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AARS News

The AARS is proud to sponsor activities for National Acne Awareness Month in June! Please contact Stacey Moore at info@aarsmember.org or stacey@physicianresources.org if you represent a Corporate Benefactor interested in partnering with social media or educational activity during this month. Here are some example of our campaigns from last year. We continue to reinforce individualized treatment approaches for acne patients and to prescribe the brand with a complementary skincare regimen.

Industry News

Dermata reports positive results for once-weekly topical application of DMT310 in acne. June 10, 2020. DermWire, Practical Dermatology.
https://practicaldermatology.com/news/dermata-reports-positive-results-for-once-weekly-topical-application-of-dmt310-in-acne?c4src=news-landing:feed

Dermata now plans to hold an end of Phase 2 meeting with the FDA and initiate two Phase 3 trials in moderate-to-severe acne patients to evaluate the safety and efficacy of DMT310. Dermata Therapeutics' lead clinical candidate, DMT310, performed well in a Phase 2b study of moderate-to-severe acne vulgaris. Once-weekly DMT310 achieved Investigator Global Assessment (IGA) success (2-point change & 0 or 1) in 44.4 percent of patients versus 17.8 percent of placebo patients (p=0.0003), the study showed. In addition, DMT310 saw a -15.6 mean change from baseline in inflammatory lesion count versus a -10.8 mean change from baseline for placebo (p=0.0017) and a -18.3 mean change from baseline in non-inflammatory lesion count versus -12.4 mean change from baseline for placebo (p=0.0027). DMT310 also appeared to be safe and well-tolerated by patients with minimal treatment-related adverse events and no serious adverse events related to treatment. Based on these results, the Company plans to hold an end of Phase 2 meeting with the FDA and initiate two Phase 3 trials in moderate-to-severe acne patients to evaluate the safety and efficacy of DMT310. Dermata also plans to initiate a Phase 2 clinical trial of DMT310 in patients with papulopustular rosacea starting in early 2021. "A big problem with treating acne is patient compliance, so having an effective product with an excellent safety profile that is only applied once weekly would be a great option for acne patients," states Chris Nardo, PhD, SVP, Development of Dermata, in a news release. "Also, patients are seeking more natural ways to treat their acne, which could position DMT310 as a very attractive product for many patients." DMT310-003 Trial Design - DMT310-003 was a 12-week, 14-center, double-blind, randomized, placebo-controlled trial designed to evaluate the safety, tolerability and efficacy of once-weekly application of DMT310 in 181 moderate to severe acne patients, defined as a grade 3 or 4 on the IGA five-point scale and at least 20 inflammatory and 20 non-inflammatory lesions on the face at baseline. The trial contained two arms: (1) DMT310 + H2O2; and (2) Placebo + H2O2. The primary endpoint was the mean change from baseline in inflammatory lesion count at week 12. Other endpoints included IGA treatment success, defined as the percentage of patients with at least a two-point reduction and a score 0 or 1 ("clear" or "almost clear") on IGA scale at week 12 and the mean change from baseline in non-

inflammatory lesion count at week 12. The trial also used a HIPAA compliant smartphone application on patients' mobile devices to document patient treatment compliance. During the study, patients recorded a 10-second video, which was reviewed by clinic staff to ensure complete and timely application of the product. DMT310-003 Efficacy Results - In the intent-to-treat analysis, Dermata saw statistically significant differences in IGA treatment success, inflammatory lesion count and non-inflammatory lesion count as early as week 4 and continuing to week 12 (study end) when compared to placebo. "The substantial clinical response observed in our DMT310-003 trial gives us confidence that DMT310 could alter the current treatment paradigm in acne by providing patients with a novel, once-weekly treatment option with minimal side effects and quicker time to treatment effect," adds Gerry Proehl, President, CEO and co-Founder of Dermata. "We believe the multiple mechanisms of action of DMT310 are crucial to its treatment success and will be a significant market differentiator for acne and other inflammatory skin diseases."

New Medical Research

Association between adult acne and dietary behaviors: Findings from the nutrinet-santé prospective cohort study. Penso L, Touvier M, Deschasaux M, et al. JAMA Dermatol. 2020 Jun 10. doi: 10.1001/jamadermatol.2020.1602. Online ahead of print.
https://pubmed.ncbi.nlm.nih.gov/32520303/?from_term=acne+AND+treatment&from_filter=years.2020-2020&from_sort=date&from_size=50&from_pos=3
Importance: Acne is a chronic, multifactorial inflammatory disease. The association between consumption of dairy products and fatty and sugary foods and occurrence and progression of acne remains unclear. Objective: To assess the association between dietary behavior and current acne in adults. Design, setting, and participants: A cross-sectional study was performed as part of the NutriNet-Santé study, which is an ongoing observational, web-based cohort study that was launched in France in May 2009. The present study was conducted from November 14, 2018, to July 8, 2019. A total of 24 452 participants completed an online self-questionnaire to categorize their acne status: never acne, past acne, or current acne. Associations between dietary behavior (food intake, nutrient intake, and the dietary pattern derived from a principal component analysis) and current or past acne were studied in multinomial logistic regression models adjusted for potential confounding variables (age, sex, physical activity, smoking status, educational level, daily energy intake, number of dietary records completed, and depressive symptoms). Results: The 24 452 participants (mean [SD] age, 57 [14] years; 18 327 women [75%]) completed at least 3 dietary records. Of these, 11 324 individuals (46%) reported past or current acne. After adjustment, there was a significant association between current acne and the consumption of fatty and sugary products (adjusted odds ratio [aOR], 1.54; 95% CI, 1.09-2.16), sugary beverages (aOR, 1.18; 95% CI, 1.01-1.38), and milk (aOR, 1.12; 95% CI, 1.00-1.25). An energy-dense dietary pattern (high consumption of fatty and sugary products) was associated with current acne (aOR, 1.13; 95% CI, 1.05-1.18). Conclusions and relevance: In this study, consumption of milk, sugary beverages, and fatty and sugary products appeared to be associated with current acne in adults. Further large-scale studies are warranted to investigate more closely the associations between diet and adult acne.
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Knockdown of H19 inhibits the pathogenesis of acne vulgaris by targeting the miR-196a/TLR2/NF-κB axis. Yang S, Fang F, Yu X, et al. Inflammation. 2020 Jun 10. doi: 10.1007/s10753-020-01268-z. Online ahead of print.
https://pubmed.ncbi.nlm.nih.gov/32524335/?from_term=acne+AND+treatment&from_filter=years.2020-2020&from_sort=date&from_size=50&from_pos=1
Acne vulgaris (AV) is a chronic inflammatory disease of the pilosebaceous unit, and Propionibacterium acnes (P. acnes) has been implicated in acne inflammation. Numerous studies have shown that non-coding RNAs play

important roles in regulating the pathophysiological processes of acne. In addition, the first imprinted long non-coding RNA (lncRNA) identified, H19, plays a critical role in inflammatory disease. However, the expression and role of H19 in AV remain unclear. In this study, we investigated the effects of H19 in keratinocytes and explored the regulatory mechanisms underlying these effects. H19 was upregulated in keratinocytes treated with P. acnes in a concentration-dependent manner. The phosphorylated forms of the nuclear factor (NF)-κB-related proteins IκBα (p-IκBα) and p65 (p-P65) were significantly upregulated after P. acnes treatment. Additionally, secretion of the proinflammatory cytokines tumor necrosis factor (TNF)-α, interleukin (IL)-6, and IL-8 was upregulated in a concentration-dependent manner. Knockdown of H19 inhibited the expression of p-IκBα and p-P65 as well as the secretion of TNF-α, IL-6, and IL-8 in keratinocytes treated with P. acnes. Moreover, H19 was found to exert its proinflammatory effects by activating NF-κB. H19, which was localized mainly in the cytoplasm of keratinocytes, facilitated Toll-like receptor 2 (TLR2) expression by acting as a miR-196a sponge. H19 thus promoted the activation of NF-κB and the secretion of inflammatory cytokines through the miR-196a/TLR2 axis. These findings provide novel insight into the pathogenesis of AV.

Combination of a self-regulation module and mobile application to enhance treatment outcome for patients with acne. Liu YS, Lu NH, Shieh PC, Sun CK. Medicina (Kaunas). 2020 Jun 4;56(6):E276. doi: 10.3390/medicina56060276.
https://pubmed.ncbi.nlm.nih.gov/32512875/?from_term=acne+AND+treatment&from_filter=years.2020-2020&from_sort=date&from_size=50&from_pos=9
Background and Objectives: Acne, an inflammatory disorder of the pilosebaceous unit associated with both physiological and psychological morbidities, should be considered a chronic disease. The application of self-regulation theory and therapeutic patient education has been widely utilized in different health-related areas to help patient with a chronic disease to attain better behavioral modification. The present study aims at investigating the treatment efficacy of combining a self-regulation-based patient education module with mobile application in acne patients. Materials and Methods: This was one-grouped pretest-posttest design at a single tertiary referral center with the enrollment of 30 subjects diagnosed with acne vulgaris. Relevant information was collected before (week 0) and after (week 4) treatment in the present study, including the Acne Self-Regulation Inventory (ASRI), Cardiff Acne Disability Index (CADI), and Dermatology Life Quality Index (DLQI) that involved a questionnaire-based subjective evaluation of the patient's ability in self-regulation and quality of life as well as clinical Acne Grading Scores (AGS) that objectively assessed changes in disease severity. To reinforce availability and feasibility, an individualized platform was accessible through mobile devices for real-time problem solving between hospital visits. Results: Thirty subjects completed the designed experiment. An analysis of the differences between scores of pretest and posttest of ASRI demonstrated substantial elevations ($p < 0.001$). The questionnaire survey of CADI and DLQI dropped significantly after the application of a self-regulation-based patient education module with a mobile application, revealing substantial reductions in both parameters ($p < 0.001$). The sign test demonstrated a remarkably significant difference in AGS ($Z = -7.38$, $p < 0.001$), indicating notable improvement in the clinical severity of acne after treatment. Conclusions: After incorporating modern mobile application, a self-regulation-based therapeutic patient education module could significantly improve treatment outcomes among acne patients.
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Influence of contraception class on incidence and severity of acne vulgaris. Barbieri JS, Mitra N, Margolis DJ, et al. Obstet Gyneco. 2020 Jun;135(6):1306-1312. doi: 10.1097/AOG.0000000000003880.
https://pubmed.ncbi.nlm.nih.gov/32459422/?from_term=acne+AND+treatment&from_filter=years.2020-2020&from_sort=date&from_size=50&from_pos=36

Objective: To evaluate the association of different contraceptive methods on the incidence and severity of acne. Methods: Using a de-identified commercial claims database, we performed a retrospective cohort study evaluating the incidence of clinical encounters for acne in the first year after initiation of contraception among female patients aged 12-40 years who were new contraceptive users. To evaluate the association of contraception class with acne severity, a subgroup analysis was performed among a cohort of patients with a history of acne examining the incidence of treatment escalation from topical acne medications to an oral tetracycline-class antibiotic in the year after initiation of contraception. Results: Among new contraceptive users with no history of acne (N=336,738), compared with combined oral contraceptives (OCs), the copper intrauterine device (IUD) (hazard ratio [HR] 1.14; 95% CI 1.01-1.29) and levonorgestrel IUDs (HR 1.09; 95% CI 1.03-1.16) were associated with increased risk of clinical encounters with acne. Among those with a history of acne (n=21,178), compared with combined OCs, the copper IUD (HR 1.44; 95% CI 1.00-2.06) and levonorgestrel IUDs (HR 1.34; 95% CI 1.10-1.64) were associated with increased risk of treatment escalation from topical acne medications to an oral tetracycline class antibiotic. Conclusion: Combined OCs appear to be associated with a modest (or small) protective effect with respect to incident acne and treatment escalation compared with other contraceptive methods. However, absolute differences between contraceptive methods were small.

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Treatment of atrophic acne scars with combination therapy of chemical reconstruction of skin scars method and fractionated non-ablative laser: A retrospective analysis. Bahl A, O'Connor K, Jin Chung H. J Cosmet Dermatol. 2020 May 30. doi: 10.1111/jocd.13514. Online ahead of print. https://pubmed.ncbi.nlm.nih.gov/32472975/?from_term=acne+AND+treatment&from_filter=years.2020-2020&from_sort=date&from_size=50&from_pos=27

Background: Patients with acne scarring often have several types of acne scars, and combination therapies have demonstrated superior success to single treatment modalities. Chemical reconstruction of skin scars (CROSS) has gained popularity as the treatment for ice-pick scars and fractionated laser therapy for rolling and boxcar scars. However, no study has looked at combination therapy with CROSS and fractionated non-ablative laser for the treatment of atrophic acne scars. Objective: We sought to evaluate the efficacy and safety of combination therapy with CROSS and fractionated non-ablative laser for atrophic acne scars. Materials and methods: We conducted a retrospective analysis of patients treated with CROSS followed by fractionated non-ablative laser treatment in the same visit for acne scars from 2016 to 2020. Treatment efficacy, defined as the percentage improvement in the appearance of acne scars, was assessed using a 5-point scale: score 0 (worsening or 0% improvement), 1 (1 - 25%), 2 (26 - 50%), 3 (51-75%), and 4 (76-100%). Results: Twenty five patients (14 females and 11 males, Fitzpatrick Skin Type II -V) were enrolled. The average improvement score was 2.07 after 3 sessions and 2.78 after 5 sessions. All subjects reported satisfaction, while 24% were very satisfied. There were no permanent adverse effects, and only one patient developed a temporary hypertrophic scar. Conclusion: We concluded that combination therapy with CROSS and fractionated non-ablative laser in the same visit is an effective and safe treatment option for atrophic acne scars in patients with various skin types, including skin of color.

In vitro antibacterial and anti-inflammatory effects of novel insect fungus polycephalomyces phaothaiensis extract and its constituents against propionibacterium acnes. Sonyot W, Lamlertthon S, Luangsa-Ard JJ, et al. Antibiotics (Basel). 2020 May 25;9(5):E274. doi: 10.3390/antibiotics9050274. https://pubmed.ncbi.nlm.nih.gov/32466146/?from_term=acne+AND+treatment&from_filter=years.2020-2020&from_sort=date&from_size=50&from_pos=33

Propionibacterium acnes plays an important role in the pathophysiology of acne vulgaris, the most common chronic

inflammatory skin disease of the pilosebaceous unit. This study was conducted to investigate whether the entomopathogenic fungus Polycephalomyces phaothaiensis components have antibacterial and anti-inflammatory effects against P. acnes that may serve for acne treatment. A chemical study by spectroscopic analysis resulted in the identification of seven known compounds. The anti-P. acnes potency of extracts and test compounds was determined by both agar diffusion and broth dilution methods. The ethyl acetate extract from culture broth along with cordytropolone (1) and stipitalide (2) exhibited strong anti- P. acnes activity while (+)-piliformic acid (3) showed mild inhibitory activity. The anti-inflammatory effect of ethyl acetate extract and 1-3 was then examined by the quantification of pro-inflammatory cytokines IL-1β, IL-6, and TNF-α on heat-killed P. acnes induced cytokine production by THP-1 cells. The result demonstrated that the extract and its constituents (1-3) showed a potent significant effect by inhibiting the P. acnes-induced pro-inflammatory cytokines production in THP-1. Our results suggest for the first time that P. phaothaiensis and its constituents (1 and 2) hold therapeutic value for further studies as a new alternative treatment for acne.

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Conventional versus daylight photodynamic therapy for acne vulgaris: A randomized and prospective clinical study in China. Zhang L, Zhang Y, Liu X, et al. Photodiagnosis Photodyn Ther. 2020 May 23;101796. doi: 10.1016/j.pdpdt.2020.101796. Online ahead of print.

https://pubmed.ncbi.nlm.nih.gov/32454087/?from_term=acne+AND+treatment&from_filter=years.2020-2020&from_sort=date&from_size=50&from_pos=41

Background: Photodynamic therapy (PDT) is an effective and safe treatment modality for acne vulgaris, and a variety of light sources have been investigated. Sunlight has been used as a PDT light source in limited acne studies over the past years. However, to date, a comparative study of conventional PDT (C-PDT) and daylight PDT (DL-PDT) on acne is still lacking. Objectives: This study aims to assess the efficacy and safety of DL-PDT vs. C-PDT in the treatment of acne vulgaris. Methods: Eighty patients with facial moderate-to-severe acne vulgaris were randomly assigned to either DL-PDT group or C-PDT group. All patients got two to three treatment sessions at two-week intervals. The lesions were photographed with VISIA digital imaging system at baseline and weeks 2, 4, and 6. Follow-up monthly for 3 months. The endpoints include efficacy (lesion response), safety (VAS pain score) and patient satisfaction. Results: A total of 77 patients completed the study. There was no statistics difference in objective response rate between DL-PDT group and C-PDT group at weeks 2, 4, and 6, respectively (40.0%, 90.0%, and 94.7% vs. 45.0%, 85.0%, and 92.3%, $p > 0.05$). The IGA score of DL-PDT group has no difference from C-PDT at baseline and at weeks 6, respectively (3.3 ± 0.4, 1.5 ± 0.7 vs. 3.4 ± 0.5, 1.6 ± 0.7, $p > 0.05$). The VAS pain score of DL-PDT group was lower than that of C-PDT group (1.8 ± 0.2, vs. 5.8 ± 0.3, $p < 0.05$). Adverse reactions such as mild burning sensation, erythema, dryness, crusting, scales and hyperpigmentation were all tolerated. Patient satisfaction was similar between the two groups ($p > 0.05$). Conclusions: DL-PDT is an effective and well-tolerated alternative regimen for moderate-to-severe acne vulgaris compared with C-PDT.

Clinical Reviews

Proposed definitions of typical lesions in hidradenitis suppurativa. Daxhelet M, Suppa M, White J, et al. Dermatology. 2020 Jun 9;1-8. doi: 10.1159/000507348. Online ahead of print.

https://pubmed.ncbi.nlm.nih.gov/32516781/?from_term=acne+AND+treatment&from_filter=years.2020-2020&from_sort=date&from_size=50&from_pos=5

Background: Although not rare, hidradenitis suppurativa (HS) is often under-recognized by physicians. The diagnosis of HS is clinical via the recognition of lesions typical of the disease, but universally accepted definitions of these latter

are currently lacking, which means that certain severity scores employed for HS classification/management are used differently by different physicians. Our aim was to develop a set of descriptive definitions and associated images of HS lesions, in order to enable doctors to better recognize and evaluate the disease. Methods: MEDLINE-available literature and dermatological textbooks on HS morphology were retrieved (January 1996 to February 2016). A preliminary set of definitions of HS typical lesions was created, including 10 terms. Each term was associated with a pathophysiological classification and an image. This preliminary set was shown during the 5th Conference of the European HS Foundation (EHSF). The physicians attending the event were invited to vote on each term and make comments via a voting sheet. Results: A total of 81 physicians answered the questionnaire. Their agreement/disagreement rates and comments were used to obtain a revised set of definitions and images. Pathophysiological classifications were dropped. Conclusion: A user-friendly set of definitions/images of HS typical lesions was proposed and will need to be validated by further studies. This set could ultimately serve as a tool to better recognize, score, and assess treatment efficacy.

Efficacy of 595- And 1319-nm pulsed dye laser in the treatment of acne vulgaris: A narrative review. Kassir M, Arora G, Galadari H, et al. J Cosmet Laser Ther 2020 Jun 9;1-4. doi: 10.1080/14764172.2020.1774063. Online ahead of print. https://pubmed.ncbi.nlm.nih.gov/32516014/?from_term=acne+AND+treatment&from_filter=years.2020-2020&from_sort=date&from_size=50&from_pos=6

Acne is one of the commonest problems of adolescence with almost half of the patients experiencing persistence into adulthood. Pulsed dye lasers (PDL) with wavelengths of 585 and 595 nm targeting hemoglobin have been used for the treatment of this condition and its sequelae. Recent introduction of PDL with a higher wavelength of 1319 nm has been reported to offer some benefit to acne patients. We reviewed the literature on the use of 595-nm and 1319-nm PDL in the management of acne. A PubMed literature search for search terms "pulsed dye laser," "acne laser therapy," "light therapy for acne," "595 nm and acne," "1319 nm and acne" was done. Studies, series and case reports were included. These lasers were compared to other lasers and light sources such as 532-nm Potassium Titanyl Phosphate laser, 585-nm PDLs, 1450-nm diode laser, 1540-nm erbium glass laser, intense-pulsed light (IPL), photodynamic therapy, red and blue light and short-pulsed 1064 nm laser utilized in acne management regarding their efficacy. Improvement in acne grading, scale severity or reduction in lesion count indicated substantial efficacy of the laser system utilized.

Topical minocycline foam 4%: A review in acne vulgaris. Paik J. Am J Clin Dermatol. 2020 Jun;21(3):449-456. doi: 10.1007/s40257-020-00523-1.
https://pubmed.ncbi.nlm.nih.gov/32468355/?from_term=acne+AND+treatment&from_filter=years.2020-2020&from_sort=date&from_size=50&from_pos=32

Topical minocycline foam 4% (Amzeeq™) is approved in the USA for the treatment of inflammatory lesions of non-nodular, moderate to severe acne vulgaris (acne) in patients aged ≥ 9 years. It was developed to minimize systemic minocycline absorption and toxicity, and its high lipid content allows efficient drug movement through sebum and into affected sites. The favorable in vitro resistance profile of oral minocycline seen in Cutibacterium acnes (C. acnes) isolates was maintained with topical minocycline foam 4%. In 12-week, phase III clinical trials, once-daily topical minocycline foam 4% significantly improved both inflammatory and noninflammatory lesions relative to foam vehicle in patients aged ≥ 9 years with moderate to severe acne and was reported by most patients to be satisfactory or highly satisfactory to use. Extension trial data indicated that topical minocycline foam 4% continued to be effective for up to 52 weeks' therapy. Topical minocycline foam 4% was generally well tolerated in these patients, with most adverse events (AEs) and all serious AEs considered to be unrelated to treatment. Cutaneous AEs were uncommon, and findings from a dermal safety study showed that topical minocycline foam 4% did not have any effects related to

phototoxicity, photoallergy, skin sensitization and skin irritation. Topical minocycline foam 4% is thus a useful addition to available treatment options for the management of inflammatory lesions of non-nodular, moderate to severe acne in adult and pediatric patients aged ≥ 9 years.

Antibiotic resistance in acne: Changes, consequences and concerns. Karadag AS, Aslan Kayıran M, Wu CY, et al. J Eur Acad Dermatol Venereo. 2020 May 31. doi: 10.1111/jdv.16686. Online ahead of print. https://pubmed.ncbi.nlm.nih.gov/32474948/?from_term=acne+AND+treatment&from_filter=years.2020-2020&from_sort=date&from_size=50&from_pos=26

Antibiotic resistance in acne was first observed in the 1970s and has been a major concern in dermatology since the 1980s. The resistance rates and types of antimicrobials have subsequently shown great variations in regions and countries. Illustrative of this is the resistance to topical erythromycin and clindamycin which continues to be a problem worldwide, while resistance to systemic treatment with tetracyclines has remained low during the past decade. The resistance for the newer macrolides like azithromycin and clarithromycin has been increasing. The results of antibiotic resistance may include treatment failure of acne, disturbance of skin microbiota, induction of opportunistic pathogens locally and systemically, and dissemination of resistant strains to both health care personnel and the general population. The ensuing complications, such as aggravated opportunistic infections caused by Propionibacterium acnes and the emergence of multiresistant superbugs, have not yet been confirmed.

Efficacy, safety, and guidelines of application of the fractional ablative laser erbium YAG 2940 Nm and non-ablative laser erbium glass in rejuvenation, skin spots, and acne in different skin phototypes: A systematic review. Modena DAO, Miranda ACG, Grecco C, et al. Lasers Med Sci. 2020 May 29. doi: 10.1007/s10103-020-03046-7. Online ahead of print.
https://pubmed.ncbi.nlm.nih.gov/32472427/?from_term=acne+AND+treatment&from_filter=years.2020-2020&from_sort=date&from_size=50&from_pos=28

Non-ablative and ablative fractional erbium lasers are among the most frequently used resources in dermatology for facial rejuvenation and for treating dermatological disorders. This type of erbium laser can be found at wavelengths of 1540 or 1550 nm, which are classified as non-ablative erbium glass, and at 2940 nm, classified as ablative erbium YAG. Despite the reports of their clinical benefits, few scientific studies have demonstrated the efficacy and safety of these lasers in the short or long term. In order to substantiate the effects, benefits, and safety of applying the erbium glass and erbium YAG lasers, a systematic review was carried out from August to December 2019 about studies published in the last 20 years. Randomized clinical trials in humans were considered that evaluated the efficacy, safety, and benefits of applying the fractional lasers erbium glass and erbium YAG to facial rejuvenation, skin spots, and atrophic acne scars. A total of 338 articles were identified; 76 articles remained after their titles and abstracts were read, and 42 articles were selected after removing the duplicates. After the articles were read in full, 17 of these articles were included in the systematic review (453 patients). The erbium glass and erbium YAG lasers seem promising in the short term, with minimal adverse effects; however, the long-term efficacy and safety still present limitations. Consequently, future research is needed, with better methodological standardization and a follow-up with a longer evaluation period for possible permanent adverse effects to determine the standardization and safety of therapy with erbium glass and erbium YAG lasers.

Knowledge levels and concerns about oral isotretinoin treatment in the parents of adolescent acne patients. Kara Polat A, Akin Belli A, Ergun EZ, et al. Dermatol Ther. 2020 May 27. doi: 10.1111/dth.13669. Online ahead of print. https://pubmed.ncbi.nlm.nih.gov/32459383/?from_term=acne+AND+treatment&from_filter=years.2020-2020&from_sort=date&from_size=50&from_pos=37

Oral isotretinoin is frequently used in the treatment of young acne patients. However, knowledge levels and attitudes about this treatment have not been studied in the parents previously. We aimed to investigate the knowledge levels and concerns about oral isotretinoin in the parents of adolescent acne patients. We conducted a cross-sectional study on 136 parents of adolescent patients with moderate to very severe acne vulgaris who answered the questionnaire about oral isotretinoin treatment. Demographic data and acne characteristics were recorded. The parents' knowledge levels and concerns about the treatment process were asked by the questionnaire. Since 32 parents have never heard oral isotretinoin before, they were excluded from the study. Of the remaining 104 parents, 80.8% were female and 19.2% were male. Of the parents, 62.5% had some concerns about oral isotretinoin treatment and 34.6% had no idea whether the drug is suitable for the use of <18 years. 52.9% stated that they think the drug will damage the liver. The most known and worrying side effects were dry lips and vision problems, respectively. The knowledge levels about oral isotretinoin treatment and its side effects were low in the parents of adolescent acne patients, leading to prejudice to the drug.
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Gastrointestinal involvement of primary skin diseases. Lu CY, Hsieh MS, Wei KC, et al. J Eur Acad Dermatol Venereol. 2020 May 26. doi: 10.1111/jdv.16676. Online ahead of print.
https://pubmed.ncbi.nlm.nih.gov/32455473/?from_term=acne+AND+treatment&from_filter=years.2020-2020&from_sort=date&from_size=50&from_pos=40
Less is known about gastrointestinal (GI) involvement of primary skin diseases due to the difference in embryology, histology, microbiology and physiology between integument and alimentary tract. Esophagus, following the oropharyngeal mucosa, is the most common GI segment affected by primary skin diseases, especially by eosinophilic esophagitis, lichen planus, and autoimmune bullous dermatoses like pemphigus vulgaris, mucosal membrane pemphigoid and epidermolysis bullosa acquisita. Eosinophilic esophagitis is an emerging chronic atopic disease with esophageal dysfunction as the typical presentation, and esophageal narrowing, rings and stricture as late complications. Esophageal lichen planus mainly involves the proximal to mid-esophagus in elderly-aged women with long-term oral mucosal lesions. In acute attack of pemphigus vulgaris esophageal involvement is not uncommon but often neglected and may cause sloughing esophagitis (esophagitis dissecans superficialis) with acute GI bleeding in rare cases. GI manifestation of hereditary bradykininergic angioedema with colicky acute abdomen mostly affects small intestine, usually in the absence of pruritus or urticaria, and is more severe and long-lasting than the acquired histaminergic form. Strong evidence supports association between inflammatory bowel disease, especially Crohn disease, and hidradenitis suppurativa/acne inversa. Patients with vitiligo need surveillance of autoimmune liver disease, autoimmune atrophic gastritis or celiac disease when corresponding symptoms become suspect. Melanoma is the most common primary tumor metastatic to the GI tract, with small intestine predominantly targeted. Gastrointestinal involvement is not uncommon in disseminated mycosis fungoides. Extramammary Paget's disease is an intraepidermal adenocarcinoma of controversial origin and a high association between the ano-genital occurrence and colorectal adenocarcinoma has been reported. As GI tract is the largest organ system with multidimensional functions, dermatologists in daily practice should be aware of the gastrointestinal morbidities related to primary skin diseases for an early diagnosis and treatment.