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

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Industry News

Almirall finalizes acquisition of Allergan US medical dermatology portfolio. DermWire, Practical Dermatology. Friday, September 21, 2018. http://practicaldermatology.com/dermwire/2018/09/21/almirall-finalizes-acquisition-of-allergan-us-medical-dermatology-portfolio

Almirall, S.A. finalized its acquisition of products from Allergan's Medical Dermatology unit in the US: Aczone (dapsone), Tazorac (tazarotene), Azelex (azelaic acid), and Cordran Tape (flurandrenolide). In addition, sarecycline, a New Chemical Entity (NCE) currently under FDA review for approval in the treatment of acne is part of the transaction. These portfolio additions further enhance Almirall's presence in the U.S. dermatology space through their subsidiary Aqua Pharmaceuticals, a respected manufacturer of established therapies for a range of medical dermatology indications including acne, eczema, dermatitis, actinic keratoses and bacterial infections. "With this acquisition, Almirall is cementing its commitment to be a leader in medical dermatology, providing proven brands and innovative new therapies across a broad array of indications as a partner to our customers and patients," said Ron Menezes, President and General Manager, Aqua Pharmaceuticals. "The mature products complement our existing portfolio while sarecycline could soon become one of the promising new oral therapies, which exemplifies our renewed focus on innovation." Should regulatory approvals be granted, Aqua will launch and market the approved product, which has been studied in patients with acne. Aqua Pharmaceutical's focus is on offering patients a variety of treatment options for their skin health. To that end they are exploring new areas in dermatology, including new molecules for the treatment of actinic keratosis. The transaction closed for a cash consideration of $550MM. This agreement also contemplates a possible earn-out, up to $100 MM and payable in Q1/2022, depending on business performance.

FDA clears Sebacia Microparticles for laser-based acne treatment. DermWire, Practical Dermatology. Tuesday, September 18, 2018. http://practicaldermatology.com/dermwire/2018/09/18/fda-clears-sebacia-microparticles-for-laser-based-acne-treatment/?c=&t=

Sebacia Microparticles are now FDA-cleared for use in the treatment of acne. The clearance comes on the heels of a pivotal study demonstrating the clinical safety and efficacy of the micoparticles. Sebacia, Inc. had submitted its 510(k) submission to the FDA in June 2018. Sebacia Microparticles selectively target the sebaceous glands and are indicated for use as an accessory to 1064nm lasers to facilitate photothermal heating of sebaceous glands for the treatment of mild to moderate inflammatory acne vulgaris. In the EU, Sebacia Microparticles is CE marked and sold in select markets. Results from a US pivotal, randomized, controlled, blinded trial evaluating 168 patients with mild to moderate acne using either Sebacia Microparticles with laser or laser alone show that Sebacia Microparticles treatment demonstrated a 53% median reduction in inflammatory lesion count (ILC), compared to 45% median reduction achieved by the laser treatment alone. The study achieved its primary endpoint of demonstrating non-inferiority at 12 weeks. It also achieved several secondary endpoints including 30.1% of patients treated with Sebacia Microparticles achieving a clear or almost clear IGA score (Investigator's Global Assessment of acne severity)—a significant accomplishment for an FDA-cleared acne product, the company says. All reported adverse events, regardless of study treatment, were of mild to moderate intensity. There were no severe adverse events nor were there any serious and/or unanticipated adverse events related to study treatment. Jill S. Waibel, MD, board-certified dermatologist practicing at Miami Dermatology and Laser Institute and a Sebacia clinical trial investigator, says, "The clinical results demonstrated by the US pivotal study were exceptional in showing Sebacia Microparticles' ability to provide a clinically meaningful reduction in acne requiring fewer treatments compared to laser alone. We have not

seen any truly innovative acne therapies developed for more than two decades and with this clearance, Sebacia Microparticles offers a new option for the millions of mild to moderate acne sufferers. Dermatologists are seeking new options for first-line therapies to offset the concerns of antibiotic resistance in this patient population. I expect Sebacia Microparticles to further enhance patient and physician optionality while seamlessly integrating into the AAD-recommended polytherapeutic approach to managing acne." "This FDA clearance further validates Sebacia Microparticles as an effective option for many who struggle with self-esteem and quality of life limitations caused by acne. By facilitating a more convenient use of laser systems, dermatologists now have another option when weighing trade-offs such as efficacy, side effects, antibiotic resistance and patient compliance in determining the optimum treatment protocol for their patient. With FDA clearance, Sebacia Microparticles is now commercially cleared in both the U.S. and the EU – the two largest dermatology markets in the world. We look forward to providing updates on our commercialization strategy in the coming months," says Anthony Lando, Chief Executive Officer. R. Rox Anderson, MD, Professor of dermatology at Harvard Medical School, Director of the Wellman Center for Photomedicine at Massachusetts General Hospital, and a member of Sebacia's Medical Advisory Board, comments, "Acne is a complicated skin disease that depends on having active sebaceous glands. Applying light-absorbing gold particles that are able to reach these glands, allows them to be selectively targeted with pulses of light."

New Medical News

Effect of oral isotretinoin on the nucleo-cytoplasmic distribution of FoxO1 and FoxO3 proteins in sebaceous glands of patients with acne vulgaris. Agamia NF, Hussein OM, Abdelmaksoud RE, et al. Exp Dermatol. 2018 Sep 21. doi: 10.1111/exd.13787. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30240097

Oral isotretinoin is the most effective anti-acne drug with the strongest sebum-suppressive effect caused by sebocyte apoptosis. It has been hypothesized that upregulation of nuclear FoxO transcription factors and p53 mediate isotretinoin-induced sebocyte apoptosis in vivo. It is the aim of our study to analyse the distribution of the pro-apoptotic transcription factors FoxO1 and FoxO3 in the nuclear and cytoplasmic compartments of human sebocytes in vivo before and during isotretinoin treatment of acne patients. Immunohistochemical analysis of skin biopsies with antibodies distinguishing phosphorylated and non-phosphorylated human FoxO1 and FoxO3 proteins was performed before isotretinoin treatment, six weeks after initiation of isotretinoin therapy, and in acne-free control patients not treated with isotretinoin. Our in vivo study demonstrates a significant increase in the nucleo-cytoplasmic ratio of non-phosphorylated FoxO1 and FoxO3 during isotretinoin treatment of acne patients. Translational and presented experimental evidence indicates that upregulation of nuclear FoxO1 and FoxO3 proteins is involved in isotretinoin-induced pro-apoptotic signalling in sebocytes confirming the scientific hypothesis of isotretinoin-mediated upregulation of FoxO expression.

Nanotechnological carriers for treatment of acne. Verma S, Utreja P, Kumar L. Recent Pat Antiinfect Drug Discov. 2018 Sep 18. doi: 10.2174/1574891X13666180918114349. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30227825

Background: Acne is a multifactorial skin disease associated with pilosebaceous unit and caused by bacteria Propionibacterium acnes and Acne vulgaris. Near about 95% people throughout the world suffer from acne at some point in their life span. This disease is more prominent in adults compared to neonates and prepubescent children. Conventionally it is treated with either creams or gels having large number of side effects on patients. Methods: We

searched about recent advancements in the use of nanotechnological carriers for effective treatment of acne. We focused on the use of liposomes, niosomes, microemulsions, microsponge, microspheres, and nanoparticles to improve anti-acne therapy. Results: The encapsulation of anti-acne drugs in various nanotechnological carriers improve their efficacy and reduce side effects. These carriers show controlled drug release and improved drug penetration even upto pilosebaceous unit of skin. Local tolerability of anti-acne molecules can be improved by adjusting the concentration in nanotechnological carriers. Conclusions: Nanotechnological carriers have opened a new window to design novel, effective and low dose systems for effective eradication acne disease. However, very few nanocarrier based formulations are available in market for topical use and much progress is required in this field to improve anti-acne therapy.

Comparison of novel dual mode vs conventional single pass of a 1450-nm diode laser in the treatment of acne vulgaris for Korean patients: A 20-week prospective, randomized, split-face study. Kwon HH, Choi SC, Jung JY, et al. J Cosmet Dermatol. 2018 Sep 17. doi: 10.1111/jocd.12788. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30225903

Background: Although a 1450-nm diode laser has been shown to be effective for acne, the conventional high-energy stamp-only regimen is often associated with pain and hyperpigmentation, especially for dark-skinned individuals. Aims: To evaluate whether the novel dual regimen has clinical advantages for acne treatments compared with conventional regimen in Asian patients. Patients and methods: Twenty-four Korean patients with facial acne were treated with a 1450-nm diode laser through a 20-week, randomized, split-face study. The patients were treated with three consecutive sessions at 4-week intervals. One half of the face received a dual regimen consisting of low-fluence stamping mode (5-6 J/cm2) for inflammatory acne lesions only, followed by 4-5 passes of moving mode for the full face. The other side received a single-pass treatment of conventional high-fluence stamp mode (14-15 J/cm2). Evaluations for acne, sebum secretion measurements, and safety profiles were performed. Results: At the final 12-week follow-up evaluations, the dual-mode side demonstrated better improvements in both inflammatory and noninflammatory lesion counts, acne severity assessments, and reduction in sebum secretion compared with stamp-only side. Subjective satisfaction for the improvement for acne, seborrhea, and texture correlated well with objective assessments. In addition, degrees of pain and treatment-related side effects were remarkably decreased in the novel dual mode. Conclusion: This novel dual regimen of the 1450-nm laser demonstrated improved efficacies for acne and seborrhea with satisfactory safety profiles. Therefore, this regimen would be a viable option for acne treatments either as monotherapy or as combination therapy.

Effects of dextran sulfate, 4-t-butylcyclohexanol, pongamia oil and hesperidin methyl chalcone on inflammatory and vascular responses implicated in rosacea. Hernandez-Pigeon H, Garidou L, Galliano MF, et al. Clin Cosmet Investig Dermatol. 2018 Sep 7;11:421-429. doi: 10.2147/CCID.S168621. eCollection 2018. https://www.ncbi.nlm.nih.gov/pubmed/30233225

Background: Rosacea is a chronic facial skin disorder characterized by inflammation and vascular abnormalities. The pathophysiology of rosacea involves increased activation of the capsaicin receptor, TRPV1, the vascular endothelial growth factor (VEGF) pathway, and cathelicidin LL-37, MMP-9, and KLKs. We evaluated the activity of four compounds (dextran sulfate, 4-t-butylcyclohexanol [BCH; TRP-regulin®], pongamia oil, and hesperidin methyl chalcone [HMC]) on inflammatory and vascular responses implicated in rosacea. Materials and methods: The anti-inflammatory activity of dextran sulfate was evaluated on PGE2 production after PMA stimulation of NCTC-2544 keratinocytes, and on normal human epidermal keratinocytes (NHEKs) after proinflammatory stimulation to mimic a

rosacea environment. The anti-angiogenic activity of dextran sulfate was measured by analyzing pseudotube formation in co-cultured human microvascular endothelial cells/normal human dermal fibroblasts. HMC modulation of vascular responses and IL-8 cytokine production after SP stimulation was evaluated in human skin explants. We also assessed the effect of BCH on TRPV1 activation, and the effect of combined BCH and pongamia oil on the inflammatory response of NHEKs. Results: Dextran sulfate strongly and significantly inhibited PMA-induced PGE2 production, inhibited KLK5 and MMP-9 mRNA expression, and IL-8, IL-1α and VEGF production, and displayed a highly significant inhibitory effect on VEGF-induced pseudotube formation. In SP-stimulated human skin explants, HMC significantly decreased the proportion of dilated vessels, total vessel area, and IL-8 production. BCH significantly and dose-dependently inhibited TRPV1 activation, and BCH and pongamia oil inhibited CXCL1 and CXCL6 mRNA expression and IL-8 production in NHEKs. Combined BCH/pongamia oil inhibited IL-8 production synergistically. Conclusion: These in vitro results showed that dextran sulfate, BCH, pongamia oil and HMC, possess complementary soothing and anti-redness properties, supporting their combination in Avène redness-relief cosmetic products for sensitive skin prone to redness, and for topical adjunctive rosacea treatment.

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Once-daily oral sarecycline 1.5 mg/kg/day is effective for moderate to severe acne vulgaris: Results from two identically designed, phase 3, randomized, double-blind clinical trials. Moore A, Green LJ, Bruce S, et al. J Drugs Dermatol. 2018 Sep 1;17(9):987-996. https://www.ncbi.nlm.nih.gov/pubmed/30235387

Background: Side effects may limit the use of current tetracycline-class antibiotics for acne. Objective: Evaluate the efficacy and safety of once-daily sarecycline, a novel, narrow-spectrum tetracycline-class antibiotic, in moderate to severe acne. Methods: Patients 9-45 years with moderate to severe facial acne (Investigator's Global Assessment [IGA] score ≥ 3, 20-50 inflammatory and ≤ 100 noninflammatory lesions, and ≤ 2 nodules) were randomized 1:1 to sarecycline 1.5 mg/kg/day or placebo for 12 weeks in identically designed phase 3 studies (SC1401 and SC1402). Results: In SC1401 (sarecycline n=483, placebo n=485) and SC1402 (sarecycline n=519, placebo n=515), at week 12, IGA success (≥ 2-grade improvement and score 0 [clear] or 1 [almost clear]) rates were 21.9% and 22.6% (sarecycline), respectively, versus 10.5% and 15.3% (placebo; P less than 0.0001 and P equals 0.0038). Onset of efficacy in inflammatory lesions occurred by the first visit (week 3), with mean percentage reduction in inflammatory lesions at week 12 in SC1401 and SC1402 of -51.8% and -49.9% (sarecycline), respectively, versus -35.1% and -35.4% (placebo; P less than 0.0001). Onset of efficacy for absolute reduction of noninflammatory lesion count occurred at week 6 in SC1401 (P less than 0.05) and week 9 in SC1402 (P less than 0.01). In SC1401, the most common TEAEs (in ≥ 2% of either sarecycline or placebo group) were nausea (4.6% [sarecycline]; 2.5% [placebo]), nasopharyngitis (3.1%; 1.7%), headache (2.7%; 2.7%), and vomiting (2.1%; 1.4%) and, in SC1402, nasopharyngitis (2.5%; 2.9%) and headache (2.9%; 4.9%). Most were not considered treatment-related. Vestibular (dizziness, tinnitus, vertigo) and phototoxic (sunburn, photosensitivity) TEAEs both occurred in ≤ 1% of sarecycline patients. Gastrointestinal TEAE rates for sarecycline were low. Among females, vulvovaginal candidiasis (SC1401: 1.1% [sarecycline] and 0 [placebo]; SC1402: 0.3% and 0) and mycotic infection (0.7% and 0; 1.0% and 0) rates were low. Conclusion: The narrow-spectrum antibiotic sarecycline was safe, well tolerated, and effective for moderate to severe acne, with low rates of side effects common with tetracycline antibiotics.

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Artificial intelligence for the objective evaluation of acne investigator global assessment. Melina A, Dinh NN, Tafuri B, et al. J Drugs Dermatol. 2018 Sep 1;17(9):1006-1009. https://www.ncbi.nlm.nih.gov/pubmed/?term=Artificial+Intelligence+for+the+Objective+Evaluation+of+Acne+Investigator+Global+Assessment

Introduction: The evaluation of Acne using ordinal scales reflects the clinical perception of severity but has shown low reproducibility both intra- and inter-rater. In this study, we investigated if Artificial Intelligence trained on images of Acne patients could perform acne grading with high accuracy and reliabilities superior to those of expert physicians. Methods: 479 patients with acne grading ranging from clear to severe and sampled from three ethnic groups participated in this study. Multi-polarization images of facial skin of each patient were acquired from five different angles using the visible spectrum. An Artificial Intelligence was trained using the acquired images to output automatically a measure of Acne severity in the 0-4 numerical range of the Investigator Global Assessment (IGA). Results: The Artificial Intelligence recognized the IGA of a patient with an accuracy of 0.854 and a correlation between manual and automatized evaluation of r=0.958 (P less than .001). Discussion: This is the first work where an Artificial Intelligence was able to directly classify acne patients according to an IGA ordinal scale with high accuracy, no human intervention and no need to count lesions.

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Severe nodulocystic acne not responding to isotretinoin therapy successfully treated with oral dapsone. Al-Kathiri L, Al-Najjar T. Oman Med J. 2018 Sep;33(5):433-436. doi: 10.5001/omj.2018.79. https://www.ncbi.nlm.nih.gov/pubmed/30210724

Nodulocystic acne is a severe form of acne which can result in significant damage to the skin with great impact on quality of life. Oral isotretinoin considered to be the best treatment for such cases. Although it has a high rate of success and its efficacy is well established in the treatment of nodulocystic acne, it may occasionally fail to control the disease. We report a case of a patient who presented to our skin clinic with severe facial nodulocystic acne in which treatment with isotretinoin failed to achieve disease control and caused worsening of his baseline condition. Therefore, oral dapsone was administered as an alternative treatment, and we reached a complete remission of acne lesions within six months. Oral dapsone could be an adequate and safe drug in severe acne, and it might also be a promising and hopeful alternative treatment for nodulocystic acne when isotretinoin fails.

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Topical trifarotene: a new retinoid. Balak DMW. Br J Dermatol. 2018 Aug;179(2):231-232. doi: 10.1111/bjd.16733. https://www.ncbi.nlm.nih.gov/pubmed/30141539

There has been a long-standing dermatology-driven interest in vitamin A (retinol) and its derivatives (retinoids). In 1925, Wolbach and Howe were one of the first to report that vitamin A deficiency induces abnormal epithelial keratinization in rats. Not much later, in 1933, nutritional vitamin A deficiency in humans was linked to the development of phrynoderma ('toad skin') with follicular hyperkeratosis, hyperpigmentation and xerosis cutis. These observations fueled clinical interest in vitamin A as a potential pharmacological treatment for keratinization skin diseases, but initial studies from the 1940s and early 1950s in patients with ichthyosis, pityriasis rubra pilaris and Darier disease showed that the dose levels of oral vitamin A required for sufficient therapeutic responses caused unacceptable toxicity. Aiming for an improved safety profile, chemical compounds with structural or functional similarities to vitamin A (i.e. the retinoids) were synthesized by the ground-breaking works of Bollag, among others. Two of the first synthetic

retinoids developed were all-trans-retinoic acid (ATRA, also known as tretinoin) and 13-cis-retinoic acid (better known as isotretinoin) back in 1946 and 1955, respectively. Pioneering studies by Stuettgen and Kligman et al., among others in the 1960s, established topical tretinoin as a dermatological treatment. However, further drug development was delayed by concerns for retinoids' teratogenicity potential in the wake of the thalidomide tragedy. The next breakthrough did not come until 1982 when oral isotretinoin received U.S. market approval for severe acne. Ever since, retinoids have remained a major class of dermatological treatment. Both topical and oral retinoid formulations have been in use across a wide range of inflammatory, (pre-)malignant and keratinization skin diseases – these include, among others, acne, psoriasis, cutaneous lymphoma, ichthyosis and photoageing. The increasing clinical applications of retinoids have been paralleled with intensive skin biology research, showing that the pleotropic cellular effects of retinoids are mediated by two types of nuclear receptors: the retinoic acid receptor (RAR) and the retinoid X receptor (RXR), both of which are present in three isoforms (α, β and γ). Even though more than 2000 retinoid compounds have been developed, a limited number is currently in clinical use. Three generations of retinoids are distinguished: first, the nonaromatic retinoids, including tretinoin, isotretinoin and alitretinoin; second, the mono-aromatic retinoids, which include acitretin and the no longer widely available etretinate; and third, the poly-aromatic retinoids bexarotene, tazarotene and adapalene. In this issue of the BJD, Aubert and colleagues describe preclinical pharmacological evaluations of trifarotene, a novel first-in-class fourth-generation topical retinoid. By using multiple in vitro and in vivo assays, the authors demonstrate robust and favourable metabolic and pharmacokinetic properties of trifarotene. Moreover, in multiple mouse models trifarotene exhibited superior comedolytic, anti-inflammatory and depigmenting activity compared with other topical retinoids. Gene expression profiling in skin samples of patients with acne treated with trifarotene 0.005% cream was helpful to establish further clinical relevance. As opposed to other topical retinoid agents, trifarotene is a potent and selective RAR-γ agonist and this may avoid RAR-β-mediated skin irritation. Consequently, it is hoped that this might translate to a better tolerability, as 'retinoid dermatitis' is a well-known and potential treatment-limiting side-effect of topical retinoids. In conclusion, well over 50 years since the introduction of the first topical retinoid, the class of retinoids is now expanded with a fourth-generation topical compound. Trifarotene shows favourable preliminary pharmacokinetics and pharmacodynamics supporting its continuous development. With a potential market in sight – among others, acne (high numbers), keratinization disorders (chronic need) and photo ageing (cosmetic demands) – the arrival of a topical retinoid with an improved tolerability profile is much awaited.

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Complement activation in hidradenitis suppurativa: a new pathway of pathogenesis? Kanni T, Zenker O, Habel M, et al. Br J Dermatol. 2018 Aug;179(2):413-419. doi: 10.1111/bjd.16428. Epub 2018 May 10. https://www.ncbi.nlm.nih.gov/pubmed/?term=Complement+activation+in+HS%3A+a+new+pathway+of+pathogenesis

Background: Despite the heavy purulence observed in hidradenitis suppurativa (HS), the kinetics of complement anaphylatoxins acting to prime chemotaxis of neutrophils has not been studied. Objectives: To explore complement activation in HS. Methods: Circulating concentrations of complement factor C5a, as well as of membrane attack complex C5b-9, were determined in the plasma of 54 treatment-naïve patients and of 14 healthy controls, as well as in the pus of seven patients. Results were correlated with Hurley stage and International Hidradenitis Suppurativa Severity Score. Peripheral blood mononuclear cells (PBMCs) were isolated from seven patients with Hurley stage III HS and seven healthy volunteers and stimulated in the presence of 25% of plasma for the production of tumour necrosis factor-α (TNF-α). Results: Circulating C5a and C5b-9 were significantly greater in patient than in control

plasma; however, concentrations in pus were very low. Circulating C5a levels exceeding 28 ng mL-1 were associated with a specificity > 90% with the occurrence of HS. Circulating levels of C5a and C5b-9 were greater in patients with more severe HS. PBMCs of patients produced high concentrations of TNF-α only when growth medium was enriched with patient plasma; this was reversed with the addition of the C5a blocker IFX-1. Conclusions: Systemic complement activation occurs in HS and may be used as a surrogate biomarker of HS. C5a stimulates overproduction of TNF-α and may be a future therapeutic target.

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Clinical Reviews

Global epidemiology and clinical spectrum of rosacea, highlighting skin of color: Review and clinical practice experience. Alexis AF, Callender VD, Baldwin HE, et al. J Am Acad Dermatol. 2018 Sep 18. pii: S0190-9622(18)32576-3. doi: 10.1016/j.jaad.2018.08.049. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30240779

Among individuals with skin of color, rosacea has been reported less frequently than in those with white skin, but it is not a rare disease. In fact, rosacea may be underreported and underdiagnosed in populations with skin of color because of the difficulty of discerning erythema and telangiectasia in dark skin, as well as underestimation of the susceptibility of more highly pigmented skin to dermatologic conditions like rosacea whose triggers include sun exposure. Many people with skin of color who have rosacea may experience delayed diagnosis leading to inappropriate or inadequate treatment, greater morbidity, and uncontrolled, progressive disease with disfiguring manifestations, including phymatous rosacea. This paper reviews the epidemiology of rosacea in skin of color and highlights variations in the clinical presentation of rosacea across the diverse spectrum of patient populations affected. It presents strategies to aid in the timely diagnosis and effective treatment of rosacea in patients with skin of color, with an aim of promoting increased awareness of rosacea in these patients and reducing disparities in the management of their disease.

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Noninvasive atrophic acne scar treatment in Asians with a 755-nm picosecond laser using a diffractive optic lens-a retrospective photographic review. Huang CH, Chern E, Peng JH, Hsien-Li Peng P. Dermatol Surg. 2018 Sep 18. doi: 10.1097/DSS.0000000000001669. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30234649

Background: The diffractive lens of the picosecond laser is relatively new, and there are few reports on its efficacy in treating atrophic acne scars, especially in Asian populations. Objective: Evaluating the efficacy of diffractive lens 755-nm picosecond laser for atrophic acne scar treatment in Asians. Patients and methods: Forty-two patients who were treated for facial atrophic acne scars at a private dermatological clinic were enrolled in this retrospective analysis. Mean session count was 4.28. Before and after photographs were assessed by 2 blinded dermatologists, who rated the amount of overall skin quality improvement on a 5-point scale. Results: All patients experienced improvements in scar texture and overall skin quality after 2 to 6 sessions, with scores of +1.4, 1.45, 1.7, 1.33, 2.3, and 1.66 points after 2, 3, 4, 5, 6, and >6 treatments, respectively. There were no obvious adverse effects after treatment. The postinflammatory hyperpigmentation (PIH) risk was 4.7% (2 of 42, both spontaneously resolved). Conclusion: The

755-nm diffractive lens picosecond laser showed good efficacy and low PIH rates when treating atrophic acne scars in darker skin-type patients. In addition to treatment results, additional improvements in overall skin quality and pigmentation make the picosecond laser an effective and desirable treatment option for Asians.

Procedural management of rhinophyma: A comprehensive review. Krausz AE, Goldberg DJ, Ciocon DH, Tinklepaugh AJ. J Cosmet Dermatol. 2018 Sep 17. doi: 10.1111/jocd.12770. [Epub ahead of print] https://www.ncbi.nlm.nih.gov/pubmed/30225926

Background: Rhinophyma is a cosmetically deforming disease characterized by nodular overgrowth of the lower 2/3 of the nose and is considered the end stage of acne rosacea. AIMS: Review the spectrum of procedural techniques for treatment of rhinophyma with a focus on the advantages and disadvantages of each modality. Methods: A comprehensive literature search was conducted using the search terms "rhinophyma," "treatment," and "surgery" in PubMed. Case reports, case series, and small retrospective trials using procedural techniques for management of rhinophyma were included for review. Animal studies, non-English articles, and reports of medical treatment of rhinophyma were excluded. Results: There are currently no prospective, randomized controlled studies evaluating procedural management of rhinophyma. The most commonly employed treatments include scalpel excision, resection with heated knives, dermabrasion, electrosurgery and lasers, specifically carbon dioxide (CO2) and erbium:yttrium-aluminum-garnet (Er:YAG). The main complication associated with complete excision of rhinophymatous tissue is excessive scarring. To correct for this adverse effect, partial or tangential excision with preservation of underlying adnexal structures is now the accepted technique, irrespective of the chosen modality. Conclusion: There is no accepted gold standard for management of rhinophyma, and each modality succeeds in maintaining hemostasis, reducing scarring and achieving satisfactory cosmesis to different degrees. There is a conflicting data on the theoretical risk of recurrence with partial excision due to incomplete removal of tissue. Further studies evaluating this risk and alternate methods of prevention are required.

Incidence and prevalence of rosacea: a systematic review and meta-analysis. Gether L, Overgaard LK, Egeberg A, Thyssen JP. Br J Dermatol. 2018 Aug;179(2):282-289. doi: 10.1111/bjd.16481. https://www.ncbi.nlm.nih.gov/pubmed/29478264

Background: The exact prevalence and incidence of rosacea remain unknown, although it is a common condition associated with severe noncutaneous diseases. Objectives: To perform a systematic review of the published literature to examine the global incidence and prevalence of rosacea. Methods: A systematic review of population-based and dermatological outpatient studies reporting the incidence and/or prevalence of rosacea was performed using three electronic medical databases: PubMed, Embase and Web of Science. Data were extracted and a proportion meta-analysis was performed to obtain pooled proportions. Results: In total 32 studies were included examining a total of 41 populations with 26 519 836 individuals. Twenty-two populations were from Europe, three from Africa, four from Asia, nine from North America and three from South America. The pooled proportion of individuals with rosacea was 5·46% [95% confidence interval (CI) 4·91-6·04] in the general population and 2·39% (95% CI 1·56-3·39) among dermatological outpatients. Self-reported rosacea gave higher prevalence estimates than rosacea diagnosed by clinical examination, suggesting a low specificity of questionnaires based on symptoms. Rosacea affected both women (5·41%, 95% CI 3·85-7·23) and men (3·90%, 95% CI 3·04-4·87), and mostly those aged 45-60 years. Conclusions: We estimated the global prevalence of rosacea based on published data and found that 5·46% of the adult population is affected. However, the prevalence of rosacea depended on the diagnostic

method, with higher estimates in questionnaire studies of rosacea symptoms and lower estimates in health registries with International Classification of Diseases codes.

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New pathways to explore in hidradenitis suppurativa. Jemec GBE. Br J Dermatol. 2018 Aug;179(2):251-252. doi: 10.1111/bjd.16828. https://www.ncbi.nlm.nih.gov/pubmed/?term=New+pathways+to+explore+in+hidradenitis+suppurativa

We have only begun to scratch the surface in our search for the pathogenesis and aetiology of hidradenitis suppurativa (HS). In this issue of the BJD, Kanni et al. report the findings of their study of systemic complement activation in HS.1 It is a new insightful approach to an aspect of HS that has never been studied before, although the complement component C5a is a strong chemoattractant able to call up both the lymphocytes and neutrophils so abundantly present in HS lesions. The authors compare circulating levels of two elements of the complement cascade, C5a and membrane attack complex C5b-9, in patients with HS with active disease and healthy controls. Somewhat surprisingly they find both elevated in HS, correlated to disease severity as indicated by Hurley stage score and International Hidradenitis Suppurativa Severity score.4, 5 However, the correlations differ, with levels being higher in milder, predominantly inflammatory Hurley stage I disease, and C5b-9 higher in more advanced disease. This suggests the potential for a marker of disease severity. This is further supported by identification of a diagnostic cut-off point for circulating C5a levels. Previous papers have suggested systemic biomarkers such as interleukin (IL)-2R are suitable for disease severity assessments in HS without coming into widespread use.6 Generally available markers such as C-reactive protein may be occasionally helpful but are rarely used in routine assessments of disease severity, which relies more on clinimetrics and patient-reported outcomes.7 However, the authors found no correlation between circulating levels of C5a and flares.1 This obviously necessitates several additional studies, including dynamic studies allowing assessment of the responsiveness of circulating C5a to various treatments, including antibiotics and surgery. Hitherto, studies of the pathogenesis have been centered on the cytokines IL-1, tumor necrosis factor, IL-17 and various antimicrobial peptides.8 The finding that complement may be involved as a bridge between the innate and acquired immune systems is therefore of great interest, in particular in view of the hypothesis that HS may be the result of dysbiosis and a subsequent inappropriate immune response to changes in the follicular microbiota.9-11 Selective blockade of C5a activity may therefore prove particularly useful in the management of HS, as it allows simultaneous targeting of inflammatory mechanisms while at the same time allowing for a continued antibacterial effect through the membrane attack complex C5b-9. Currently one such trial is registered in ClinicalTrials.gov. One can hardly wait to see the results.

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Elucidating the role of Demodex folliculorum in the pathogenesis of rosacea: exciting first steps. Forton FMN. Br J Dermatol. 2018 Aug;179(2):252-253. doi: 10.1111/bjd.16792. Epub 2018 Jul 19. https://www.ncbi.nlm.nih.gov/pubmed/?term=Elucidating+the+role+of+Demodex+folliculorum+in+the+pathogenesis+of+rosacea%3A+exciting+first+steps

The role of Demodex mites in rosacea remains controversial, largely because it is impossible to establish the pathogenicity of Demodex using the Koch postulates. Indeed, as an obligate parasite, Demodex cannot be grown in vitro. And even if this were possible, the massive experimental inoculation needed to induce rosacea would be difficult to achieve because Demodex already parasitizes healthy skin. Moreover, very high densities of the mite can be

present without any significant inflammation (in pityriasis folliculorum). As a result of these challenges, the potential role of Demodex in rosacea has only been explored through observational studies. However, in 2015, Lacey et al. succeeded in circumventing the problem of cultivation by developing a method by which Demodex mites could be collected and kept viable ex vivo: the modified standardized skin surface biopsy. Using this technique, the same group of investigators conducted an experimental study to explore the impact of Demodex on human cells in vitro. The results of this exciting study are reported in this issue of the British Journal of Dermatology. Lacey et al. show that live Demodex mites co-cultured with human sebocytes downregulate the Toll-like receptor 2 (TLR2) immune response when present in small numbers, but when increased numbers of Demodex mites are present, a proinflammatory response is activated. The authors thus suggest that, in low numbers in normal skin, Demodex mites may downregulate the host immune TLR signaling pathway to facilitate their survival, whereas increased numbers of Demodex mites may trigger a host immune reaction by activation of the TLR2 pathway, leading to the inflammatory skin changes typical of rosacea. These results thus confirm the hypothesis generated by the observational data, notably that Demodex mites can both suppress and enhance the host immune response. Interestingly, although not specifically examined in this study, the initial immunosuppressive action of the parasite may explain why, in pityriasis folliculorum, the most frequent demodicosis and, in my opinion, the precursor of rosacea, there is almost no inflammatory reaction, despite the presence of numerous mites. Indeed, the skin Demodex density in pityriasis folliculorum is similar to that observed in papulopustular rosacea: using the sum of Demodex densities obtained from two consecutive standardized skin surface biopsies performed at the same site, we observed a mean total Demodex density (Dd) of 285 ± 12 Dd cm^{-2} among 445 patients with pityriasis folliculorum (unpublished data) and 284 ± 17 Dd cm^{-2} among 254 patients with rosacea. The interesting results of the study by Lacey et al. raise many questions. For example, what triggers the switch from the initial immunosuppressive effect to one of immunostimulation in vivo? Does the presence of excessive mites lead some to penetrate the dermis and stimulate the immune response? What are the effects of Demodex folliculorum on other cell types, such as keratinocytes, which are the main cells in contact with the mites inside the follicles, or immune cells present in the dermis? Staphylococcus epidermidis, for example, has anti-inflammatory actions on keratinocytes, but proinflammatory effects on immune cells. These first experimental results thus pave the way for more research on the role of the Demodex mite in rosacea and demodicosis, which may ultimately lead to better patient management.

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Successful therapy of ocular rosacea with topical ivermectin. Schaller M, Pietschke K. Br J Dermatol. 2018 Aug;179(2):520-521. doi: 10.1111/bjd.16534. https://www.ncbi.nlm.nih.gov/pubmed/29527668

Approximately 75% of patients with cutaneous rosacea also have ocular involvement with blepharitis and meibomian gland dysfunction often presented as chalazia. Clinical symptoms are foreign body sensation, light sensitivity, burning and tearing. The main underlying pathophysiological mechanisms are an inflammatory immune response and an increased density of Demodex mites. In addition, other different triggers may contribute to the pathogenesis of rosacea, more specifically gastrointestinal disorders such as Helicobacter pylori infection and small intestinal bacterial overgrowth. Substantial upregulation in proinflammatory cytokines involved in vasoregulation, along with enlarged, dilated vessels in the upper dermis promote leucocyte infiltration and postcapillary oedema, which can manifest itself even in the eyelids (blepharitis). There are several theories linking the dermatological and ocular manifestations of rosacea. Ocular rosacea should be treated at an early stage to avoid serious complications, such as corneal infiltration, neovascularization, ulcers and scarring. There is no approved treatment with the indication but guidelines suggest an off-label approach consisting of systemic doxycycline 40–100 mg daily for 6–12 months combined with long-term eyelid margin hygiene and preservative-free, lipid-containing eye drops. Additionally, steroid-, antibiotic- or

ciclosporin A-containing eye drops have been proposed without any level of evidence, or ciclosporin ophthalmic emulsion for ocular rosacea, with low quality evidence. With further insight into the pathological changes in patients with rosacea, new therapeutic approaches were developed. A dual anti-inflammatory and antiparasitic effect of topical ivermectin cream (Soolantra®, Galderma Laboratories, Fort Worth, TX, U.S.A.) in papulopustular rosacea has recently been demonstrated. A highly significant reduction of Demodex mites and inflammatory genes, in addition to a decrease in protein expression, was observed within 6 weeks of treatment. As both cutaneous and ocular rosacea are associated with elevated counts of Demodex mites and thereby frequently occur concurrently, we sought to evaluate the effect of topical 1% ivermectin in a 50-year-old man with papulopustular rosacea and blepharoconjunctivitis without corneal involvement. Ivermectin 1% cream was used once daily in the evening. The patient was instructed to apply one small pea-sized (approximately 1 g) amount of cream on the forehead, chin, nose and cheeks (i.e. a total of five pea-sized amounts). The product was to be spread in a thin film over the entire face. In addition, he was asked to apply one half pea-sized amount on each closed eyelid and next to the lid edges while carefully avoiding the eyes. An assessment score was used to describe the severity of cutaneous and ocular rosacea. During our study the cutaneous Investigator's Global Assessment (IGA) score improved from 4 (severe) prior to therapy to 2 (moderate) after 14 weeks, while the ocular IGA score decreased from 2 (mild–moderate blepharoconjunctivitis) (Fig. 1a) to 1 (mild blepharitis) (Fig. 1b) during the same time period. At week 35, the skin and ocular IGA were both completely clear (IGA 0) (Fig. 1c) with no visible inflammatory lesions and no symptoms or side-effects described by the patient. Follow-up showed no relapse 20 months after the end of treatment. The Demodex mite count using standardized skin-surface biopsies prior to therapy was 21 mites per cm2. After 14 and 35 weeks of monotherapy with 1% ivermectin daily no mites could be detected. On immunohistochemical staining, an increase in the intensity of epithelial interleukin (IL)-8 and Toll-like receptor (TLR)2 expression was observed at week 14, while LL-37 expression decreased. At week 35, significant decreases in the intensity of LL37, IL-8 and TLR2 were detected (not shown). No side-effects were reported. This case report suggests that the dual anti-inflammatory and antiparasitic effects of topical ivermectin improve the ocular manifestations of rosacea. Topical ivermectin 1% cream may therefore have the potential to fill the current gap of an effective and well-tolerated therapy for ocular symptoms of rosacea to be used at an early stage. In our opinion, this offers a well-tolerated alternative to the current treatment routine of using long-term topical or high-dose systemic antibiotics to treat ocular rosacea. Large, randomized, placebo-controlled studies are now required to confirm these results.

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Isotretinoin therapy: A retrospective cohort analysis of completion rates and factors associated with nonadherence. Kazemi T, Sachsman SM, Wilhalme HM, Goh C. J Am Acad Dermatol. 2018 Sep;79(3):571-573. doi: 10.1016/j.jaad.2018.02.032. https://www.ncbi.nlm.nih.gov/pubmed/?term=Isotretinoin+therapy%3A+A+retrospective+cohort+analysis+of+completion+rates+and+factors+associated+with+nonadherence

Acne medication nonadherence remains a primary cause of treatment failure and is a major challenge dermatologists encounter in treating acne patients. Adherence to isotretinoin therapy is particularly important, given its cumulative dose-dependent mechanism for inducing remission, yet there is limited literature on this topic. Reported adherence rates range 54%-96% for the first course of isotretinoin therapy. Our aim was to examine isotretinoin treatment compliance and explore common reasons for nonadherence. We performed a retrospective chart review of 544 patients prescribed isotretinoin at the University of California Los Angeles Dermatology Clinic during 2010-2015. Institutional Review Board approval was obtained. Exclusion criteria included incomplete medical records or access

restriction, chronic low-dose or alternate therapy, and non–acne diagnosis. Adherence was defined as reaching a cumulative dose of 120-150 mg/kg or completion of therapy as determined by the treating clinician. On the basis of this definition, patients were divided into 1 of 6 major categories: completed, likely completed, lost to follow-up (LTFU), patient-stopped, physician-stopped, or never started. Overall, 458 patients (50.4% female) were included in this analysis. Of these, 53.9% completed therapy, 18.3% likely completed therapy, 15.5% were lost to follow-up, 5.9% stopped due to physician orders, 4.2% self-discontinued, and 3.1% never started therapy. After excluding the never started and physician-stopped groups from the total study population, we found an overall adherence rate of 78.6%, which counted the completed and likely completed groups as adherent and the LTFU and patient-stopped groups as nonadherent. When comparing adherent versus nonadherent patients, we found no statistically significant difference in age, sex, or previous isotretinoin course status. However, when comparing LTFU versus adherent patients, we found that significantly more LTFU patients were male and had ≥1 previous course of isotretinoin (P = .03 and P = .04, respectively). Most nonadherent patients did not complete therapy simply by failing to return to the clinic for follow-up appointments; over a third of these patients failed to complete the first follow-up appointment after initiating therapy. Clinical and logistical factors contributed to medication nonadherence. The most commonly cited reason for both physician and self-discontinuation was mood changes. Other reasons for self-discontinuation included travel/moving and unwillingness to reduce alcohol intake. The most commonly documented reason for not initiating therapy was iPLEDGE difficulties. Of the 133 female patients who completed therapy, only 61.7% had a documented 30-day post-therapy pregnancy test. Age and prior treatment status did not have a statistically significant effect on obtaining last pregnancy test. The strengths of this study are the large number of patients prescribed only isotretinoin therapy and characterization and evaluation of different subgroups of nonadherent patients. The study's retrospective nature limited our ability to capture the reason patients were lost to follow-up. On the basis of our findings, we suggest that improved patient screening and education for patients who might be unable to comply with iPLEDGE requirements and close attention to increasing first-month follow-up rates (via telephone and message reminders) might be critical to increasing successful initiation and completion of isotretinoin therapy. Future studies could evaluate adherence rates after implementation of these interventions.

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Patient Counseling/Communication

Female type of adult acne: Physiological and psychological considerations and management. Dreno B, Bagatin E, Blume-Peytavi U, et al. J Dtsch Dermatol Ges. 2018 Sep 24. doi: 10.1111/ddg.13664 [Epub ahead of print.] https://www.ncbi.nlm.nih.gov/pubmed/?term=Female+type+of+adult+acne%3A+Physiological+and+psychological+considerations

Today we see more cases of acne after adolescence, with a greater prevalence in females than males. Adult female acne has a distinct clinical presentation and is associated with a number of specific pathophysiological features and gender-specific triggers. The psychological impact of acne is generally significant and largely underestimated; stress during professional and private life, anxiety and sleep quality, in particular, have a reciprocal relationship with disease susceptibility and severity. It is essential to compare with males. Acne in females often causes greater distress in adults than in adolescents. The impact of disease may therefore be greater for female patients, triggering higher levels of psychosocial anguish and increasing the likelihood of sequelae such as skin picking and the risks of cutaneous superinfection, scarring and PIH and acne recurrence. The management of adult female acne should encompass not just medical treatment of the symptoms, but also a comprehensive, holistic approach to the patient

as a whole, her individual lifestyle factors and the impact of acne on her quality of life. Future management of this disease should aim to improve patient adherence to therapy and to develop validated outcomes of treatment regarding overall skin appearance and quality of life.

Make patient-centered work in practice. Whitney J. Palmer. Dermatology Times. August 8, 2018. Volume: 39Issue: No. 8. http://www.dermatologytimes.com/patient-relations/make-patient-centered-work-practice

For Elizabeth Kiracofe, M.D., the patient-centered care focus started with retinoid cream. “When I opened my practice and started seeing patients, many of them said they had stopped using topical retinoids because they were allergic,” she said. “I discovered they really meant they were developing retinoid dermatitis from the medicine, and they needed more guidance on how to use the creams.” That’s when the board-certified dermatologist with Illinois Dermatology Institute in Chicago began designing her practice around giving patients not only the best dermatology care possible, specifically with acne, but also providing education about their conditions and the medications used for management. Ensuring your patients know what you’re doing and why is critical to protocol adherence regardless of what condition you’re treating, she said. “If you don’t give them an understanding of why the program you’ve created together makes sense specifically for them, they’re not going to do it,” Dr. Kiracofe said. “The main trouble happens when patients receive plans that don’t match their lifestyle. They just can’t do it.” But, while this patient-centered focus works well for the individuals you treat, what does it mean for your practice? According to Dr. Kiracofe, it’s changed the way she structures appointments and how she asks her staff to operate. Planning the office visit: At the outset, Dr. Kiracofe said, she plans for longer first-time appointments. Most follow-up visits can last approximately 5-to-7 minutes, but initial consultations now run nearly 20 minutes. That time is devoted to learning as much about the patient’s condition as possible, as well as what he or she is doing to handle it. For these appointments, she said she asks new patients to bring in all products they’re using — face washes, creams, and products from any skin care line. It’s an opportunity to assess their tactics and involve them in designing a new treatment plan. “Your patients are obviously trying to fix the problem, but they’re in your office because they haven’t been able to,” she said. “Salvage what you can from what they’ve been doing, and augment it.” Additionally, if possible, Dr. Kiracofe recommended creating a checklist to set your patients up for success. For example, to avoid any confusion, she gives patients a handout filled in with treatment details, specifically what medications are to be used in the morning and at night. “Basically, I fill in what I want them to do when and highlight specific education information that is pertinent to each individual,” she said. She also has pre-packaged samples of medication she prescribes frequently available so patients leave the office armed with medicine needed to immediately begin treating their condition. Training staff: Because a patient-centered focus takes more time, it’s unlikely you’ll be able to handle everything yourself. Instead, Dr. Kiracofe recommended training your staff to educate patients on how best to use their medications, especially if it’s a new prescription. Once your portion of the patient visit is complete, have a medical assistant show the patient what amount of medicine to use and how to apply it. “Nine times out of ten, a patient will want to put on too much or too little medication,” she said. “Watch them. Show them what to do. That way, they understand when they get home how much medication they’ll really need to use.” Giving a medical assistant this responsibility can help teach your patients how to effectively manage their conditions and free you up to stay on schedule with your patient rotation. With their help other patients won’t wait too long for their time with you. Your staff can also improve the electronic heath record by carefully entering your notes into the system. Highlighting any changes in medication or regimen specifics can help you keep track of how a patient’s condition changes over time and monitor whether he or she has followed the prescribed protocol properly. “It creates 60 seconds of work for medical assistants to enter data, but it makes it so much easier when the patient returns,” she said. “There’s no question of what the patient and you decided. You can see what was altered at a glance.” Digital tools: But, as important as the personal touch is in patient-centered care, creating a workflow and

practice management system in today's healthcare environment requires more arrows in the quiver. Scottish company StormID is taking a more technological approach by launching digital tools that could make it easier for patients to contact their dermatologists, according to Paul McGinness, StormID Director. Long appointment wait times could become less common. Through its Virtual Consultation and Primary Care Triage App, the company hopes to limit how frequently patients return for face-to-face visits, as well as help general practitioners determine the best options for patients with skin conditions. As part of a virtual consultation, patients will likely be able to side-step an in-person appointment by sharing personal health data via a secure connection with their dermatologist. A Patient Mobile App feature will also allow for picture uploads of skin conditions. The goal is limiting wait time for patients to contact their provider, freeing up office visits for new or more complicated patients. A second app — the Primary Care Triage App — is set to offer clinical decision support to primary care providers who require assistance in determining the next steps for treating patients with emergent skin conditions. By uploading images and submitting them to an artificial intelligence database, general practitioners could retrieve a likely diagnosis and guidance for how to best advise patients. Whether you opt for the personal approach, digital approach, or combination of the two, Dr. Kiracofe said, the patient-centered care focus can be valuable. "I get a lot more out of my patient visits. They're more engaged in their care, and they're more excited because they start doing better," she said. "They're more up front with me about what they're doing, and I feel like I have real time with them."

Developing sensitivity to the psychological burden associated with skin conditions: a call for training. Montgomery K, Thompson AR. Br J Dermatol. 2018 Aug;179(2):237-238. doi: 10.1111/bjd.16817. https://www.ncbi.nlm.nih.gov/pubmed/?term=Developing+sensitivity+to+the+psychological+burden+associated+with+skin+conditions%3A+a+call+for+training

Considering the range of physical, social and emotional consequences that can arise as a result of living with a skin condition it is unsurprising that dermatology patients report higher levels of anxiety and depression than the general population. With the objective severity of skin conditions not providing an accurate picture of psychological distress, and psychological morbidity being strongly associated with poorer quality of life, it is disappointing that access to psychological treatment remains limited.3 While efforts have been made to increase access to psychological therapies there is a critical task that needs to take place within the dermatology clinics before patients can begin to consider the options of support, namely, the identification of psychological distress. While interest in 'psychodermatology' has grown exponentially in recent years, studies have shown that despite a significant number of dermatology patients experiencing psychological distress, this is not identified in routine clinical practice. Indeed, in the current issue of the BJD Dalgard et al. present the findings of a cross-sectional multicentre European study which highlights that dermatologists in Europe significantly underestimate levels of anxiety and depression. An analysis of 3635 consultations found that the agreement between patients and dermatologists was poor to fair, with dermatologists failing to identify depression and/or anxiety in over half their patients (56% depression and 64·4% anxiety). The underestimation of depression and anxiety was particularly evident in patients with chronic conditions (e.g. hand eczema and psoriasis). Dalgard et al. conclude that further training for dermatologists is needed to increase the likelihood that patient distress will be identified and treated. These findings are sadly not new, and lend weight to an earlier study of patients with psoriasis, in which the level of agreement between patient-reported and clinician-reported anxiety and depression was low (kappa statistic 0·24 and 0·26, respectively). In addition, when distress was actually identified in patients with psoriasis they were rarely offered appropriate psychological treatment. Further, a number of qualitative studies have indicated that some patients report that distress and stigma associated with their skin condition is not acknowledged by clinicians. On a positive note, good concordance between patients and clinicians has been reported on quality of life measures in some studies; however, this concordance is related to functional

impact rather than affective distress, which clinicians are seemingly less familiar with and on occasion may consider as outside their remit. As outlined by Dalgard et al. in this current issue of the BJD, the recognition of psychological distress is crucial given the influence of mood on the course of the skin condition and adherence to treatment. One potentially useful strategy to assist clinicians in identifying psychological distress is to use brief psychological screening tools in routine clinical practice. Psychological screening tools (e.g. the Patient Health Questionnaire 99 and the Generalized Anxiety Disorder Questionnaire 710) can assist dermatologists in identifying common mental health problems (e.g. anxiety and depression). Screening tools provide an opportunity for dermatologists to begin a conversation with the patient about how they are feeling, and, if used appropriately, can assist clinicians in acknowledging patient distress. In addition, psychometric measures of affective distress can not only act as a valuable tool in indicating levels of distress but also form part of the assessment of risk. There is now sufficient evidence to suggest that improving mood can improve health outcomes for dermatology patients, and this forms an additional rationale for the routine assessment of distress to be included within dermatology consultations. Training on brief psychological assessment and management of risk may provide reassurance and encouragement to dermatologists; however, it is no small ask for dermatologists to make time within demanding and busy schedules for training. However, despite these legitimate barriers it is crucial that dermatologists do not miss out on an opportunity to support patients by identifying distress. Simply asking patients about the emotional impact of their skin condition can be hugely valued by and beneficial to patients. The growing field of psychodermatology offers an opportunity to support dermatologists with the necessary training and development opportunities to enhance the holistic care of dermatology patients.

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