley.com/doi/epdf/10.1002/lsm.22819>

BACKGROUND: The pulsed-dye laser has been used to treat facial redness and rosacea for decades. Recent advances in dye laser technology enable 50% higher output energies supporting 50% larger treatment areas, and beam-diameters up to 15 mm with clinically-relevant fluences. In this study, we investigate this novel pulsed-dye laser using a 15 mm diameter beam for treatment of rosacea. **METHODS:** Twenty subjects with erythemato-telangiectatic rosacea were enrolled in the study. A total of 4 monthly treatments were administered, first treating linear vessels with a 3 × 10 mm elliptical beam, then diffuse redness with a 15-mm diameter circular beam. Blinded assessment of digital,

cross-polarized photographs taken 2 months following the last treatment was performed using an 11-point clearance scale. **RESULTS:** Nineteen subjects completed the study. Blinded reviewers correctly identified baseline photos in 55 out of the total of 57 images (96.5%). The blinded reviewers scored 17 of the 19 subjects with an improvement greater than 40%, and 11 of the 19 subjects greater than 50%. The average improvement was 53.9%. Side effects were limited to mild edema, mild to moderate erythema, and mild to moderate bruising. **CONCLUSION:** This study demonstrates that a newly designed pulsed-dye laser having a novel 15-mm diameter treatment beam improves the appearance of rosacea with a favorable safety profile.

[Download Reference Document](#)

Values of the systemic immunity in patients suffering from acne with different clinical course. Dashko MO, Syzon OO, Fedorova UV. *Wiad Lek.* 2018;71(2 pt 1):297-300. <https://www.ncbi.nlm.nih.gov/pubmed/29729159>

OBJECTIVE: Introduction: Acne is chronic recurrent dermatosis, one of the essential skin inflammation in the structure of dermatological pathology, especially in young people of working age, often caused by persistent cicatricial changes in the skin, and affecting negatively the psychoemotional state of patients, their quality of life and working capacity. It has been established by today that the pathogenesis acne is complex and multifactorial, and the changes of immune reactivity of the organism play an important role in its clinical course development. The aim of the article is to determine and analyze the values of the systemic immunity in patients suffering from acne with different clinical course. **PATIENTS AND METHODS:** Materials and methods: 128 patients with acne aged from 18 to 35, among which 74 women (57,8 %) and 54 men (42,2 %) were observed. According to the clinical criteria, 26 patients (20,31%) were diagnosed with comedonal form of acne, 40 patients (31.25%) had papules, 10 people (7.81%) -papular-pustular acne, 29 of the observed (22.65%) had pustules, 9 patients (7.03%) suffered from acne conglobata, and 14 patients (10.94%) were diagnosed with post-acne. The control group consisted of 34 practically healthy people (donors) of the same age. **RESULTS:** Results: Consequently, most of the patients with acne had varying degrees of changes in rates of systemic immunity - the likely reduction in relative and absolute number of total lymphocytes, T-lymphocytes and their subpopulations against the growing number of B lymphocytes and the level of IgM and IgG, which generally indicates the formation in these patients secondary immunodeficiency state of T-link intensified by activation of humoral immunity in response to the development of skin inflammation. The most significant changes in rates of systemic immunity with the depletion of T-cell immunity were found in patients with papular-pustular and pustular acne, and still more significant - in patients with acne conglobate, which justifies differentiated treatment by immunotrophic drugs for these patients. **CONCLUSION:** Conclusion: In patients with acne, changes in systemic immunity indexes that indicate the formation of secondary immunodeficiency state T-cell link, amid an adequate humoral immunity have been found. Relationship between the causes of changes of systemic immunity has been established.

Clinical Reviews

Which acne treatment has the best influence on health-related quality of life? Literature review by the European Academy of Dermatology and Venereology Task Force on Quality of Life and Patient Oriented Outcomes. Chernyshov PV, Tomas-Aragones L, Manolache L, et al. J Eur Acad Dermatol Venereol. 2018 May 5. doi: 10.1111/jdv.15048. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/29729107>

According to results of a recent literature search performed by the European Academy of Dermatology and Venereology (EADV) Task Forces (TF) on Quality of Life and Patient Oriented Outcomes (QoL and PO) and Acne, Rosacea and Hidradenitis Suppurativa (ARHS) most of publications where health-related (HR) QoL of acne patients was studied were clinical trials. Members of the EADV TF on QoL and PO decided to detect which acne treatment has the best influence on HRQoL of acne patients. A new literature search was organized to find publications on acne treatment where the HRQoL of patients was assessed as an outcome measure. From 186 papers with HRQoL assessment 37 papers were included for further analysis. Our results revealed that oral isotretinoin had the best influence on HRQoL of acne patients. Several other treatment methods also showed good effects on the HRQoL of acne patients. Oral isotretinoin and norethindrone acetate/ethinyl estradiol, topical clindamycin phosphate/benzoyl peroxide and adapalene/benzoyl peroxide showed significantly better effect on HRQoL than placebo. There is limited number of the high-quality studies on acne treatment where HRQoL were assessed. Dermatology-specific and acne-specific instruments showed much better sensitivity to successful therapeutic intervention than generic HRQoL instruments. The most frequently used HRQoL instrument was the DLQI questionnaire.

Chemical peels for acne vulgaris: a systematic review of randomized controlled trials. Chen X, Wang S, Yang M, Li L. BMJ Open. 2018 Apr 28;8(4):e019607. doi: 10.1136/bmjopen-2017-019607. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5931279/pdf/bmjopen-2017-019607.pdf>

OBJECTIVE: We evaluated current evidence from randomized controlled trials (RCTs) regarding the effectiveness of chemical peeling for treating acne vulgaris. **METHODS:** Standard Cochrane methodological procedures were used. We searched MEDLINE, Cochrane Central Register of Controlled Trials and EMBASE via OvidSP through April 2017. Reviewers independently assessed eligibility, risk of bias and extracted data. **RESULTS:** Twelve RCTs (387 participants) were included. Effectiveness was not significantly different: trichloroacetic acid versus salicylic acid (SA) (percentage of total improvement: risk ratio (RR) 0.89; 95% CI 0.73 to 1.10), glycolic acid (GA) versus amino fruit acid (the reduction of inflammatory lesions: mean difference (MD), 0.20; 95% CI -3.03 to 3.43), SA versus pyruvic acid (excellent or good improvement: RR 1.11; 95% CI 0.73 to 1.69), GA versus SA (good or fair improvement: RR 1.00; 95% CI 0.85 to 1.18), GA versus Jessner's solution (JS) (self-reported improvements: RR 1.00; 95% CI 0.44 to 2.26), and lipohydroxy acid versus SA (reduction of non-inflammatory lesions: 55.6%vs48.5%, p=0.878). Combined SA and mandelic acid peeling was superior to GA peeling (percentage of improvement in total acne score: 85.3%vs68.5%, p<0.001). GA peeling was superior to placebo (excellent or good improvement: RR 2.30; 95% CI 1.40 to 3.77). SA peeling may be superior to JS peeling for comedones (reduction of comedones: 53.4%vs26.3%, p=0.001) but less effective than phototherapy for pustules (number of pustules: MD -7.00; 95% CI -10.84 to -3.16). **LIMITATIONS:** The methodological quality of the included RCTs was very low to moderate. Meta-analysis was not possible due to the significant clinical heterogeneity across studies. **CONCLUSION:** Commonly used chemical peels appear to be similarly effective for mild-to-moderate acne vulgaris and well tolerated. However, based on current limited evidence, a robust conclusion cannot be drawn regarding any definitive superiority or equality among the currently used chemical peels. Well-designed RCTs are needed to identify optimal regimens. [Download Reference Document](#)

A review of the current modalities for the treatment of papulopustular rosacea. McGregor SP, Alinia H, Snyder A, et al. *Dermatol Clin.* 2018 Apr;36(2):135-150. doi: 10.1016/j.det.2017.11.009.

<https://www.ncbi.nlm.nih.gov/pubmed/29499797>

Papulopustular rosacea is characterized by papules and pustules in the central facial region. We review the literature surrounding the treatment of papulopustular rosacea. PubMed, EMBASE, and Cochrane (Central) databases searches of articles published from 1980 to 2015 were performed using the MeSH terms or keywords "rosacea" and "clinical trial." Additional searches were performed to include rosacea and each treatment modality used. Topical metronidazole, azelaic acid, ivermectin, and oral doxycycline have the most robust data to support their use. Variation in assessment tools and a lack of clinical trial standardization makes comparison of therapeutic options difficult.

Rosacea comorbidities. Vera N, Patel NU, Seminario-Vidal L. *Dermatol Clin.* 2018 Apr;36(2):115-122. doi: 10.1016/j.det.2017.11.006. <https://www.ncbi.nlm.nih.gov/pubmed/29499794>

Rosacea is a chronic inflammatory cutaneous disorder with an unclear pathogenesis. It has been associated with multiple comorbidities, including cardiovascular diseases, malignancies, depression, migraines, dementia, Parkinson disease, gastrointestinal disorders, and autoimmune conditions. The extent, clinical significance, and implications of these associations remain a topic of discussion. Further evaluation of these comorbidities may offer valuable insight for future screening practices and treatment recommendations.

Photodynamic therapy for hidradenitis suppurativa/acne inversa: Case report. Zhang Y, Yang Y, Zou X. *Photodiagnosis Photodyn Ther.* 2018 Apr 27. pii: S1572-1000(17)30533-1. doi: 10.1016/j.pdpdt.2018.04.014. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/29709603>

Hidradenitis suppurativa/acne inversa (HS/AI) is a type of chronic suppurative inflammatory reaction of the hair follicles characterized by recurrent dermal abscesses, sinus tracts and scars. So far, there has not been any prospective study proving the efficacy and safety of photodynamic therapy for the disease. In this report, one case of HS/AI achieved resolution of skin lesions, ulcer healing and disappearance of symptoms after nine treatments with 5-aminolevulinic acid photodynamic therapy (ALA-PDT).

Ivermectin 1% (CD5024) for the treatment of rosacea. Sahni DR, Feldman SR, Taylor SL. *Expert Opin Pharmacother.* 2018 Apr;19(5):511-516. doi: 10.1080/14656566.2018.1447562.

<https://www.ncbi.nlm.nih.gov/pubmed/29544355>

Rosacea is a chronic and recurrent disease with a variety of cutaneous manifestations. The disorder is a centropacial inflammatory dermatosis with significant financial, physical and psychological impacts. There are a number of topical, oral and systemic treatments available. Yet, treatment for rosacea remains difficult. The multifactorial nature of the disease combined with an incomplete understanding of the pathophysiology is challenging for providers and patients. Areas covered: This article provides an in-depth review of rosacea treatment and emerging use of ivermectin 1% cream for papulopustular rosacea based on multiple clinical trials. The PubMed database was searched using the combination of keywords "ivermectin, rosacea, and papulopustular." Expert opinion: Topical ivermectin 1% cream has emerged as a novel agent for treatment of papulopustular rosacea. The drug targets the Demodex mite which is increased in patients with rosacea. Though ivermectin 1% is a clinically efficacious medication, poor adherence continues to remain an issue due to topical application. Ultimately, the agent has the potential to be an effective drug

when used as a single or combination agent. With the move to limit chronic antibiotic use, topical agents such as ivermectin 1% will continue to thrive as a specialized niche in the rosacea market.

Rosacea fulminans during pregnancy. Markou AG, Alessandrini V, Muray JM, et al. Clin Exp Obstet Gynecol. 2017;44(1):157-159. <https://www.ncbi.nlm.nih.gov/pubmed/29714890>

BACKGROUND: Rosacea fulminans (RF) is a severe form of facial dermatosis presenting with a sudden onset of numerous facial pustules, papules, and erythema. During pregnancy its treatment may be difficult and can have an impact on obstetrical outcomes. **CASE:** A 37-year-old woman during the 37th week of her fourth pregnancy presented RF that was associated with ocular manifestations. The usual treatment with isotretinoin was contraindicated during pregnancy and the patient started an alternative treatment with prednisone and azithromycin. After delivery at 38 weeks of gestational age, there was a significant improvement. **CONCLUSION:** RF is a severe dermatological disease with unknown etiology and with a rapid improvement in the immediate postpartum period.

Medical management of facial redness in rosacea. Cline A, McGregor SP, Feldman SR. Dermatol Clin. 2018 Apr;36(2):151-159. doi: 10.1016/j.det.2017.11.010. <https://www.ncbi.nlm.nih.gov/pubmed/29499798>

Persistent centrofacial erythema is a predominant component of rosacea. The authors review the topical and systemic treatments for rosacea-related erythema and flushing to aid in treatment decision making in clinical practice. Databases were searched for literature pertaining to treatment options for erythema related to rosacea. The paucity of large-scale clinical trials in patients with the erythematotelangiectatic rosacea subtype makes it difficult to draw firm conclusions regarding treatment. Although certain topical and oral treatments appear to have modest benefit in reducing erythema, there is a need for high-quality, well-designed, and rigorously reported studies for the treatments for rosacea.

Patient Counseling/Communication

It takes one to know one: Exploring patient dialogue on rosacea web based platforms and their potential for significant harm. Riddoch LH. J Dermatolog Treat. 2018 Apr 20:1-37. doi: 10.1080/09546634.2018.1468067. [Epub ahead of print]

<https://www.ncbi.nlm.nih.gov/pubmed/?term=It+Takes+One+To+Know+One%3A+Exploring+Patient+Dialogue+On+Rosacea+Web+Based+Platforms+And+Their+Potential+For+Significant+Harm>

BACKGROUND: Rosacea is a non-curable skin condition, leading patients to turn self-management options from web based platforms. Self-management can be dangerous possibly under-reported. **AIM:** To discover the extent of online material and determine the potential for harm influenced by rosacea internet sources. **MATERIALS AND**

METHODS: Material analysed included search engines, apps, YouTube, forums and Facebook groups. As Facebook and forums were most active, they became the core focus. A passive 'fly on the wall' approach allowed observation of user posts and their content. **RESULTS:** Three broad categories of dialogue were identified: prescribed medications, non-prescribed remedies and, most commonly, posts aimed to elicit emotional support. From this, positive and negative influences were identified. Negative influences were divided into 4 domains: physical harm, financial harm, emotional harm, and detrimental influences on patient-doctor relationships. **CONCLUSIONS:** Rosacea patients may be susceptible to rely on peer-generated information. Forums can have detrimental outcomes, primarily due to lack of monitoring and the potential for misplaced trust between fellow sufferers, encouraging others to try potentially harmful alternative remedies. Lack of monitoring allows the spread of inaccurate information, which can result in harm. Medical practitioners should be aware of trending online dialogue and self-treatment remedies to facilitate patient safety.

Patient costs associated with rosacea. Turbeville JG, Alinia H, Tuchayi SM, et al. Dermatol Clin. 2018 Apr;36(2):167-170. doi: 10.1016/j.det.2017.11.012. <https://www.ncbi.nlm.nih.gov/pubmed/29499800>

The recalcitrance of rosacea to many treatment options may prompt patients to spend exorbitant amounts of money on unsubstantiated treatment regimens in an effort to achieve relief. The authors examine the relationship between disease severity and treatment cost across several demographic and socioeconomic strata. Familiarization of evidence-based clinical recommendations and consensus guidelines may equip physicians to educate patients about the most efficacious and cost-effective treatment options to assist patients in making cost-conscious decisions in the management of their rosacea.