AARS HOT TOPICS MEMBER NEWSLETTER

July 1 2018 Issue

American Acne and Rosacea Society
201 Claremont Avenue • Montclair, NJ 07042
(888) 744-DERM (3376) • info@aarsmember.org
www.acneandrosacea.org

Like Our YouTube Page

hottopics
American Acne & Rosacea Society Member Newsletter | www.acneandrosacea.org

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.

TABLE OF CONTENTS

Industry News

UVBioTek launches POLY Go portable LED light therapy. DermWire. Tuesday, June 26, 2018. http://practicaldermatology.com/dermwire/2018/06/26/uvbiotek-launches-poly-go-portable-led-light-therapy

UVBioTek has launched a new line of hand-held LED therapy products that support their newest brand, POLY LED Light Therapy. The mobile hand-held products, named "POLY Go", use multiple wavelengths that are clinically proven to cater to those with acne, fine-line wrinkles, hyperpigmentation, under-eye bags, collagen depletion issues, and even pain, swelling, and redness. POLY Go, like the clinical and spa version POLY, offers the option to change light heads to address several conditions for a variety of client needs. UVBioTek also teamed up with IT company, TIMIT Solutions, to build a custom application to assist users in utilizing POLY Go. The app, "My POLY", is available for iOS and Android users looking to get the most from their light therapy treatments. My POLY provides an interface that will allow POLY Go users to be trained in using the products, manage their therapy sessions, and learn more about advances in the field. "Our mission is to enrich our customer's health and wellness and we know that having these features will give us an even closer connection to them," said Dan Gorney, CEO. "We want our clients to get the best, most effective treatment possible and giving them a means to track treatments and learn more about light therapy will only increase their positive results." UVBioTek is a leader in the light therapy industry. Since 1994, UVBioTek has manufactured clinical and home phototherapy treatment systems for psoriasis, eczema and vitiligo. Now with its entry into the LED therapy, the company continues to evolve with the industry, developing new products that offer an alternative, holistic solution to skin care and pain conditions.

LEO Pharma and Advancing Innovation in Dermatology partner to help finance Accelerator Fund. DermWire. Tuesday, June 26, 2018. http://practicaldermatology.com/dermwire/2018/06/26/leo-pharma-and-advancing-innovation-in-dermatology-partner-to-help-finance-accelerator-fund

LEO Pharma and its Boston-based R&D innovation unit LEO Science & Tech Hub, and Advancing Innovation in Dermatology (AID) will each contribute $500,000 into the recently created Advancing Innovation in Dermatology Accelerator Fund. This non-profit fund is unique in its approach for supporting product innovation for dermatology. LEO and AID have a joint mission to accelerate early stage research and development projects with the potential to impact the lives of people living with skin conditions. William Ju, MD, FAAD, President and a Co-founding Trustee of Advancing Innovation in Dermatology, Inc. said, "We are grateful for LEO Pharma's generosity and partnership and are excited to build collaborations that will spark the translation of science and engineering innovations into products that meaningfully improve patient outcomes." "Our vision for this initiative is to build a sustainable investment model that will spur further innovation in the dermatology space," said Michael Sierra, PhD, Vice President of LEO Science & Tech Hub, "We are excited to fill what we see as a major void in the early development process and are committed to keeping the patient at the center of all endeavors." Christian Antoni, MD, PhD, Senior Vice President of Global Development at LEO Pharma concluded, "LEO Pharma is proud to be involved in progressing innovations in dermatology by working together with renowned thought leaders and entrepreneurs in order to truly impact society." The AID Accelerator Fund was created to support new breakthroughs that address unmet clinical needs. Designed to bridge the gap between government or other initial funding and commercial investment at a stage far earlier and riskier than what traditional venture capitalists or angel investors would typically accept, the fund will provide both seed capital and in-kind intellectual property and advisory services to entities in which it invests. Focused on driving innovative technologies within the field of dermatology, the fund will have a particular emphasis on product

development. In addition to LEO's financial support, Michael Sierra will serve as a member of the steering committee where he will help guide investment decisions and also act as a strategic advisor for the projects. He will be joined on the steering committee by other founding partners from Advancing Innovation in Dermatology, Inc., Pepper Hamilton LLP, Brickell Biotech and Aclaris Therapeutics.

New patient-centered panel helps BioPharmX define its role in the future of dermatology. DermWire. Tuesday, June 19, 2018. http://practicaldermatology.com/dermwire/2018/06/19/new-patient-centered-panel-helps-biopharmx-define-its-role-in-the-future-of-dermatology

BioPharmX Corporation has formed a Special Advisory Council of thought leaders from various disciplines to help the company embrace patient centricity in its products, pricing, and market access considerations. The advisors, who bring decades of experience in fields beyond dermatology—ranging from regulatory pathways to market access and from infectious diseases to antibiotic resistance—will inform the company's efforts by providing the kind of strategic expertise needed to position BioPharmX as a leader in patient-centric dermatology. The Special Advisory Council will collaborate with the company's scientific and medical team and its Medical Advisory Board, a group of dermatologic experts in acne and rosacea who have been instrumental in guiding BioPharmX in the treatment of these diseases. "We are excited about what the future holds for BioPharmX and are confident that this team of respected scientists and physicians will enable us to accelerate the next steps in our company's evolution," said Anja Krammer, BioPharmX President and Co-Founder. "After years of working on our pipeline and patent protections for our unique delivery systems, we now are collaborating with these passionate patient advocates to help us achieve our goal of becoming truly patient centric. Ultimately, they will help us put patients at the center of everything we do." Patient-centricity has been a decades-long goal for the healthcare industry. But larger companies have struggled to retrofit their products and services around patient-centered care models. BioPharmX, designed to be a more nimble organization, says it is committed to ensuring its products are dedicated to the patient, from developing cosmetically elegant products that are easy to use, tolerable and with minimal side effects, to making sure those products are reasonably priced and available to the patients who seek them. "There has never been a greater need for patient-centricity in dermatology," said Dr. Julie Harper, president of the American Acne and Rosacea Society and member of the company's Medical Advisory Board. "I look forward to collaborating with these distinguished colleagues to drive innovative solutions and improve access to care." The Special Advisory Council includes:

R. Todd Plott, MD, an expert on oral minocycline formulation, clinical trials and regulation, who holds six patents related to Solodyn® oral minocycline and was appointed to the FDA Dermatologic & Opthalmic Drug Advisory Committee 2014-2019.

Mark D. Kaufmann, MD, associate clinical professor of dermatology at the Icahn School of Medicine at Mount Sinai, an expert on market access and formulary, with extensive experience working with companies to place novel drugs on appropriate formularies.

George Zhanel, PharmD, PhD, professor in the Department of Medical Microbiology and Infectious Diseases at Max Rady College of Medicine, University of Manitoba, coordinator of antibiotic resistance in the Departments of Medicine and Microbiology at the Health Sciences Centre in Winnipeg, and director of the Canadian Antimicrobial Resistance Alliance. He is an expert on antibiotic resistance.

Kenneth J. Tomecki, MD, vice chairman of the Department of Dermatology at Cleveland Clinic, an expert on infectious diseases with a passion for patient-centric care, medical education and clinical research.

James J. Leyden, MD, emeritus professor of dermatology at the University of Pennsylvania. In addition to 50 years of experience with acne and rosacea, he is an expert on regulatory issues and has consulted for the Food and Drug Administration, the Federal Trade Commission and drug regulation agencies in England, Germany and Austria.

BioPharmX has successfully completed a phase 2b trial for BPX-01 for acne and is preparing for phase 3 trials and has reported positive interim results from a feasibility study for BPX-04 for rosacea and is preparing for a phase 2 trial.

Galderma global survey assesses burden of rosacea. DermWire. Friday, June 08, 2018. http://practicaldermatology.com/dermwire/2018/06/08/galderma-global-survey-assesses-burden-of-rosacea

Recently released findings from Galderma's global survey on the true burden of rosacea suggest a need for dermatologists and doctors to proactively open a dialogue with patients about the true burden of rosacea. An expert-authored report entitled Rosacea: Beyond the visible, available on the British Medical Journal (BMJ) website, reveals the true extent of the psychosocial burden of the disease. Every second patient reported that they would potentially be willing to trade six months or more of their life to cure rosacea. Additionally, over half of those who have worked at least one hour in the past seven days (55%) admitted that their health problems have impacted their work productivity. People who are 'clear' also tend to have fewer doctor visits and say that their health problems had no effect (rated 0 – 2 out of 10) on their work productivity vs. those who were 'almost clear.' Despite the availability of treatments and multiple healthcare professional (HCP) visits, only 14% of patients surveyed rated themselves as 'clear' of symptoms at the time of reporting, highlighting the extent of the unmet need. According to findings, there is a disease-related impact on patients' quality of life. Rosacea can have a high impact at any severity, with 82% of people surveyed feeling that their rosacea is not totally controlled and 86% substantially modifying their behavior and daily lives to avoid triggering flare-ups. ''This research alerts us to the reality that people with rosacea can feel like they are stuck in an unwinnable situation – judged on their appearance, but also worried they will be blamed or viewed as superficial if they seek help. We need to open the discussion surrounding the burden of rosacea and ensure people are comfortable talking about the impacts this illness can have on their lives. We can help make a difference by opening the conversation with patients on the impact of rosacea to identify the more vulnerable 'high burden' individuals and implement a tailor-made treatment approach," comments Dr. Jerry Tan, Adjunct Professor, Western University, Windsor, Ontario, Canada and one of the study authors. The survey asked 710 patients diagnosed with rosacea and 554 dermatologists and general practitioners (GPs) in six different countries (France, Germany, Italy, UK, Canada and the US) about their experience of living with or treating patients that are living with rosacea. According to the survey results, people with rosacea may feel embarrassed or ashamed to talk about their disease burden with over a third (37%) saying friends and family did not understand their condition. As people can be reluctant to discuss the true burden of their disease, physicians can overestimate the impact of symptoms typically associated with rosacea but underestimate less-visible or well-known symptoms (such as stinging, burning, itching and pain).

New Medical News

Severe acne in monozygotic twins treated with photodynamic therapy. Li SS, Zhang LL, Nie S, et al. Photodiagnosis Photodyn Ther. 2018 Jun 19. pii: S1572-1000(18)30134-0. doi: 10.1016/j.pdpdt.2018.06.016. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29933082

Acne is a common skin disease in adolescence. It is a chronic inflammatory disease of the pilosebaceous units, which mainly occurs on the face and upper parts of the trunk. Based on severity of the lesions, acne can be mild, moderate or severe. Severe acne is usually featured with a protracted course and residual scars. Photodynamic therapy (PDT) has been demonstrated to be effective in severe acne recently. We report a case of monozygotic twins with severe acne who were successfully treated with PDT.

Fractional carbon dioxide laser resurfacing of skin grafts: long-term results of a prospective, randomized, split-scar, evaluator-blinded study. Datz E, Schönberger C, Zeman F, et al. Lasers Surg Med. 2018 Jun 17. doi: 10.1002/lsm.22950. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29911321

Background: Fractional ablative resurfacing is frequently used for treating atrophic and acne scars as well as for the early improvement of scars after surgery. No evidence-based clinical data on improving the appearance of skin grafts by fractional CO2 -laser resurfacing have been available so far. Objectives: The primary outcome parameter was the adaptation of the skin graft to the surrounding skin 2, 6, and 12 months after the second laser treatment. Secondary outcome parameters were melanin variation, skin roughness, resizing of the skin graft, and patient satisfaction with cosmetic results. Methods: The randomized half of the skin graft was treated with the fractional CO2 -laser two times in a 4-week interval, whereby the first laser treatment was conducted 3-8 weeks after surgery. Two independent dermatologists assessed the adaptation of the treated area and the untreated control of the skin graft to the surrounding skin using follow-up pictures and an 11-point scale (0 representing no adaptation at all and 10 complete adaptation). Results: Adaptation to the surrounding skin was significantly improved after laser therapy. The mean investigator ratings showed poor adaptation to the surrounding skin before the first treatment (treatment: 2.24 ± 1.00; control group: 1.95 ± 1.27; P < .001; n = 26) but significant improvement at the follow-up visits (8 weeks: treatment: 6.38 ± 1.47; control group 5.29 ± 1.27; P < .001; 6 months: treatment: 7.31 ± 1.24; control group 6.04 ± 0.91; 12 months: treatment: 7.6 ± 1.26; control group: 6.57 ± 1.02; n = 26). After fractional ablative laser treatment, appearance of the skin grafts was significantly improved for all time points. Profilometric analysis showed significantly reduced skin roughness 1 year after laser treatment compared to control (P = .003). Pigmentary irregularities were improved. Melanin distribution was significantly more uniform 1 year after laser treatment compared to control (P = .034). Patients were reasonably satisfied with both sides of the skin graft before treatment but more satisfied with the laser-treated side at the other time points (P < .001). Conclusions: Adaptation of the skin graft to the surrounding skin was significantly improved after ablative fractional skin resurfacing. Skin roughness and melanin variation were also improved. Patient satisfaction with the appearance of the skin graft was significantly higher after graft resurfacing. Thus, this treatment modality can be recommended for patients wishing to improve the appearance of their skin graft.

Combined fractional carbon dioxide laser and long-pulsed neodymium: yttrium-aluminium-garnet (1064 nm) laser in treatment of hidradenitis suppurativa; a prospective randomized intra-individual controlled study. Abdel Azim AA, Salem RT, Abdelghani R. Int J Dermatol. 2018 Jun 16. doi: 10.1111/ijd.14075. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29907956

Background: Multiple treatment modalities were introduced for treatment of hidradenitis suppurativa (HS) but mostly with unsatisfactory results. Objective: In this prospective randomized right-left intra-individual controlled study, we studied the safety and efficacy of combined treatment with fractional CO2 laser and long pulsed Nd: YAG (1064 nm) laser in treatment of HS. Methods: Twenty adult patients with HS were randomized into this study. The patients were randomly allocated to receive four laser sessions with 2 weeks interval. Control side received long pulsed Nd: YAG laser (1064 nm) only, and the other side (combined treatment side) received combined fractional CO2 laser and long

pulsed Nd: YAG (1064 nm) laser. Patients were clinically and histopathologically evaluated 2 weeks post treatment. Recurrence was evaluated 3 months post treatment. Outcome was clinically evaluated by physician global assessment (PGA), 10-point visual analog scale for patient's satisfaction, and side effects. Results: Statistically significant higher improvement and patient's satisfaction was observed in combined treatment side compared with control side (P = 0.011, 0.048 respectively). Absence of recurrence was achieved by 55% of sides receiving combined treatment and 35% of control sides. Conclusions: Combination of fractional CO2 laser and long pulsed Nd: YAG (1064 nm) laser in treatment of HS had higher improvement and patient's satisfaction together with lower recurrence compared with long pulsed Nd: YAG (1064 nm) laser alone. Better results could be achieved with low PGA, non-obese populations, and absence of surgeries for the lesions.

Clindamycin phosphate 1.2%/benzoyl peroxide 3% fixed-dose combination gel versus topical combination therapy of adapalene 0.1% gel and clindamycin phosphate 1.2% gel in the treatment of acne vulgaris in Japanese patients: A multicenter, randomized, investigator-blind, parallel-group study. Hayashi N, Kurokawa I, Siakpere O, et al. J Dermatol. 2018 Jun 15. doi: 10.1111/1346-8138.14497. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29905384

Adapalene 0.1% (ADA) with clindamycin phosphate 1.2% (CLNP; ADA + CLNP) and the fixed-dose combination containing CLNP and benzoyl peroxide 3% (CLNP/BPO 3%) are strongly recommended for the early treatment of acne vulgaris in Japan. Here, we compare the early efficacy and safety of CLNP/BPO 3% with Japanese standard topical use of ADA + CLNP in the treatment of acne vulgaris. In this phase IV, multicenter study, 351 patients were randomized to receive CLNP/BPO 3% or ADA + CLNP for 12 weeks. The primary end-point was percentage change from baseline in total lesion (TL) counts at week 2. Secondary end-points included the percentage change from baseline in TL, inflammatory and non-inflammatory lesion (IL and non-IL) counts, Investigator's Static Global Assessment (ISGA), quality of life (QoL [Skindex-16]) and patient preference. Local tolerability scores and adverse events were also recorded. CLNP/BPO 3% provided a significantly greater percentage reduction from baseline in TL compared with ADA + CLNP at week 2, and week 4. Compared with ADA + CLNP, CLNP/BPO 3% was superior at reducing IL (but not non-IL) over weeks 2-12, was more effective at improving patient QoL and ISGA, and scored higher in patient-preference assessments. Both treatments were well tolerated; adverse drug reactions occurred more frequently in patients receiving ADA + CLNP (37%) than in those receiving CLNP/BPO 3% (17%). In conclusion, CLNP/BPO 3% showed greater efficacy for the early treatment of acne vulgaris in Japan, with a more favorable safety profile compared with ADA + CLNP.

Download Reference Document

The rapid effect of pulsed dye laser on demodex density of facial skin. Ertaş R, Yaman O, Akkuş MR, et al. J Cosmet Laser Ther. 2018 Jun 8:1-4. doi: 10.1080/14764172.2018.1481509. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29883220

Background: Recently, treatment with acaricides, which is aimed at reducing excessive proliferation of demodex mites, has gained popularity due to its providing a significant improvement in the symptoms of diseases, such as rosacea, seborrhoeic dermatitis, and perioral dermatitis. The effect of IPL on demodex mites was reported in skin biopsy specimens in three patients; however, to the best of our knowledge, no study exists to date, which evaluates the effect of pulsed dye laser (PDL) on demodex density (Dd) in larger patient group. We aim here in to observe the Dd before and after PDL therapy with two different skin biopsy techniques. Material and methods: Thirty-one patients

diagnosed with rosacea were included in the study who received PDL treatment. Dds which were measured by using both the SSSB (standardized skin surface biopsy) and CTM (cellophane tape method) techniques before and after 3 weeks of PDL therapy were evaluated. Results and discussion: The Dd of patients before PDL treatment was 13.0 (interquartile range (IQR): 5.0-28.0) and after 3 weeks of PDL treatment it was 6.0 (IQR: 3.0-12.0) with SSSB. After PDL treatment, the Dd was significantly lower than pretreatment the Dd (p = 0.002). The present study shows that PDL significantly reduced Dd in facial skin with one session.

The effect of an anti-inflammatory botanical cleanser/night mask combination on facial redness reduction. Draelos ZD, Donald A. J Drugs Dermatol. 2018 Jun 1;17(6):671-676. https://www.ncbi.nlm.nih.gov/pubmed/29879255

Facial redness is a common difficult to control cosmetic problem representing various phases of rosacea. Using anti-inflammatory/antioxidant botanicals in moisturizer formulations is a possible approach to minimizing the erythema. This research utilized a common facial cleanser, but only applied the botanically based moisturizer to one half face to properly assess efficacy. 30 female subjects Fitzpatrick skin types I-IV 30-55 years of age with mild to moderate chronic facial redness, defined as a redness score of 3-6 on a 10-point scale, were enrolled. By the end of week 4, statistically significant improvement was seen on the cleanser/mask treated side in scaling (P less than 0.001), flaking (P less than 0.001), tactile smoothness (P less than 0.001), textural smoothness (P less than 0.001), firmness (P less than 0.001), radiance (P less than 0.001), luminosity (P less than 0.001), and overall appearance (P less than 0.001). Thus, cosmetic moisturizers may be useful in reducing facial redness.

Download Reference Document

Hidradenitis suppurativa with SAPHO syndrome maintained effectively with adalimumab, methotrexate, and intralesional corticosteroid injections. Crowley EL, O'Toole A, Gooderham MJ. SAGE Open Med Case Rep. 2018 Jun 1;6:2050313X18778723. doi: 10.1177/2050313X18778723. eCollection 2018. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5998992/

Introduction: Hidradenitis suppurativa and synovitis, acne, pustulosis, hyperostosis, osteitis syndrome are chronic, debilitating diseases involving apocrine gland-bearing skin inflammation and bone inflammation, respectively. Although both often present with multiple comorbidities, single patient co-presentation is rare. Methods/results: This study reports the 8-year treatment course of a 40-year-old man with hidradenitis suppurativa and synovitis, acne, pustulosis, hyperostosis, osteitis syndrome, and reviews relevant literature. Initial oral and topical antibiotics had little effect. Intralesional corticosteroid injections were effective for localized inflammatory lesions but insufficient for hidradenitis suppurativa control. Adalimumab initiation and local excision of a persistent HS lesion led to stabilization. Adalimumab provided dramatic back pain improvement. Synovitis, acne, pustulosis, hyperostosis, osteitis was diagnosed; adalimumab continuation with subsequent methotrexate addition resulted in hidradenitis suppurativa-synovitis, acne, pustulosis, hyperostosis, osteitis control. Conclusions: Literature regarding comorbid hidradenitis suppurativa and synovitis, acne, pustulosis, hyperostosis, osteitis syndrome therapy is scarce but growing. Adalimumab, methotrexate, intralesional corticosteroid, and lifestyle changes successfully maintained a severe hidradenitis suppurativa-synovitis, acne, pustulosis, hyperostosis, osteitis-syndrome case. Further studies beyond a case-based review could yield more definitive treatment plans.

Download Reference Document

Case report: successful treatment of refractory SAPHO syndrome with the JAK inhibitor tofacitinib. Yang Q, Zhao Y, Li C, et al. Medicine (Baltimore). 2018 Jun;97(25):e11149. doi: 10.1097/MD.0000000000011149. https://www.ncbi.nlm.nih.gov/pubmed/29924019

Introduction: Synovitis, acne, pustulosis, hyperostosis, and osteitis (SAPHO) syndrome is an autoinflammatory disorder without standardized treatment. Janus kinase (JAK) inhibitors can block a range of cytokines and might possess significant anti-inflammatory activity. Here, we report the first case of efficacious treatment of refractory SAPHO syndrome with the JAK inhibitor tofacitinib. Case presentation: A 44-year-old woman presented with arthralgia in the right wrist and complained of having difficulty in doing housework. Symptoms were unresponsiveness to nonsteroidal anti-inflammatory drugs, disease-modifying antirheumatic drugs, and tumor necrosis factor inhibitors. A diagnosis of SAPHO syndrome was made based on previous dermatological and osteoarticular manifestations and bone scintigraphy findings. Oral treatment with tofacitinib at 5mg twice daily in combination with the basic methotrexate treatment was initiated. After 4 weeks of using tofacitinib, the patient reported marked improvement of symptoms and also reported being competent in completing housework. Conclusions: The efficacy of JAK inhibitors in treating refractory SAPHO syndrome should be noted.

Characterization of cutibacterium acnes phylotypes in acne and in vivo exploratory evaluation of Myrtacine®. Pécastaings S, Roques C, Nocera T, et al. J Eur Acad Dermatol Venereol. 2018 Jun;32 Suppl 2:15-23. doi: 10.1111/jdv.15042. https://www.ncbi.nlm.nih.gov/pubmed/29894577

Objective: Our main objective was to compare Cutibacterium acnes (C. acnes) skin colonization in patients with mild to moderate acne versus healthy controls and secondly, to evaluate a Myrtacine® -based cream on C. acnes total population and antibioresistant Cutibacteria in patients with acne. Methods: In 60 acne patients (Global Acne Severity Scale, GEA grades 2-3), of mean age 20 [15-30] years and in 24 age- and sex- matched healthy controls, forehead strips samplings were performed for microbiological analysis of comedones by colony forming unit (CFU) counts of global C. acnes and erythromycin (EryR) or clindamycin-resistant (ClnR) populations of Cutibacterium and determination of phylotypes by MALTI-TOF. Clinical evaluations of acne patients (GEA, lesion count, porphyrin fluorescence) were performed at baseline and after 56 days of twice-daily application of a Myrtacine® -based cream. Results: We first showed (i) high and similar levels of C. acnes colonization in superficial pilosebaceous follicles and detection of EryR and ClnR strains in both acne and control groups; (ii) different repartition of phylotypes in acne patients versus healthy control, with a predominance of phylotype IA in acne patients and a link between phylotype IA and erythromycin resistance. Besides, after treatment with the Myrtacine® -based cream in acne patients, there was no change in C. acnes total load, but a significant decrease of EryR Cutibacteria, reduced porphyrin production by C. acnes, a decrease in acne severity (GEA), associated with reduced retentional and inflammatory lesions. Conclusion: Cutibacterium acnes colonization was not significantly different in acne versus control groups. Phylotype IA was predominant in acne patient and in EryR C. acnes. A Myrtacine® -based cream significantly reduced the level of EryR Cutibacteria in vivo and improved acne lesions.

Download Reference Document

Comparative efficacy of oral contraceptive versus local treatment versus intense pulsed light combined with vacuum in endocrine acne in women. Ianosi S, Neagoe D, Branisteanu DE, et al. J Biol Regul Homeost Agents. 2018 May-Jun;32(3):711-718. https://www.ncbi.nlm.nih.gov/pubmed/29921404

Acne is the most common affection of adolescents, although it can be also found in adult women. Our study was

aimed at the comparative assessment of three different therapies over a three-month period, applied to women with moderate comedogenic and papulo-pustular endocrine acne. In the study 116 female patients with endocrine localized face acne were included and divided into three groups: group I with 42 patients was treated with a combination of contraceptive pill + local treatment + pulsed-vacuum light; group II with 38 patients was treated with contraceptives and pulsed-vacuum light and group III with 36 patients was treated only with local treatment. The acne evaluation was made using the Global Acne Grading System (GAGS). Statistical data processing was carried out using the STATA software. For the comedogenic form of acne, the good and very good results were superior in group I vs group II and III (83.33% vs 31.58% vs 5.56%) at the end of the three months of treatment. For the papulo-pustulous form of acne, good and very good results were similar in groups I and II (92.86% vs 73.68%) both after the first month of treatment and at the end of the study, well above the local treatment group (13.99%). Our study highlighted the superiority of laser treatment combined with hormonal treatment, compared to hormonal and local treatment in the comedogenic form of acne, and the superiority of hormonal treatment combined (or not) with laser treatment in the papulo-pustular form compared to local treatment.

In-vitro investigation of anti-acne properties of Mangifera indica L. kernel extract and its mechanism of action against Propionibacterium acnes. Poomanee W, Chaiyana W, Mueller M, et al. Anaerobe. 2018 May 17;52:64-74. doi: 10.1016/j.anaerobe.2018.05.004. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29906773

Propionibacterium acnes has been recognized as a main target for medical treatment of acne since this bacterium promotes acne inflammation by inducing upregulation of pro-inflammatory cytokines production, resulting in an accumulation of neutrophils and oxygen-free radicals produced by neutrophils within acne lesion. The aims of this study were to evaluate the biological activities of Mangifera indica kernel extracts grown in Northern Thailand (Kaew-Moragot cultivar), related to anti-acne properties including antimicrobial effect against acne-inducing bacteria together with the first elucidation of the mechanism of action against Propionibacterium acnes, anti-oxidation, and anti-inflammation. The kernels of M. indica, obtained from raw and ripe fruits, were macerated using various solvents. Agar diffusion and broth microdilution methods were performed to investigate the antibacterial activities of the extracts against P. acnes, Staphylococcus aureus, and Staphylococcus epidermidis. The ethanolic fractions exhibited the strongest antimicrobial effect against P. acnes with minimum inhibitory concentration and minimum bactericidal concentration of 1.56 mg/mL and 12.50 mg/mL, respectively. Bactericidal effect against P. acnes of these extracts could be observed after 3 h of incubation from time-kill curve. The chromatograms of high-performance liquid chromatography showed that the extracts existed gallic acid with high total phenolic content. These extracts additionally showed strong free radical scavenging properties on 2,2-diphenyl-1-picrylhydrazyl (DPPH) and 2,2-azino-bis-3-ethylbenzothiazoline-6-sulfonic acid (ABTS) as well as a notable inhibitory effect on linoleic acid peroxidation, which highly correlated to their antimicrobial effect, total phenolic, and gallic acid contents. The images, studied through using transmission electron microscopy, revealed that the extract certainly disrupted P. acnes cell membrane after exposure for 1 h as well as induced the consequent leakage of cytoplasmic materials. The inhibitory effects of the extracts on IL-8 secretion from LPS-inducing RAW 264.7 cells were also presented. In conclusion, the kernel extracts of raw M. indica fruit were effective against aerobic and anaerobic acne-inducing bacteria particularly P. acnes and exerted antioxidant along with anti-inflammatory activities. Therefore, the extracts might be potential agents for inflammatory acne treatment. However, clinical study is needed for further investigation.

Clinical Reviews

Radical resection and local coverage of hidradenitis suppurativa - acne inversa: analysis of results. Mendes RRDS, Zatz RF, Modolin MLA, et al. Rev Col Bras Cir. 2018;45(3):e1719. doi: 10.1590/0100-6991e-20181719. Epub 2018 Jun 18. https://www.ncbi.nlm.nih.gov/pubmed/29924129

Objective: To evaluate the primary outcome of local complications and late recurrence in patients with hidradenitis suppurativa undergoing radical resection and specific reconstruction. Methods: We conducted a retrospective analysis of the medical records of patients attended by the Plastic Surgery Service of the Clinics Hospital, Medical School, USP, between 2010 and 2016. We included patients who underwent radical resection of hidradenitis suppurativa in advanced stage and reconstruction through primary closure, grafts or flaps. Results: We analyzed 34 lesions in 19 patients, of which 64.5% had local complications, though with 73.5% efficient healing after 12 weeks postoperatively. We observed late recurrence in 47%, but in isolation, 22.2% of the reconstructions with locoregional flaps had recurrence after one year. Conclusion: Extensive and radical resection of the disease associated with locoregional flap coverage (pedicled or perforating) has been shown to be the best management in terms of late results.

Download Reference Document

A systematic literature review of the human skin microbiome as biomarker for dermatological drug development. Van Der Kolk T, Van Der Wall HEC, Balmforth C, et al. Br J Clin Pharmacol. 2018 Jun 7. doi: 10.1111/bcp.13662. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/29877593

Aims: To explore the potential of the skin microbiome as biomarker in six dermatological conditions i.e. atopic dermatitis (AD), acne vulgaris (AV), psoriasis vulgaris (PV), hidradenitis suppurativa (HS), seborrheic dermatitis/pityriasis capitis (SD/PC) and ulcus cruris (UC). Methods: A systematic literature review was conducted according to the PRISMA guidelines. Two investigators independently reviewed the included studies and ranked the suitability microbiome implementation for early phase clinical studies in an adapted GRADE method. Results: In total 841 papers were identified and after screening of titles and abstracts for eligibility we identified 42 manuscripts that could be included in the review. Eleven studies were included for AD, 5 for AV, 10 for PV, 2 for HS, 4 for SD and 10 for UC. For AD and AV, multiple studies report the relationship between the skin microbiome, disease severity and clinical response to treatment. This is currently lacking for the remaining conditions. Conclusion: For two indications, i.e. AD and AV, there is preliminary evidence to support implementation of the skin microbiome as biomarkers in early phase clinical trials. For PV, UC, SD and HS there is insufficient evidence from the literature. More microbiome-directed prospective studies studying the effect of current treatments on the microbiome with special attention for patient meta-data, sampling methods and analysis methods are needed to draw more substantial conclusions.

Download Reference Document

A biologically based approach to acne and rosacea. Kallis PJ, Price A, Dosal JR, et al. J Drugs Dermatol. 2018 Jun 1;17(6):611-617. https://www.ncbi.nlm.nih.gov/pubmed/29879248

Complementary and alternative medicine (CAM) therapies are increasing in popularity in the field of dermatology. Natural products and holistic approaches are in high demand among patients and research has begun to support

their roles in acne and rosacea pathophysiology. In this article, commonly utilized biologically based complementary and alternative therapies for acne and rosacea are reviewed from an evidence-based perspective. Therapies discussed include vitamin C, nicotinamide, zinc, tea tree oil, green tea, resveratrol, curcumin, feverfew, licorice, chamomile, polypodium leucotomos, and nutrition-based approaches.

Download Reference Document

Cutibacterium acnes (Propionibacterium acnes) and acne vulgaris: a brief look at the latest updates. Dréno B, Pécastaings S, Corvec S, et al. J Eur Acad Dermatol Venereol. 2018 Jun;32 Suppl 2:5-14. doi: 10.1111/jdv.15043. https://www.ncbi.nlm.nih.gov/pubmed/29894579

While the commensal bacterium Propionibacterium acnes (P. acnes) is involved in the maintenance of a healthy skin, it can also act as an opportunistic pathogen in acne vulgaris. The latest findings on P. acnes shed light on the critical role of a tight equilibrium between members of its phylotypes and within the skin microbiota in the development of this skin disease. Indeed, contrary to what was previously thought, proliferation of P. acnes is not the trigger of acne as patients with acne do not harbor more P. acnes in follicles than normal individuals. Instead, the loss of the skin microbial diversity together with the activation of the innate immunity might lead to this chronic inflammatory condition. This review provides results of the most recent biochemical and genomic investigations that led to the new taxonomic classification of P. acnes renamed Cutibacterium acnes (C. acnes), and to the better characterization of its phylogenetic cluster groups. Moreover, the latest data on the role of C. acnes and its different phylotypes in acne are presented, providing an overview of the factors that could participate in the virulence and in the antimicrobial resistance of acne-associated strains. Overall, this emerging key information offers new perspectives in the treatment of acne, with future innovative strategies focusing on C. acnes biofilms and/or on its acne-associated phylotypes.

Download Reference Document

Aromatherapy, botanicals, and essential oils in acne. Winkelman WJ. Clin Dermatol. 2018 May - Jun;36(3):299-305. doi: 10.1016/j.clindermatol.2018.03.004. https://www.ncbi.nlm.nih.gov/pubmed/29908571

Complementary and alternative medicine approaches are popular among some patient segments due to the perception that they are "natural" and thus are believed to be less likely to be dangerous, to be less toxic, or to cause fewer side effects. In dermatology, these can include aromatherapy, botanicals, and essential oils (plant extracts). Preliminary evidence, biological activity studies, and small pilot clinical trials conducted outside of North America, mostly in young adults, suggest that some may have value in acne treatment. When additional research and larger clinical trials are conducted, both clinicians and patients will be able to understand the risks and benefits compared with allopathic remedies.