

Abstract N°: 20**Serological extracellular matrix tissue biomarkers are associated with disease severity and activity in patients with hidradenitis suppurativa**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease characterized by recurrent nodules, abscesses, tunnels and scarring in the inverse regions. The skin architecture and function depend on the composition of the extracellular matrix (ECM). The ECM of the skin can be divided into three layers; epidermal ECM, epidermal basement membrane (EBM) and the papillary/reticular ECM. Patients with severe HS have extensive remodeling of all three layers of the ECM, since it is manifested through both epidermis and dermis.

The objective of this study was to investigate the association between serological ECM biomarkers and disease severity and activity in patients with HS.

Materials & Methods:

In serum samples from 430 patients with HS (mean \pm SD age 39.7 ± 14.3 , 67.4% female), remodeling of the EBM was quantified using a serological catabolic biomarker quantifying type IV collagen degradation (C4M), while remodeling of papillary/reticular ECM was quantified by type III and XI collagen (C3M and PRO-C11, respectively), and degradation of biglycan and elastin (BGM and ELA-HNE, respectively). Statistically significant differences between disease severity (Hurley stages) were calculated by ANCOVA, corrected for age and sex, and correlations were performed to investigate the association to Hidradenitis Suppurativa Score (HSS) and International Hidradenitis Suppurativa Severity Score System (IHS4) to investigate disease activity. Data were log transformed to obtain normality.

Results:

The biomarker C4M, measuring EBM degradation, showed increasing levels with Hurley Stages (I vs. II: $p=0.003$, I vs. III: $p<0.001$, and II vs. III: $p=0.035$, Figure 1), and was significantly correlated to disease activity (HSS: $r=0.338$, $p<0.0001$ and IHS4: $r=0.262$, $p<0.0001$). For biomarkers measuring remodeling of the papillary/reticular ECM, patients with Hurley stage III had significantly elevated levels of C3M, BGM and PRO-C11, compared to Hurley stage I and II ($p<0.01$ for all comparisons, Figure 1). All three biomarkers were additionally associated to disease activity (HSS: C3M: $r=0.360$, $p<0.0001$, BGM: $r=0.319$, $p<0.0001$, PRO-C11: $r=0.263$, $p<0.0001$; and IHS4: C3M: $r=0.264$, $p<0.0001$, BGM: $r=0.287$, $p<0.0001$, PRO-C11: $r=0.230$, $p<0.0001$). ELA-HNE, measuring elastin degradation, were not statistically significantly associated to HS severity or activity.

Conclusion:

We identified potential biomarkers quantifying ECM remodeling of the different layers of the skin, which were associated with disease severity and activity in adult patients with HS. Further investigations should elucidate whether the biomarkers can be used as tools in patient stratification including evaluation of treatment response in clinical studies.

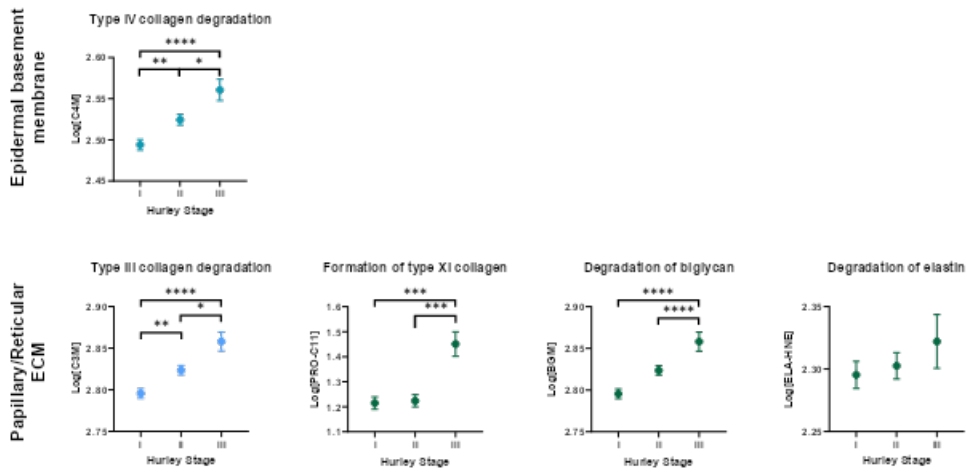


Figure 1. Biomarker levels of the epidermal basement membrane biomarkers measuring degradation of type VI collagen (C4M), and the papillary/reticular ECM biomarkers, measuring type III (C3M) and XI (PRO-C11) collagen, biglycan (BGM) and elastin (ELA-HNE). Data are log-transformed and statistical differences are calculated by analysis of covariance (ANCOVA), corrected for age and sex. Data are shown with mean \pm SEM.



Abstract N°: 55**The angiotensin-TIE2 receptor tyrosine kinase pathway is a biological marker of homeostasis in rosacea**

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The angiotensin-TIE2 receptor tyrosine kinase pathway is a biological marker of homeostasis in rosacea

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Introduction & Objectives:

Besides inflammation (LL-37), and Demodex density (Dd) there are no biological markers allowing to monitor** homeostasis in rosacea prone skin. In particular, the vascular component, intrinsic to the disease, has been focused on VEGF, with no practical use. We now have explored the “gatekeeper of vascular quiescence”: the angiotensin-TIE2 receptor tyrosine kinase pathway.

Materials & Methods:

Patients with rosacea are followed for several years in the registry “homeostasis Homeostasis markers in chronic facial dermatosis” (HCFD Swissethics CCER 2021-02174), an observational, real life cohort through regular visits with clinical markers of homeostasis- loss (IGA, ET/ECA and Papulo Pustular scoring) , and Standardized Skin Surface Biopsy (SSSB) with cyanoacrylate for Dd measure and proteins extraction. Patients are treated according to current guidelines-recommended prescription drugs. Permanent numeric follow-up insures high patients compliance. Proteins extracted from *sequential*/SSSBs (taken at different prospective time points in the same patient) were analysed for LL-37, Tie2TIE2, Ang1 ANGPT1 & Ang2 ANGPT2 expressions by immunoblotting, and data were correlated to clinical status markers.

Results:

A total of 192 SSSB were analysed for LL-37, Tie2 TIE2,& PhTie2phospho-TIE2, Ang1 ANGPT1 & Ang2 ANGPT2 expression. All were detectable in protein extracts, but at variable levels, according to clinical status; duplicates done the same day in some patients indicated the degree of reproducibility. The expression of LL-37 marker was, as expected, higher in periods of high clinical ET/PP scores & Demodex density. Interestingly, a very similar trend was observed for Tie2TIE2; its agonist ligand Ang1 ANGPT1 and antagonist/ partial-agonist Ang2 ANGPT2 showed as expected, distinct expression profiles.

Conclusion:

These data indicate that the Angiotensin-TIE2 receptor tyrosine kinase pathway, the “gatekeeper of vascular quiescence”, is accessible for monitoring in human rosacea prone skin, and has been overlooked so far (no link in PubMed). Current data indicate it should be a marker of homeostasis, as well as a potential target for intervention.



Abstract N°: 91**The patient journey differs between People from some Racial/Ethnic Groups and Caucasians with hidradenitis suppurativa: United States and Europe**

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Introduction & Objectives: Evidence suggests People from some Racial/Ethnic Groups (PREG) experience disparities in access to care. For patients with hidradenitis suppurativa (HS), disparities manifest as delayed diagnosis and treatment, which result in a more burdensome and costly disease for patients, and a greater burden on healthcare systems.¹ This study aimed to assess group differences in the HS patient journey between PREG and Caucasian patients.

Materials & Methods: Data were drawn from the Adelphi HS Disease Specific Programme™, a point-in-time survey of dermatologists and their HS patients in the United States (US), France, Germany, Italy, Spain and the United Kingdom (UK) from November 2020 – April 2021. Dermatologists completed patient record forms (PRFs), including demographic and clinical characteristic information, for 5-7 consecutively consulting HS patients. Patients were invited to voluntarily complete a questionnaire (PSC) detailing symptom burden of disease and quality of life impact using the Work Productivity and Activity Impairment (WPAI) and EQ-5D-5L tools. No PSCs were collected in the UK. Numerical outcomes were compared using t-tests, reported as mean [standard deviation]. Categorical outcomes were compared using Fisher's exact and Mann-Whitney U tests.

Results: In total, 312 dermatologists (US, n=81, Europe, n=231) completed PRFs for 1,787 patients (US, n= 482, Europe, n=1305). Data for 565 patients are reported (US, n=198, France, n=47; Germany, n=197; Italy, n=24; Spain, n=109). The sample was comprised of 13.8% PREG and 86.2% Caucasians; age: 34.5[11.8] vs. 33.6[12.0] (p=0.5614); and 61.5% vs. 57.5% female (p=0.5382), respectively. PREG were younger at symptom onset (23.3[10.8] vs. 26.2[11.0], p=0.0275), and took longer to be diagnosed from symptom onset (7.3[8.8] vs. 2.7[5.4] years, p<0.0001). Physician-reported misdiagnosis was 53.6% for PREG vs. 45.2% for Caucasian (p=0.2550). PREG reported greater proportions of worrisome initial symptoms that prompted them to seek care including: repeated outbreaks of bumps/boils (62.8% vs. 41.8%, p=0.0006), bumps/boils that started spreading to other areas (52.6% vs. 27.0%, p<0.0001), and bumps/boils that started to smell (35.9% vs. 23.1%, p=0.0231). PREG took longer to talk to a doctor about their symptoms (133.5[296.9] vs. 61.8[127.8] weeks, p=0.0011). Following first consultation about their symptoms, PREG took longer to receive a diagnosis (143.12[274.0] vs. 76.3[211.2] weeks, p=0.0285).

At the time of data collection, fewer PREG reported no problems walking about (EQ-5D-5L, 77.6% vs. 87.2%, p=0.0302) and doing their usual activities (EQ-5D-5L, 64.5% vs. 76.3%, p=0.0318). PREG reported greater activity impairment due to problem (WPAI, 27.0% vs. 20.0%, p=0.0081). PREG reported a lower EQ-5D-5L score (0.82 vs. 0.86, p=0.0446, US tariff) and a higher overall work impairment (WPAI, 20.8 vs. 17.3, p=0.2870).

Conclusion: Data analysis suggests PREG experience greater delay to diagnosis, presenting with higher symptom burden. PREG also have greater impact on their HRQoL. This study highlights the health disparities in PREG with HS, raising awareness to forward health equity.

References:

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Abstract N°: 124**The Effect of Demodex spp Colonization on Acne Vulgaris Etiopathogenesis and The Evaluation of the Relationship Between Demodex spp Number and Disease Severity**Ayse Hande Yoldas*¹¹Ege Üniversitesi Hastanesi, Türkiye

Introduction & Objectives: Acne vulgaris; It is a chronic inflammatory dermatosis that occurs with multifactorial and polygenic effects involving the pilosebaceous unit and progresses with acute exacerbations. Although many factors are accused in its etiopathogenesis; The interaction mechanisms have not been clearly revealed yet. Similarly, the pathological effects of the Demodex mite, which is the largest and most complex organism of the skin, are not yet clearly known. However, it has been determined that the etiopathogenesis of acne vulgaris and the pathological effects of Demodex spp show common features in some aspects. We planned our study to evaluate Demodex spp, which is likely to be involved in the etiopathogenesis of acne vulgaris, according to the severity of acne vulgaris. Our study is the first study that classifies acne vulgaris according to age and severity, and examines the number of D. folliculorum and D. brevis in the malar region and additionally on the anterior chest, another seborrheic area in Global Acne Rating Score (GARS).

Materials & Methods: 103 people were included in the acne vulgaris group and 76 healthy people were included in the control group. The severity of acne patients was determined using the GARS. Acne vulgaris severity according to the total score was 0; no lesion, 1-18: mild, 19-30 moderate, 31-38 severe, >39 very severe. The malar region and anterior chest local acne score, which are among the areas included in GARS, were also noted. Standardized Superficial Skin Biopsy (SSSB) sampling was performed from the malar and anterior chest of the patient and control groups. The numbers of Demodex (D.) folliculorum, D. brevis and larvae in both areas were noted separately.

Results: The mean numerical value of the calculated GARS score was 17.63(±6.81). 59 people (57.3%) were in the mild severity group, 40 people (38.8%) were in the moderate severity group, and 4 people (3.9%) were in the severe group. The relationship between GARS and malar Demodex spp in the acne group was not statistically significant (p=0.41). By gender; the GARS was 21.59±7.04 in men and 16.22±6.18 in women. This difference was significant (p<0.01). According to age; there was a negative correlation (correlation=-0.28) between GARS and this difference was significant (p=0.04). A statistically significant (p=0.03) result was found between Demodex spp and gender in 179 subjects. The number of mites was higher in males. When Demodex spp was compared in the acne and control groups, the average number was 2.18 (±5.28) in the acne group, while the average number was 6.22 (±15.20) in the control group. This difference was found to be statistically significant (p=0.01). We found that as the severity of acne vulgaris increased, the number of Demodex spp decreased, but this relationship was not statistically significant.

Conclusion: In the light of these results; in our study, we concluded that Demodex spp had no effect on acne formation and an increase in the severity of existing acne. Moreover; the number of Demodex spp, which we found to be negatively correlated with the increase in severity in acne vulgaris, is thought-provoking. Perhaps the changing folliculosebaceous unit structure with acne vulgaris creates an unfavorable environment for Demodex spp. More work is needed on this topic.

Abstract N°: 149**Skincare in acne: are we letting our patients down?**Hamisha Salih*¹, Saeeda Moradi¹, Pallavi Gupta¹¹University Hospitals Sussex NHS Foundation Trust, Dermatology, Brighton, United Kingdom**Introduction & Objectives:**

Acne vulgaris is a chronic and recurrent inflammatory condition of the pilosebaceous unit. A combination of topical and systemic agents is often required to achieve symptom control, improve quality of life and reduce the risk of scarring. The role of skincare products in the management of acne has been well-defined in previous literature as a key adjunct to other therapies.

Materials & Methods:

We conducted an observational retrospective study to explore patient experience of acne skincare advice provided by their dermatologist. Patients in the acne clinic, where they would be referred to for treatment with oral isotretinoin, were invited to participate. A survey incorporating multiple choice questions and an open comment box was distributed electronically.

Results:

28.6% of the patients acknowledged the importance of skincare products in managing their acne. Only 38.9% of respondents felt they had the opportunity to discuss skincare during their consultation. Over 86% of patients had been prescribed oral isotretinoin at least once, however 60% had not received any skincare advice from their dermatologist. Only 30.6% of patients felt more confident with their skincare routine after their dermatology consultation than they did before. The internet and social media were the most popular sources of information for accessing skincare advice, with over 77% of patients identifying it as their main informant. Yet the majority of patients (88.2%) were likely to adhere to skincare advice if instructed by their dermatologist, clearly preferring this to social media. The most recurring theme from open comments was the desire to discuss skincare with their dermatologist and get signposted to a more reliable source of information for skincare.

Conclusion:

The data suggests that clinicians are failing to address or discuss skincare with patients, leaving them at the mercy of social media and at risk of exposure to scientifically unproven or incorrect advice. Integrating such advice when reviewing patients with acne would not only help with the management of their condition post-treatment with oral isotretinoin, but also improve patient satisfaction and avoid misinformation.

As a single-centre study, our results may not be representative of all patients and the data collected was dependent on patient recall. Our results have highlighted the need for dermatologists to disseminate evidence-based skincare advice specific to acne-prone skin to their patients. Going forward, we aim to provide all our acne patients with an information leaflet on skincare to complement their medical treatment.

Abstract N°: 166

Comparison of efficacy of 40% mandelic acid with 30% salicylic acid peels in mild to moderate acne vulgaris

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Introduction & Objectives: Chemical Peel is a cosmetic procedure that is becoming a popular modality in treating acne vulgaris (AV). Mandelic acid (MA) is an upcoming peeling agent for AV due to its anti-inflammatory and antibacterial traits. Hence, it is worthwhile to appraise this newer agent's effectiveness and safety profile and compare it with a more traditional and established peeling agent, salicylic acid (SA), in the treatment of AV.

Objective - Comparison of efficacy of 40% MA with 30% SA peels in south Indian patients suffering from mild-to-moderate facial AV.

Materials & Methods: One hundred patients suffering from mild-to-moderate facial AV were distributed randomly into two groups of 50 each, with group A receiving 40% MA peel and group B receiving 30% SA peel at an interval of two weeks for six sessions. The duration of the study was twelve weeks. Clinical pictures and Michaelsson acne scores (MAS) were used to evaluate the effectiveness of treatment objectively. Adverse effects of both the peeling agents were also noted.

Results: Overall, there was no significant difference in the efficacy between the two peels. However, adverse effects were slightly higher with SA peel.

Conclusion: The 40% MA peel was equally effective as 30% SA peel in mild-to-moderate facial AV. However, safety profile and tolerability were better in the MA peel group than the SA peel group.



Abstract N°: 182**Efficacy of carbon peel laser in acne vulgaris in skin of color : a single center prospective study**Karthi Kishore*¹, Anuj Bhatnagar², Rahul Kumar¹¹command hospital air force bangalore, dermatology, Bengaluru, India, ²command hospital air force bangalore, dermatology, Bengaluru**Introduction & Objectives:**

Introduction: Acne vulgaris is a chronic disease of pilosebaceous units. Despite various treatment modalities available, topical carbon suspension combined with QsNdYAG laser treatment (carbon peel laser technique) has gained popularity recently for effective treatment of Acne vulgaris. The study of its efficacy in Indian skin has not been reported so far.

Objectives: To study efficacy of Carbon peel laser technique in management of Acne vulgaris (Grade II-IV) in skin of colour.

Materials & Methods:

A prospective observational study was done on 35 patients with Acne vulgaris Grade II-IV, who were poorly compliant to treatment with topical/systemic agents owing to side-effects or failure of treatment to meet patient's expectations. The patients were subjected to an initial topical application of carbon suspension (Cosderma) followed by treatment with Qs:NdYAG laser in two modes (quasi long pulsed mode followed by Q switched mode 1064nm). The treatment consisted of 3 sittings with intervals of 2 weeks. The patients were asked to refrain from topical/systemic medication for acne during this period.

Results: Significant reduction of erythematous & nodular acne lesions noted after 3 sittings of "Carbon peel laser technique". Among 35 patients, 28(80%) showed >80% improvement & 7(20%) showed 50-80% improvement in skin lesions in form of decrease in number, size of lesions & extent of inflammation, with no patients non-responsive to treatment. The post procedure complications were minimal, 6(20%) developed erythema, and 1(3.3%) mild tolerable pain with no post inflammatory hyper/hypopigmentation. The post procedure mean ISGA (Investigator Status Global Assessment) was 1.342 as compared to pre procedure mean ISGA of 3.657 with p value (< 0.0001).

Conclusion: Carbon peel laser technique is an effective method for the management of Acne vulgaris in skin of colour with minimal side effects & significant results.



Abstract N°: 315**Surgical Management of Acne Combined to Oral Isotretinoin : Case-Series of 1191 Patient**

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Introduction & Objectives:

Systemic Isotretinoin is the cornerstone of severe acne treatment, used alone has many disadvantages (inflammatory flares, inefficiency against closed comedones, long improvement time and debatable healing rates after reaching the cumulative doses). Closed comedones surgical extraction is the key procedure to shortcut these inconveniences.

The most severe cases of acne (nodulo-cystic and closed comedonian) are usually out of reach of conventional treatments such as topical and oral retinoids, they even worsen by getting more inflamed when medically treated because of the skin layer preventing the material from being drained outside, they are therefore considered as therapeutic dead-ends. The purpose of this study is to give a clear evidence that surgically removing acne cystic and closed comedonian material will unlock the situation and drastically improve the quality of life by offering an immediate remission and better chances of definitive healing.

Materials & Methods:

From February 2017 to September 2022, 1191 patients with severe or unresponsive to conventional treatments acne received a protocol based on performing a surgical extraction/drainage of all comedonian and inflammatory lesions immediately before launching a 0.5 mg/Kg/day Isotretinoin course. Assessments based on lesions count were made on a regular basis until reaching 120-150 mg/Kg cumulative doses. Comedones surgical removal and inflammatory lesions drainage were renewed when required throughout the course.

Results:

Average acne improvement was 88% at one month, 96% at two months, 98% at 3 months and 99% at four months. 99% of the 433 patients who reached the cumulative doses were in complete remission. Isotretinoin-induced inflammatory flares were inexistent on the surgically cleansed areas and present only on the non-cleansed ones in patients requiring more than a single surgical session. The procedure didn't leave visible scars even when massive mini-incisions were performed on patients under full dose Isotretinoin courses (the average was 100 incisions per session).

Conclusion:

This is the first documented large scale study of comedones surgical extraction associated with Isotretinoin, the procedure's advantages are the immediate and persistent acne clearance even for very severe acne, the avoidance of Isotretinoin-induced inflammation and the drastically increased complete remission rates after reaching cumulative doses. Previous literature records about Isotretinoin alone showed acceptable rates but after devastating scar-producing flares during the first treatment weeks, a side effect dramatically avoided by massively extracting comedones. The incisions - even massive and during a full dose Isotretinoin course - don't leave any visible scars, which seriously questions the recommendation to avoid all physical treatments amid such courses. This technique turns nodulo-cystic and closed comedonian acne from dead-end conditions into perfectly curable

ones. However, further RCTs are needed to compare the procedure with the use of Isotretinoin alone.

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Abstract N°: 373**The effects of oral isotretinoin on the skin and serum levels of FoxO3, p53, and TRAIL of acne patients: A case-control study**Yavuz Semiz¹, Mehmet Alp Matur¹, Damla Demir², Ezgi Aktaş¹¹Prof Dr Cemil Tascioglu City Hospital, Dermatology and Venereology, Türkiye, ²Istinye University, Faculty of Medicine, Dermatology and Venereology, Türkiye**Introduction & Objectives:**

Acne vulgaris is promoted by enhanced insulin/IGF-1 signaling and insufficient FoxO/sestrin-3/AMPK-mediated attenuation of mTORC1 activation. The aim of our study is to investigate the effects of oral isotretinoin therapy on the serum and skin levels of FoxO3, TRAIL, and p53. Insulin resistance, the components of metabolic syndrome, IGF-1 and IGFBP-3 serum levels, and any association between clinical features and these parameters in patients with AV are also examined.

Materials & Methods:

Sixteen AV patients who were administered the appropriate cumulative dose of oral isotretinoin were enrolled in this prospective case-control study. The clinical examination included measurements of height, weight, waist circumference (WC), and blood pressure (BP), as well as a determination of the clinical severity of acne utilizing the Global Acne Grading System. The levels of serum fasting glucose, insulin, IGF-1, IGFBP-3, high-density lipoprotein cholesterol (LDL-C), HDL-C, TG, FoxO3, TRAIL, and p53 were assessed. The levels of FoxO3, TRAIL, and p53 in the skin were also evaluated. All the clinical examinations, laboratory analyses, and Beck Depression Inventory (BDI) and Beck Anxiety Inventory (BAI) scores were evaluated at the baseline and at the end of the treatment.

Results: The decreases in the values of body mass index, waist circumference, systolic blood pressure, Beck Depression Inventory (BDI), HDL-C, CRP, and ferritin from the baseline to the end of the treatment were statistically significant ($p = 0.028$, $p = 0.029$, $p = 0.008$, $p = 0.010$, $p = 0.018$, $p = 0.046$, and $p = 0.003$, respectively). The increases in the levels of serum LDL-C, TG, total cholesterol, GGT, and FoxO3 from the baseline to the end of the treatment were statistically significant ($p = 0.001$, $p = 0.004$, $p < 0.001$, $p = 0.010$, $p = 0.007$, respectively). In terms of changes from the baseline to the end of the treatment, serum FoxO3 levels were positively correlated with the changes in serum TRAIL levels ($r = 0.674$, $p = 0.004$). The change in the levels of skin and serum p53 from the baseline to the end of the treatment was statistically significantly correlated ($r = 0.603$, $p = 0.013$).

Conclusion:

Isotretinoin therapy caused an increase in skin and serum levels of FoxO3 and skin and serum TRAIL values and a decrease in serum and skin p53 values. However, only the increase in serum FoxO3 levels was statistically significant. The research investigating the effects of isotretinoin on skin and serum foxo3, p53, and TRAIL levels is limited. This is the first research evaluating the serum levels of these parameters, suggesting that the systemic effects of isotretinoin may be explained by an increase in serum FoxO3 levels. Moreover, in the present study, the cardioprotective effects of isotretinoin were observed and presented as decreases in BMI, WC, and systolic pressure values, serum CRP and ferritin levels at the end of isotretinoin therapy. Moreover, decrease in BDI scores were observed at the end of isotretinoin therapy, a sign of improvement in psychological status. Further studies are required to understand the mechanism of action of isotretinoin.

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Abstract N°: 378**Evaluation of Irisin Level Change After Isotretinoin Treatment for Moderate and Severe Acne Vulgaris**Ilayda Uysal¹, Ilteris Topal², Okan Dikker²¹Prof. Dr. Cemil Tascioglu City Hospital, Dermatology, Istanbul, Türkiye, ²Prof. Dr. Cemil Tascioglu City Hospital, Biochemistry, Istanbul, Türkiye**Introduction & Objectives:**

Acne vulgaris is a common, chronic, inflammatory disease of the pilosebaceous unit. Systemic isotretinoin can be used in the treatment of moderate and severe acne. Irisin is a protein secreted from muscle and adipose tissue and increases energy expenditure by producing heat. It also exerts an insulin-sensitizing effect by increasing glucose uptake into tissues. We aimed to determine serum irisin levels in patients receiving isotretinoin treatment for acne vulgaris at the beginning and 3rd month of treatment and to compare them with the control group.

Materials & Methods:

The study was conducted between April 15 and October 15, 2022 at our hospital Dermatology Outpatient Clinic. A total of 59 patients diagnosed with moderate or severe acne who were scheduled to start isotretinoin therapy, and 58 controls with similar demographic characteristics as patients were included. Isotretinoin treatment at a dose of 0.5 mg/kg/day was started. Serum irisin levels were compared with the control group at the beginning and 3rd month of the treatment. The severity of acne, acne quality of life scale, laboratory parameters and the relationships between them, which may affect irisin levels, were evaluated.

Results:

Serum irisin levels in acne patients were found to be insignificantly lower than controls. After 3 months of isotretinoin treatment, irisin levels increased significantly and were found to be significantly higher than the control group. Glucose levels, which were significantly higher in the patients at baseline compared to controls, decreased after treatment. Irisin levels and the baseline acne severity were positively correlated in the patients. A significant positive correlation was observed between irisin and CRP values in both the patient and control groups. No significant correlation was found between glucose, insulin resistance and irisin levels.

Conclusion:

Isotretinoin treatment resulted in increased serum irisin levels and decreased glucose levels. Irisin may be a promising parameter for evaluating response to isotretinoin therapy. In addition, irisin, which shows a strong correlation with CRP values, may be a new marker of inflammation. The role of irisin in the mechanism of action of isotretinoin and its future role in acne treatment should be clarified by further research.

Abstract N°: 389**Neutrophilic granulocyte-derived B-cell activating factor supports B cells in skin lesions in hidradenitis suppurativa**

Robert Sabat , Deimante Simaite , Johann Gudjonsson , Theresa-Charlotte Brembach , Katrin Witte , Torben Krause , Georgios Kokolakis , Eckart Bartnik , Christos Nikolaou , Natascha Rill , Bema Coulibaly , Clement Levin , Matthias Hermann , Gabriela Salinas , Thomas Leeuw , Hans-Dieter Volk , Kamran Ghoreschi , Kerstin Wolk

Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic inflammatory disease characterized by painful inflamed nodules, abscesses, and pus-draining tunnels appearing in axillary, inguinal, and perianal skin areas. HS lesions contain various types of immigrated immune cells. This study aimed to characterize mediators that support lesional B/plasma cell persistence in HS.

Materials & Methods:

Skin samples from several cohorts of HS patients and control cohorts were assessed by mRNA sequencing, quantitative PCR on reverse-transcribed RNA, flow cytometry, and immunohistofluorescence. Blood plasma and cultured skin biopsy samples, keratinocytes, dermal fibroblasts, neutrophilic granulocytes (neutrophils), monocytes, and B cells were analyzed. Complex systems biology approaches were used to evaluate bulk and single-cell RNA sequencing data.

Results:

Proportions of B/plasma cells, neutrophils, CD8+ T cells, and M0 and M1 macrophages were elevated in HS lesions compared to skin of healthy and perilesional intertriginous areas. There was an association between B/plasma cells, neutrophils, and B-cell activating factor (BAFF, aka TNFSF13B). BAFF was abundant in HS lesions, particularly in nodules and abscesses. Among the cell types present in HS lesions, myeloid cells were the main BAFF producers. Mechanistically, granulocyte colony-stimulating factor in the presence of bacterial products was the major stimulus for neutrophils' BAFF secretion. Lesional upregulation of BAFF receptors was attributed to B cells (TNFSF13C/BAFFR and TNFSF13B/TACI) and plasma cells (TNFSF17/BCMA). Characterization of the lesional BAFF pathway revealed molecules involved in migration/adhesion (eg, CXCR4, CD37, CD53, SELL), proliferation/survival (eg, BST2), activation (eg, KLF2, PRKCB), and reactive oxygen species production (eg, NCF1, CYBC1) of B/plasma cells.

Conclusion:

Neutrophil-derived BAFF supports B/plasma cell persistence and function in HS lesions.



Abstract N°: 397**Healthcare Resource Utilisation in Patients With Physician-Diagnosed Hidradenitis Suppurativa: Results From the CPRD-HES Database in England**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a painful, chronic inflammatory skin disease that affects around 1.19% of the population in England.¹ HS is associated with a high comorbidity burden and significantly impacts patients' quality of life. Patients with HS usually visit multiple physicians in several specialities before receiving a confirmed diagnosis, thereby incurring high healthcare costs. In the context of constrained resources, understanding the healthcare resource utilisation (HCRU) associated with treating patients with HS is important. This study aims to characterise the patient profile, treatment pathways and outcomes for patients with physician-diagnosed HS in England, using real-world data from the Clinical Practice Research Datalink (CPRD) linked with the Hospital Episode Statistics (HES) database. Here, we report the HS-related and all-cause HCRU among patients with HS.

Materials & Methods:

This retrospective observational study utilised data from the CPRD-HES linked database in England from January 2009 through March 2021 to conduct descriptive analysis on the all-cause and HS-related HCRU in patients with physician-diagnosed HS in both primary and secondary care settings.

Results:

Overall, 40,036 physician-diagnosed patients with HS were included; the mean \pm standard deviation [SD] age at diagnosis was 34.5 ± 13.1 years. The majority of the patients were female (73.7%). Depression (31.7%), anxiety (21.5%) and acne (20.7%) were the most commonly reported comorbidities related to HS. The number (mean \pm SD) of all-cause general practitioner (GP) visits per patient-year (ppy) was 19.4 ± 17.1 , whereas specifically HS-related GP visits were 1.2 ± 3.1 ppy. The number (mean \pm SD) of all-cause specialist visits, specialist referrals, and accident and emergency attendances ppy were 0.1 ± 0.5 , 0.4 ± 0.9 , and 0.9 ± 6.2 , respectively. All-cause and HS-related number (mean \pm SD) of hospitalisations ppy were 0.6 ± 3.7 and 0.1 ± 0.5 , whereas the length of hospital stay was 1.3 ± 15.5 days and 0.1 ± 4.5 days, respectively. About a quarter of the patients (26.2%) had standard hospital admission, 20.0% were day cases and 0.4% were regular day attendees. The most frequent primary diagnoses for hospital admissions were HS-related conditions, including cutaneous abscess, furuncle and carbuncle of the limb and trunk, anal abscess, pilonidal cyst with abscess, and trichilemmal cyst (**Table 1**).

Conclusion:

HS is associated with a significant economic burden, as demonstrated by the HCRU among patients in England. HS also imposes a severe socioeconomic burden as it affects young adults of working age, and frequent medical appointments can substantially decrease working ability and productivity. Of note, an average of 19 GP visits ppy demonstrates high healthcare need in patients with HS and most of these visits were not coded as HS-related, suggesting that holistic care for associated conditions such as depression, anxiety and acne is important. In

contrast, HS-related conditions were the most frequent primary diagnoses for hospital admission. Improving the holistic management of HS in primary care, including the care of associated conditions, should be prioritised to improve the quality of life of people with HS and to reduce HCRU.

Table 1. HCRU of Patients With Physician-Diagnosed HS in England

Variable	Overall (N = 40,036) Mean ± SD
GP visits (all-cause)	19.4 ± 17.1
GP visits (HS-related)	1.2 ± 3.1
Specialist visits (all-cause)	0.1 ± 0.5
Specialist visits (HS-related)	0.0 ± 0.1
Specialist referrals (all-cause)	0.4 ± 0.9
Specialist referrals (HS-related)	0.0 ± 0.1
Number of accident and emergency attendances (all-cause)	0.9 ± 6.2
Number of hospitalisations (all-cause)	0.6 ± 3.7
Length of hospital stay, days (all-cause)	1.3 ± 15.5
Number of hospitalisations (HS-related)	0.1 ± 0.5
Length of stay, days (HS-related)	0.1 ± 4.5
Number of days of dermatological support – in critical care only	0.0 ± 0.2
Admission type, N (%)	
Standard admission	10,505 (26.2%)
Day case	8018 (20.0%)
Regular day attendee	144 (0.4%)
Most frequent primary diagnoses for hospital admissions*	
HS-related conditions (cutaneous abscess, furuncle and carbuncle of the limb and trunk, anal abscess, pilonidal cyst with abscess, trichilemmal cyst)	4420
Hidradenitis suppurativa	2772
Chronic kidney disease, stage 5	824
Maternal care for other specified foetal problems	560
Other specified pregnancy-related conditions	537
Crohn disease, unspecified	533
All numbers are N per patient-year.	
*Only variables with counts ≥500 are listed.	
HS, hidradenitis suppurativa; N, total number of patients.	

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Abstract N°: 406**Comparison of Social Media Content on Hidradenitis Suppurativa: A Cross-Sectional Study**

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Introduction & Objectives:

Over the last number of years dermatologists worldwide have turned to social media as an alternative approach to engage with and educate patients. However, a lack of regulation poses a challenge as patients navigate through a stream of unverified content. Previous research has shown that patients may turn to social media seeking information regarding diagnosis and treatment. This study aims to analyse and compare content using the 'hashtag' tool across three of the most popular social media platforms to determine the information that patients are exposed to online.

Materials & Methods:

We identified hashtags across Instagram, TikTok and Facebook for '#hidradenitissuppurativa'. The top 50 videos returned by algorithm across each site were selected for analysis. Data extracted for comparison included; content creator demographics, number of followers, type of content (educational vs non-educational) and associated hashtags. Exclusion criteria included posts that were created in a language other than English and recurring, duplicate posts.

Results:

One-hundred and sixty-nine posts were identified and 19 were unsuitable for analysis in accordance with the study exclusion criteria. Of the total 150 posts included in the data, 50 across each platform were selected and analysed. Sixty-seven percent of posts were created by females (n=101/150), 10% by males (n=16/150) and 22% other (n=33/150). Distribution was similar across all platforms. User accounts on TikTok have a significantly higher number of followers (median= 38,700, range=902-17,600,000 followers) compared to Facebook (median=1375, range= 58-777,000 followers) and Instagram (median=2818, range= 57-9,800 followers).

Conclusion:

At the time of this study, TikTok and Facebook had a significantly higher number of patient accounts sharing HS-related content compared to Instagram (70-78% versus 50%). Dermatologists represented 12% of users on TikTok posting HS-related content and displayed the largest number of educational videos at 22%. Instagram has the largest presence of Patient Support Groups across all platforms at 22% however, only 36% of HS-related posts analysed on Instagram were focused on raising awareness of HS compared to 92% on Facebook and 74% on TikTok.

This study demonstrates a snapshot of the breadth of HS-related information available on social media. Our findings suggest that patients are more likely to use social media platforms to raise awareness of HS compared to Dermatologists and Patient Support Groups. Although TikTok, with the largest presence of Dermatologists, has the highest number of educational posts, this study highlights how there is a lack of education-related content across all three social media platforms as a whole.

It is reported that the median age of onset for HS is between 21-29 years old and given the large presence of

younger patients on social media we propose that it is a useful platform that Dermatologists and official institutional bodies can utilise as an alternative method of health promotion and patient education. Further research to explore social media trends across a range of dermatological conditions can help guide targeted education campaigns in the future.

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Abstract N°: 493

Exuberant and unusual case of keloids with macrocomedones in a patient with acne and hidradenitis suppurativa

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease and it is believed that a follicular occlusion disorder occurs with rupture of the pilosebaceous unit and release of its contents along with bacteria into the dermis, triggering a chronic inflammatory response and formation of nodules, abscesses, fistulas and scars. Treatment is based on approaching the different mechanisms that participate in its complex pathophysiology.

Keloids are nodules or tumors formed by an exaggerated repair response, with stimulation and proliferation of fibroblasts and exacerbated synthesis of type I collagen. Such lesions, by definition, exceed the limits of the scar and can acquire large volumes, causing significant aesthetic damage and decreased quality of life. Reports of keloids with comedones on their surface seem not to be described in the literature.

The formation of keloids has some pathophysiological mechanisms in common with those of HS, like the participation of interleukin 1 (IL-1), tumor necrosis factor alpha (TNF- α) and Th17 pathway. This report presents a rare and exuberant case of HS and keloid with atypical morphology, whose surface is full of macro comedones.

Materials & Methods:

This is a case report of a patient who presented for a medical appointment at a specialized dermatology service.

Results:

A 21-year-old male patient presented to the dermatology clinic complaining of keloid. A 21-year-old male patient, presented to the dermatology clinic complaining of keloids on his body since he was 4-years-old. The only reported comorbidity was pubertal acne. We observed well-circumscribed, slightly violaceous tumor lesions, whose diameter varied from 2 to 11 cm, with the presence of comedones on the entire surface. In the suprapubic region, there was a hardened tumor lesion with an irregular texture, with cicatricial atrophic areas interspersed with hypertrophic areas with comedones and secretive fistulas. The patient was then diagnosed with Hurley III HS, acne and atypical morphology keloids. It was introduced trimethoprim-sulfamethoxazole twice a day and acitretin 10 mg daily.

Two keloids were approached with cryotherapy associated with intralesional triamcinolone. The aesthetic result after one session was discreet, with a slight volumetric reduction of the lesions. At the moment, the patient is scheduled to start biological treatment.

Conclusion:

Patients with HS and predisposition to keloid formation are still a therapeutic challenge due to the chronic nature of skin inflammation and the continuous appearance of keloids. As far as we know that's the first case of keloids with comedones. The use of immunobiologicals, retinoids, antibiotics, intralesional therapies, lasers, cryotherapy,

surgery and radiotherapy should be considered to control inflammation and reduce the mass of keloid tissue.

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Abstract N°: 509**HS Uncovered: Results from a global survey revealing patient perspective in hidradenitis suppurativa**

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Introduction & Objectives: Hidradenitis suppurativa (HS) is a chronic, painful inflammatory skin disease that affects physical, social and emotional well-being^{1,2}. Patients with HS experience greater pain and psychological comorbidities, including stigma, anxiety, depression, and risk of suicide compared to those with other dermatological conditions^{3,4}. Moreover, the diagnostic delay of approximately 7–10 years and subsequent therapeutic delay further impact patient quality of life (QoL).^{5,6} There is a paucity of large-scale, quantitative evidence on the patient level which focuses on the psycho-social and financial impact of HS and patient perceptions of treatment modalities. Besides, the role of patient activation in improving health outcomes is yet to be explored in HS. We present the results of a cross-sectional, real-world survey that evaluated patient perspectives on various aspects of HS to facilitate their integration into healthcare policies and clinical decision-making to improve QoL.

Materials & Methods: This was a patient-reported, 35-minute online survey which included the patient activation measure (PAM13), dermatology life quality index (DLQI), work productivity and activity impairment (WPAI), and hospital anxiety and depression scale (HADS) tools and was conducted between November 2022 and February 2023 in 6 countries (United States, United Kingdom, Germany, France, Italy and Spain). Adult patients who self-reported a diagnosis/suspected diagnosis of HS at the time of data collection and were not participating in any other HS surveys in the last 4 weeks were included. The primary endpoint was patient activation level via PAM13, a 13-item survey that assesses an individual's knowledge, skills, and confidence in managing their healthcare. Key secondary endpoints evaluated patient disease burden and impact on QoL. Three linear regression models were fit with PAM13 score as the dependent variable and patient characteristics as independent variables to evaluate their impact on PAM13.

Results: Here, we report on 505 patients (68.3% female) with diagnosed HS who participated in the survey. Overall, 66% of patients had high PAM13 scores (level 3/4; **Fig 1**). A very large to extremely large effect of HS on QoL (DLQI score 11–30) was reported by 67% and 73% of patients with level 3 and 4 PAM13 scores, respectively (**Fig 2**). In total, 61% of patients reported skin-related pain; 58% considered pain relief as the most important feature for a treatment to be considered as effective and 52% were dissatisfied with current treatment. Further, 29% of patients reported abnormal depression and rates were higher in patients with level 3/4 PAM13 scores (32% vs level 1/2: 21%). Also, 52% of patients reported overall work productivity loss and patients with level 3/4 PAM13 scores experienced high impact on work productivity (25% vs level 1/2: 15% felt very/completely impacted). Regression models identified 'impact on work productivity' as a significant predictor of patient activation (impact coefficient=0.4).

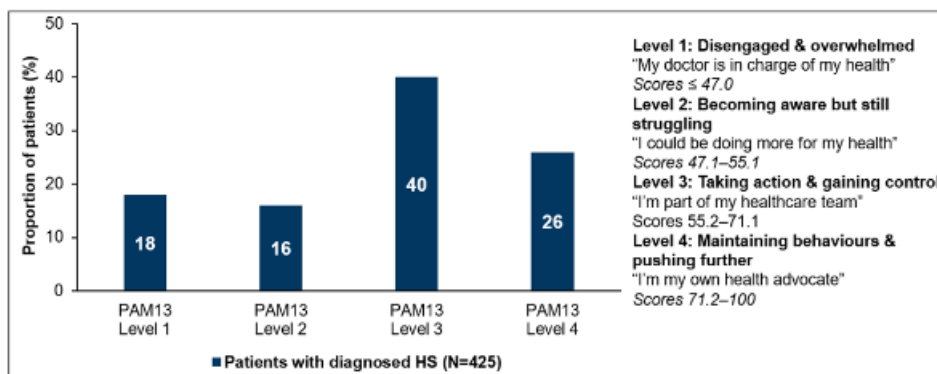
Conclusion: While high patient activation is typically associated with better health outcomes⁷, many patients in this survey reported a negative impact of HS on their QoL despite a high level of activation. This could be due to

factors such as delayed diagnosis, treatment dissatisfaction or depression associated with HS, leading to patients feeling neglected by the healthcare system and forcing them to take control of their health.

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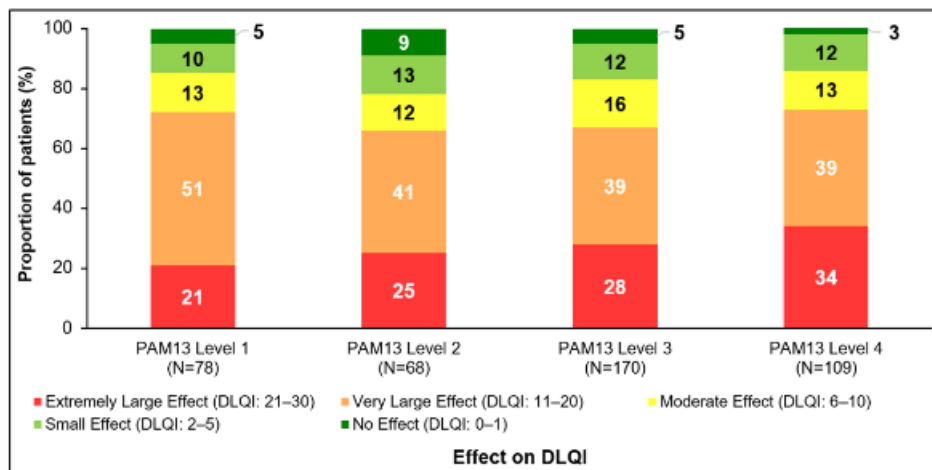
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Figure 1: Patient activation measure (PAM13) results. PAM13 levels 1 and 2 indicate lower patient activation, while PAM13 levels 3 and 4 indicate higher patient activation.



HS, hidradenitis suppurativa; N, total number of patients.

Figure 2: Reported quality of life impact of hidradenitis suppurativa by patient activation measure (PAM13) level



DLQI, dermatology life quality index; N, total number of patients.



Abstract N°: 528**HELyx: A study to Assess the Effectiveness and Feasibility of Implementation Strategies to Improve the Diagnosis and Management of Patients with Hidradenitis Suppurativa: Study Design Overview**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease associated with high disease burden and substantial impact on patients' quality of life.¹ HS is often misdiagnosed or diagnoses are delayed (average 7–10 years);²⁻⁴ causes include lack of recognition of HS across medical specialties, particularly by those who may first encounter cases of HS.^{5,6} HS must be more readily identified to enable timely referrals to dermatologists and initiation of adequate treatment. However, the effectiveness of implementation strategies for early HS diagnosis and optimal disease management require evaluation.⁷ HELyx is an ongoing, non-interventional, implementation science study designed to evaluate the effectiveness and feasibility of implementing a HS care package or medical education program on the awareness and/or diagnostic behaviour of healthcare professionals (HCPs) involved in the HS patient journey.

Materials & Methods:

HELyx is a hybrid, effectiveness-implementation type I study with a pre-post design involving HCPs that will be guided by the Consolidated Framework for Implementation Research (CFIR).⁸ HELyx will be conducted over 4 consecutive phases (context analysis, pre-implementation, implementation, and post-implementation; **Figure 1**) in a sequential manner across Germany (pilot country) and Spain; iterative variations in the core methodology, dependent on the outcome of country-specific context analyses, are being employed on a per-country basis. HELyx is guided by input from a working group (5 dermatologists, 1 patient advocate) with specialist HS knowledge.

Results:

HELyx aims to address key unmet needs in HS through identification of country-specific barriers (e.g., low disease awareness, delayed diagnosis).

Phase 1: Context Analysis

The determinants, barriers, facilitators, and potential benefit of implementation strategies were identified through

literature review, market research, qualitative data collection from HCPs, and working group input. Tailored objectives were informed by country-specific context analyses. The primary objective of HELyx is to evaluate the effectiveness and feasibility of implementing:

- A care package to increase diagnostic screening for HS by dermatologists, general practitioners, gynaecologists, and surgeons (Germany)
- A medical education programme on the knowledge, attitudes, and beliefs of HS management by dermatologists (Spain)

Phase 2: Pre-implementation

HCPs are currently being identified and enrolled. Baseline assessments will evaluate HCPs' awareness and knowledge of HS, clinical behaviours, and attitudes towards the planned implementation.

Phase 3: Implementation

The co-created implementations will be rolled out to participating HCPs:

- HS care package (Germany): Medical specialty-tailored training materials (HS pathophysiology, clinical and patient scores, HS therapies) and a diagnostic tool
- Medical education program (Spain): Theoretical training modules on HS, short stays in HS centers of excellence, and mentoring by medical education program faculty

Phase 4: Post-implementation

HCPs will be assessed at week 12 and 24 in Germany, and at week 12 in Spain; analyses will inform on the immediate effectiveness and long-term sustainability of implementations.

Conclusion:

Context analysis has been completed and pre-implementation is ongoing in Spain and Germany. Implementation is estimated to be completed by December 2023.

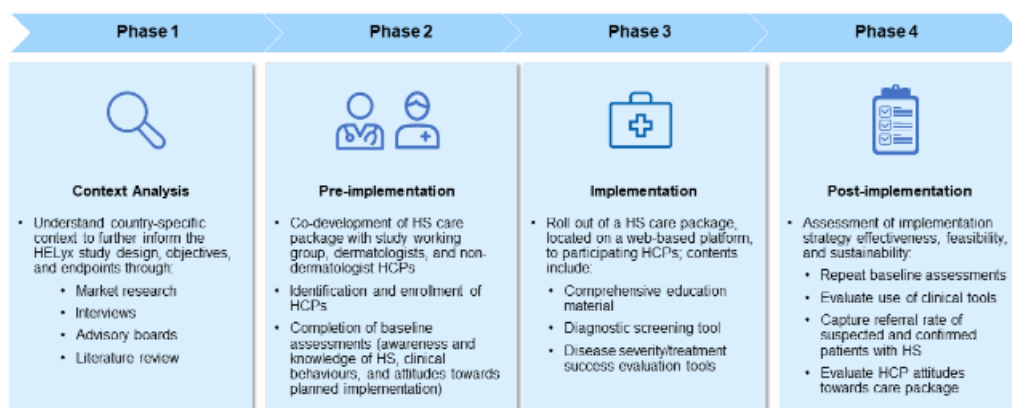


Figure 1: HELyx Study Overview

HCP, healthcare provider; HS, hidradenitis suppurativa

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Abstract N°: 535**Effect of secukinumab on draining tunnels in patients with moderate to severe hidradenitis suppurativa: Post hoc analysis of the SUNSHINE and SUNRISE Phase 3 randomised trials**

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Introduction & Objectives:

Draining tunnels in hidradenitis suppurativa (HS) are associated with severe disease, significant pain, poor quality of life and are predictors of poor response to therapy¹⁻³. A post hoc analysis of pooled data from the SUNSHINE/SUNRISE trials was conducted to assess the effect of secukinumab, an anti-interleukin-17A therapy, on draining tunnels up to 52 weeks of treatment, both in the overall population and in the population of patients who presented with ≥ 1 draining tunnel at baseline.

Materials & Methods:

SUNSHINE and SUNRISE were identical, phase 3, randomised, placebo-controlled, multicentre trials evaluating short term (up to Week 16) and long term (up to Week 52) efficacy/safety of two secukinumab dosing regimens (secukinumab 300 mg every 2 [SECQ2W] or 4 [SECQ4W] weeks) in adults with moderate to severe HS. Patients were randomised in a 1:1:1 ratio to SECQ2W, SECQ4W or placebo at baseline. At Week 16, patients previously randomised to SECQ2W or SECQ4W continued on the same dosing regimen; patients on placebo were switched 1:1 to SECQ2W or SECQ4W up to Week 52.

Results:

In total, 1084 patients were included (SECQ2W, N=361; SECQ4W, N=360; placebo, N=363). Overall, at baseline 66.2%, 60.6% and 62.5% of patients in the SECQ2W, SECQ4W and placebo treatment arms, respectively, presented with ≥ 1 draining tunnel; 33.8%, 39.4% and 37.5%, respectively, had no draining tunnels. The mean \pm standard deviation number of draining tunnels in all patients at baseline was 2.9 \pm 3.51, 2.5 \pm 3.51 and 2.5 \pm 3.19 in the SECQ2W, SECQ4W and placebo arms, respectively. The mean \pm SD number of draining tunnels in patients presented with ≥ 1 draining tunnel at baseline was 4.4 \pm 3.47, 4.1 \pm 3.71 and 4.0 \pm 3.19 in the SECQ2W, SECQ4W and placebo arms, respectively.

In patients who presented with ≥ 1 draining tunnel at baseline, a numerically greater mean decrease from baseline in the number of draining tunnels was shown in the secukinumab groups vs. placebo at Week 16 (-1.4 ± 2.95 , -1.0 ± 2.79 and -0.6 ± 2.94 in the SECQ2W, SECQ4W and placebo arms, respectively) with the effect sustained through Week 52 (SECQ2W, -1.3 ± 4.12 ; SECQ4W, -1.4 ± 3.13). Overall, at Week 16, a numerically greater

proportion of patients treated with secukinumab had no increase in the number of draining tunnels from baseline vs. placebo (84.8%, 80.9% and 75.8% of patients in the SECQ2W, SECQ4W and placebo arms, respectively); in either secukinumab dose group, this effect was sustained through Week 52 (SECQ2W, 80.7%; SECQ4W, 81.6%; **Figure 1**).

At Week 16, in patients with ≥ 1 draining tunnel at baseline (N=684), a numerically greater proportion of patients treated with either SECQ2W/SECQ4W had no increase in draining tunnels from baseline vs. placebo (82.9%, 78.2% and 71.2% of patients in the SECQ2W, SECQ4W and placebo arms, respectively); the benefit at Week 16 in the secukinumab groups was sustained through Week 52 (SECQ2W, 80.7%; SECQ4W, 82.6%).

Conclusion:

Secukinumab was effective in reducing the number of draining tunnels at Week 16 in patients with moderate to severe HS, with effects sustained through Week 52. At Week 52, >80% of patients treated with secukinumab had no increase in the number of draining tunnels from baseline, which is relevant as skin tunnel formation has been associated with HS disease progression and irreversible tissue damage^{2,3}.

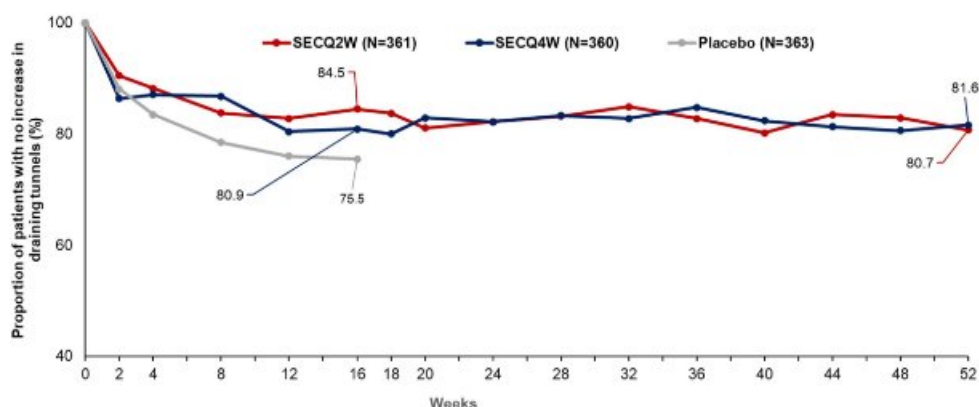


Figure 1. Proportion of patients reporting no increase in draining tunnels over time to Week 52. Line graphs showing the effects of SECQ2W, SECQ4W, and placebo from baseline up to Week 52 on draining tunnels in the SUNSHINE and SUNRISE trials (pooled data). Data are presented as observed. At Week 16, patients randomised to placebo were switched to receive SECQ2W or SECQ4W up to Week 52. Only patients on continuous secukinumab treatment for 52 weeks are represented in the graph beyond Week 16. Q2W, every 2 weeks; Q4W, every 4 weeks; SEC, secukinumab 300 mg.

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Abstract N°: 552**The diagnostic and therapeutic landscape of hidradenitis suppurativa in Germany. A retrospective claims data analysis.**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease with a profound negative impact on patients' quality of life. HS is commonly viewed as an under-diagnosed, under-treated condition. Representative real-world evidence on the management of HS in routine healthcare remains scarce. This study aims to uncover current diagnosis and treatment patterns in the HS population in Germany using longitudinal claims data.

Materials & Methods:

A retrospective observational study was conducted based on the InGef research database. An anonymized nationally representative sample of 4.7 million statutory health insurance members was drawn and prevalent and incident HS patients ≥ 18 years were identified in the years 2015 to 2019. Descriptive statistics were calculated for demographic characteristics, diagnosis and treatment patterns, as well as potential misdiagnoses.

Results:

The documented prevalence of HS in the adult population in Germany increased over time from 0.03% in 2015 to 0.05% in 2019. 30.0% of prevalent patients ≥ 18 years received HS-relevant topical pharmacological therapies and 50.3% received systemic therapies in the year 2019. 34.9% of patients were treated with systemic antibiotics, 7.8% received biologic therapy and 36.1% underwent at least one surgical procedure. The majority of surgical procedures were performed in the inpatient setting (28.6% with at least one inpatient procedure) and 22.4% of patients underwent at least one radical and extensive excision of diseased tissue of skin and subcutis. Of note, only half of the patients undergoing surgery also received additional pharmacological therapies recommended by current treatment guidelines. Dermatologists and general practitioners (GPs) were responsible for the majority of relevant outpatient pharmacological prescriptions, while the majority of outpatient surgical procedures was performed by dermatologists (40.1%) and surgeons (18.0%).

39.0% of initial HS diagnoses were coded in hospitals and 61.0% by outpatient physicians, with dermatologists (37.2%), GPs (12.1%) and surgeons (4.0%) being responsible for the majority of first outpatient diagnoses. These physician specialties were also visited more frequently by HS patients than by age- and sex-matched non-HS controls, both during the years preceding their initial diagnosis and after receiving an HS diagnosis. A rising frequency of potential misdiagnoses, including skin abscesses, boils and carbuncles (33.3%) as well as acne and infections was observed in the years preceding the initial HS diagnosis.

Prevalent HS patients accumulated significantly more sick leave days (47 days/ year on average) than age- and sex-matched non-HS controls (24 days/ year).

Conclusion:

This study improves our understanding of current diagnosis and treatment patterns of HS in routine healthcare using a large claims dataset. Our evaluation indicates that despite the increasing availability of modern therapies, expert recommendations about HS therapy are rarely implemented in routine practice. It further provides evidence supporting that HS is commonly misdiagnosed, gives novel insights into the burden of this disease and indicates where patients seek help prior to their initial diagnosis. This study highlights the need to make increased awareness of this disease as well as therapeutic options in the medical community a national health care goal, in order to reduce diagnostic delay and to improve patient care.

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Abstract N°: 556

Hidradenitis suppurativa: influence of hormonal factors on disease activity in women in France

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Introduction & Objectives:

Hidradenitis suppurativa (HS) affects 3 women for 1 men; however, impact of hormonal factors on HS has infrequently been evaluated.

Materials & Methods:

A prospective multicentre cohort study conducted by 150 physicians involved in HS management, included all consecutive patients with HS seen in consultations. Anonymously recorded clinical examination data was collected using standardized case report forms. We performed an analysis including all women, to evaluate the impact of hormonal factors on HS and to describe the use of contraception and the number of live births.

Results:

Characteristics of the 884 women are detailed in Table 1. 63% of women reported no impact of menstrual cycle on HS activity, 0.4% an improvement and 36.5% a worsening, mostly in second part of the menstrual cycle. There was a statistical association between the use of oral contraception (OC) and premenstrual HS flareup (27.8% vs 21.6% in women without OC, $p=0.047$). 452 women have had at least one living birth. Considering the women of childbearing age, the mean number of living birth per women was $1.0+-1.2$. Among theses, 61.4% reported no impact of pregnancy on HS activity, 23.3% an improvement and 15.3% a worsening; 57.6% reported no impact of post-partum on HS activity, 40.3% a worsening and 2.1% an improvement. A higher proportion of women with pre-menstrual HS flareup (20,7%) had a worsening of HS during pregnancy. Among the menopausal women, 72.1% reported no impact of menopause on HS activity, 19.7% a worsening and 8.2% an improvement.

Conclusion:

6 out of 10 women reported no impact of physiological hormonal variations on HS activity. Only 36.5% of women reported HS flare-up related to menstrual cycle, contrary to recent smaller studies with web-based questionnaires in which 62.4 to 76.7% of women reported HS worsening with menses. Use of OC was associated in our study with a higher rate of premenstrual flareup of HS, suggesting an impact of hormonal treatment. Pregnancy was more likely to cause no change in HS activity. Available data on pregnancy influence on HS activity are contradictory: 2 studies reporting no effect in 53.1 and 72% of women, 2 reporting an improvement in 36.6 and 45%, and 1 reporting a worsening for 61.9%. Less women in our study had worsening of HS in post-partum than previously described (66.1-69%). Improvement of HS after menopause, which has been previously described is questioned by our results and the low rate of improvement (16.5%) in a recent study. However, we can't rule out highly improved post-menopausal women no longer consult and were not captured in our study.

We found an overrepresentation of oral contraception compare to French general population (64.4% vs 36.5%).

The number of live births per women in our study was much lower than in French general population (1.87).

Several reasons can be hypothesized: more HS women being single, sexual dysfunction, impact on fertility, higher rate of spontaneous abortion, worries about being pregnant, incompatibility of HS treatments with pregnancy....

Limitations of our survey include recollection bias given the nature of the study, the absence of detail about the type of oral contraception. Evaluation of fertility in HS women was not possible. However, the strengths of this study are its large sample size and the collection of the data by a physician.

Our study illustrates the limited impact of physiological hormonal variations on HS activity. It underlines a much lower fecundity rate compared to general population.

	n= 884
Mean age (years)	33 ± 11.1
Repartition according to the age (n,%)	
- < 18 years	47 (5,3)
- 18 to 45 years	690 (78)
- > 45 years	146 (16,5)
- MD	1
Mean age of HS onset (years)	20.9±8.5
Hurley stage (n,%)	
- I	421 (47,6)
- II	352 (39,8)
- III	111(12,6)
Type of contraception (n,%)	
- None	353 (39,9)
- Oral contraception	286 (32,3)
- Intrauterine device	104 (11,8)
- Implant	35 (3,9)
- Physical contraception	18 (2)
- MD	8 (0,9)
- Menopausal women	80 (9)

Table 1: Characteristics of the 884 women in the Epiver study

MD: missing data



Abstract N°: 573**Characteristics of pediatric onset hidradenitis suppurativa**

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Introduction & Objectives:

Pediatric onset of hidradenitis suppurativa (HS) occurs in 2.2 to 38.3% of cases. Differentiation with adult-onset HS is controversial with recent data suggesting a clinical spectrum comparable in the 2 populations in studies with small number of pediatric onset HS, and a high frequency of comorbidities in a retrospective study of 481 patients with pediatric onset HS.

Materials & Methods:

We performed a prospective multicentric cohort study including 1428 HS patients, objective of which was to describe the epidemiology of HS. In this ancillary study we compared the demographic and clinical characteristics of HS patients according to the age of onset (pediatric <18 years, or adult).

Results:

Among the 1428 patients of the study, age of HS onset was available for 1384, with 528 patients with pediatric onset and 856 patients with adult onset of HS whose characteristics are described in Table 1. Patients with pediatric onset HS had more frequently HS lesions in inguinal folds (76.7 versus 71.4%, $p=0.029$), mammary region (6.1 versus 3.3%, $p=0.013$), face (29.5 versus 22.9%, $p=0.006$), trunk (18.6 versus 13.7%, $p=0.015$) and legs (5.9 versus 3.3%, $p=0.020$). Patients with adult onset HS had more frequently HS lesions in genital area (36.1 versus 28.6%, $p=0.004$) and scalp (4.4 versus 2.3%, $p=0.036$). More patients in the adult onset group had associated dyslipidaemia (8.4 versus 3.2%, $p<0.001$) and diabetes mellitus (5 versus 1.1%, $p<0.001$). Frequency of hypertension (respectively 5.1 and 7.6%) was comparable between the two groups.

Conclusion:

Our study confirms the feminine predominance and the frequency of familial HS history in pediatric onset HS. Contrary to the large retrospective study of Liy-Wong et al. (with a predominance of North America centers) we did not show a high prevalence of comorbidities in patients with pediatric onset HS. In our study, the mean diagnostic delay was 9.6 years in the pediatric onset group, much longer than in the study of Liy-Wong et al. (2 years) and closer to the average diagnostic delay in France (8.4 years). No difference of severity (evaluated by Hurley staging or DLQI) was identified according to the age of onset of HS. In our study, localization of HS lesions differs according to the age of onset with more patients with follicular lesions (face, trunk, legs) and lesions of the inguinal folds or mammary area in the pediatric onset group.

Limitations of our survey include recollection bias given the nature of the study, and the lack of a control group. However, the strength of this study is its large sample size and the examination by physicians implicated in HS management.

	Pediatric onset HS (n=528)	Adult onset HS (n=856)	
Mean age at inclusion (years)	28.7+10	36.5+10.5	p<0.001
Mean age at HS onset (years)	14.5+2.1	25.7+ 7.7	p<0.001
Mean age at HS diagnosis (years)	24.1+8.9	31.9+ 9.3	p<0.001
Women (%)	70.3	56.1	p<0.001
Mean BMI (kg/m ²)	27.45+8.26	27.82+8.27	p=0.122
Hurley stage (%)			
I	46.7	42.8	p=0.247
II	39.4	40.5	
III	14	16.7	
Family history of HS (%)	28.2	22.8	p=0.024
Family history of pilonidal cyst (%)	14.6	10.1	p= 0.011
Familial history of inflammatory bowel disease (%)	5.3	4.3	P=0.405
Familial history of chronic inflammatory rheumatism (%)	3.8	6.2	p=0.051
Smokers (%)	67.8	82.1	p<0.001
Cannabis use (%)	20.5	19	P=0.520
Chronic inflammatory rheumatism (%)	5.5	4.9	p=0.631
Inflammatory bowel disease (%)	1.7	4.7	p=0.004
Pilonidal cyst (%)	33.3	30.5	p=0.269
Acne (%)	36.9	33.6	p=0.213
Mean DLQI	12.7+7.3	12.4 +7.3	p= 0.450
Mean pain (VAS)	5.7+3.3	5.3+3.3	p= 0.047

Table 1: Characteristics of patients

HS: hidradenitis suppurativa, BMI: Body Mass Index, DLQI: dermatology Life Quality Index (from 0 to 30), VAS: Visual Analogic Scale (from 0 to 10)



Abstract N°: 611**Screening for diabetes mellitus in patients with hidradenitis suppurativa**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease that is commonly associated with metabolic syndrome. Among these, diabetes mellitus (DM) may be the most common endocrine comorbidity in HS patients. In two BMI-adjusted meta-analyses, the pooled odds ratios for DM were 2.17-fold (95% CI, 1.9–2.6) and 2.8-fold (95% CI, 1.8–4.3) higher in HS patients compared to controls. The current German guidelines for the management of HS do not contain any recommendations regarding DM. Here, we wished to address this gap in the early detection of DM, and thereby the prevention of secondary diseases, specifically in HS patients. The aim of the present study was to investigate the prevalence of different types of DM, and the impact on the quality of life in HS patients as a basis for recommendations concerning DM screening in routine clinical practice. Moreover, a particular focus was placed on identifying HS patients with a high risk for developing or presenting with DM.

Materials & Methods:

In this monocentric investigation, data from 99 HS patients were collected. All patients underwent DM screening by the examination of HbA1c levels and fasting blood glucose levels, as well as by the collection of the history of known comorbidities. DM was present with an HbA1c > 6.5% and an HbA1c between 5.7% and 6.4% was considered prediabetes. A fasting blood glucose level \geq 126 mg/dL was also an indicator of DM. HS patients with DM were subdivided according to the clusters of the All New Diabetics In Scania (ANDIS) study. Diabetes types 1–4 were established based on medical history, known comorbidities, presence of antibodies and initial manifestation. We performed a sample size calculation using two-sample comparison. We calculated that at least 88 patients were needed for our study. The statistical analysis of all the data was carried out with IBM SPSS Statistics (version 29.0.0.0). A p-value < 0.05 was considered as significant.

Results:

Most of the HS patients with DM had type 2 diabetes (n = 19, 95%). In one case, type 1 DM was present. most common DM cluster type in HS was mild obesity-related diabetes (MOD) at 75%, followed by cluster type severe insulin-deficient diabetes (SIDD) at 15%. In our screening, another 23 patients had prediabetes.

The mean age differed significantly and was higher in HS patients with DM (p = 0.001). HS patients with DM had a significantly higher BMI than patients without DM (34.8 \pm 6.1 kg/m² vs. 30.6 \pm 6.6 kg/m²; p = 0.008). In patients with DM, the prevalence of Hurley III was 70% and in patients without DM, the prevalence of Hurley III was only 39.2% (p = 0.01). We included all variables from the univariable analyses with a p value \leq 0.05. Thus, we determined that age and BMI showed an increased OR of 1.1 (95% confidence interval (CI) 1.03–1.16; p = 0.005) and 1.2 (95% CI 1.02–1.25; p = 0.019), respectively. Interestingly, compared to other Hurley stages, patients at Hurley III stage were 5.3-fold more likely to present with DM (95% CI 1.01–27.9; p = 0.048).

Conclusion:

In summary, DM was confirmed to present an important comorbidity in HS patients. Regular screening of HbA1c or fasting blood glucose levels should be performed in patients from the 4th decade of life with severe forms of HS, especially Hurley stage III. A recommendation to screen for DM in this high-risk group should be included in the forthcoming guidelines on clinical management of HS. A high BMI was also associated with an increased risk of DM.

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Abstract N°: 645**Dalbavancin for the treatment of severe hidradenitis suppurativa**

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Introduction & Objectives: Hidradenitis suppurativa (HS) is a chronic inflammatory recurrent skin condition that causes abscesses and frequent fistula formation. HS is challenging to treat and significantly impairs the patient's quality of life. Dalbavancin is a lipoglycopeptide antimicrobial long-acting medication that has been used for the treatment of skin soft tissue infections (SSTIs) and recently for the management of severe hidradenitis suppurativa. Here we report a case of severe refractory hidradenitis suppurativa who responded to treatment with dalbavancin and improved the quality of life, pain, and pruritus of the patient.

Materials & Methods: In October 2022, a 53-year-old male with severe refractory hidradenitis suppurativa (HS) presented to our Dermatology outpatient Department for consultation. He was currently on treatment with adalimumab subcutaneous (sc) injection of 80 mg every 14 days for his Crohn's disease since 2005. He had previously taken several courses of several antibiotics such as oral doxycycline, amoxicillin/clavulanic acid, and intravenously ceftriaxone with modest improvement. On clinical examination, he had multiple inflammatory nodules, abscesses, and fistulas mainly on his axilla, buttocks, inguinal area, and thighs. From his past medical history (PMH) he was a regular smoker with 40 pack years, he had Crohn's disease, a history of previous deep vein thrombosis (DVT), Hashimoto disease, and depression. His regular medications were acetylsalicylic acid (ASA) 100mg and citalopram 20 mg daily. He was Hurley stage 3, IHS4= 148, the patient's reported disease severity score was 8/10, his DLQI was 16, Skindex symptoms= 75, Skindex emotions=61.90, Skindex functioning=26.66, Skindex total=54.16, pruritus severity scale=6/10, VAS pain=80/100, and his general health as measured by EQ5D-5L index was 0.725.

Results: He was administered intravenously dalbavancin 1500mg followed by another 1500mg after one week. After 4 and 8 weeks of follow-up, the patient showed a significant improvement mainly in his inflammatory nodules, abscesses, and draining fistulas. On clinical examination after 8 weeks of follow up his IHS4 score was 96 and his HiSCR=60. His pruritus score reduced to 3/10 and his VAS pain to 50/100. After 8 weeks, there was also a great improvement in his quality of life with the patient's reported disease severity score=5/10 DLQI=10, Skindex symptoms= 58.33, Skindex emotions=45.23, Skindex functioning=16.66, Skindex total=39.58 and EQ5D-5L index =0.768.

Conclusion: There are only a few reports regarding the use of Dalbavancin in the management of severe HS. In a previous case series, dalbavancin 100mg iv was administered once to eight patients that improved significantly their clinical presentation and their DLQI and VAS pain scores. In our case, a different dose regimen was administered of dalbavancin 1500mg once and this was repeated after 14 days. Also, we evaluated its efficacy with patients' reported outcomes and also assessed the intensity of pruritus, anxiety, depression, and general health before and after treatment that was not previously evaluated in other studies. Our case supports the efficacy of dalbavancin in the management of severe refractory treatment of hidradenitis suppurativa. Determining the function of dalbavancin in HS and defining its anti-inflammatory and immunomodulatory potential might be important. Further studies are needed to validate these results.

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Abstract N°: 678**Quality of life in Hidradenitis Suppurativa: A Scoping Review**Amrit Kaur¹¹Galway University Hospital, Dermatology Unit, Galway, Ireland**Introduction & Objectives:**

Hidradenitis Suppurativa (HS), is a chronic, relapsing, inflammatory skin condition which is physically, psychologically and socially disabling and often affects a patient's quality of life (QOL). There are numerous QOL tools used in dermatology, however, assessment of QOL in patients with HS is difficult due to the inability of generic QOL tools to specifically capture QOL in patients with Hidradenitis Suppurativa (HS). There has been a gradual increase in the use of generic and disease specific QOL tools in last few decades. The aim of this scoping review is to evaluate the most widely used generic QOL tools and HS specific QOL tools to identify the psychometric evaluation of such tools.

Materials & Methods:

Design: A Scoping review (SR) guided by Joanna Brigg's Institute (JBI) manual and Arskey O'Malley framework guidelines. Data extraction included the studies with psychometric evaluation of QOL tools used in dermatology.

Results:

Ten papers were included in the review, eight papers demonstrated HS specific QOL assessment tools. The psychometric properties of these tools were underpinned by reliability, validity and sensitivity measurement. Six disease specific tools were identified in this SR however they all lack full psychometric evaluation.

Conclusion:

This review indicates that there is a very little research in the field of QOL tools for HS. It is very important to develop and validate disease specific tools to measure the real impact of disease on patients QOL. QOL instruments can evaluate the impact on life of a HS patient, thus helping improve intervention and management of disease. A validated QOL tool for HS with clinical and patient utility is needed.



Abstract N°: 738**Unilateral breast enlargement - coincidence or unknown side effect of systemic isotretinoin treatment**Michał Niedźwiedź¹, Małgorzata Skibińska¹, Aleksandra Lesiak¹, Joanna Narbutt¹¹Medical University of Lodz, Department of Dermatology, Pediatric Dermatology and Oncology, Łódź, Poland

Introduction & Objectives: Isotretinoin has been used as a systemic treatment for severe acne for many years. Side effects caused by isotretinoin are or well known, including teratogenic effect, cheilitis and dry eyes, or still controversial, as depression. We present two cases of sisters with unilateral enlargement of mammary gland started during therapy with isotretinoin.

Materials & Methods: Nineteen-year-old female started oral isotretinoin for severe acne at a dose of 20 mg daily in January 2020. Seven months later she noticed unilateral enlargement of the left mammary gland with visible stretch marks around the nipple. The isotretinoin treatment was ceased, and the breast gradually returned to its previous size. Due to the deterioration of her acne systemic lymecycline 300 mg a day with topical trifarotene once a day were introduced with gradual skin improvement within the next six months.

Patient's sister, 13-year-old female, also required systemic therapy for severe acne, which was started in May 2020 with oral isotretinoin. In September 2020 she developed the unilateral enlargement of the right mammary gland. Isotretinoin has been ceased and oral antibiotics and topical treatment were started. Again, the size of her breast decreased over the next 3 months. The antibiotic treatment was not helpful and due to the severity of her acne a shared decision was made to restart isotretinoin at a dose of 10 mg per day. A slight enlargement of the right breast was observed again. The dose was reduced to 10 mg every other day and gradually the size of the breast returned to normal.

Results: Both patients underwent extensive cardiological, gynaecological, and endocrinological assessments with no significant abnormalities observed. Specifically, ultrasound of the breasts and the echocardiography did not reveal any concerns. Sisters are still under dermatological observation. It is worth mentioning that the third sister who did not have acne but lived at the same house, did not observe any changes in her breasts size. The possible explanation of the breast enlargement in connection with systemic isotretinoin treatment could be disrupted retinoic acid signalling pathway.

Conclusion: To the best of our knowledge, we present the first case report of unilateral mammary gland enlargement during isotretinoin therapy for acne. It seemed to be dose dependent and subsided after lowering the dose of the medication or stopping the treatment. The cause of this phenomenon remains unknown, however dysfunction of retinaldehyde dehydrogenases should be considered as a possible explanation.



Abstract N°: 789

The comparative efficacy of topical Minocycline gel 4% vs topical clindamycin phosphate gel 1% in Indian patients with acne vulgaris

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Introduction & Objectives:

Acne vulgaris (AV), the most common skin disorder, predominantly affecting pre-adolescent and adolescents with a global prevalence of 9.4%. Though multifactorial, *Cutibacterium acnes* and inflammatory processes play critical role in AV and hence antibacterial are prescribed for its treatment. Though clindamycin is commonly prescribed topical antibacterial, an increase in the resistance has been noted. Topical minocycline 4% was approved in the US as foam (2019) and in India as gel formulation (2022). This clinical trial was conducted in view of scarcity of comparative data between these two drugs in acne.

Materials & Methods:

This was a randomized, comparative study, conducted on 100 patients with acne (grade 2-3) to evaluate efficacy and safety of both the drugs for 12 weeks. The eligible patients were divided in two equal groups; one group receiving topical minocycline gel 4% while other receiving topical clindamycin 1% gel. No other treatment was allowed. Efficacy was assessed by Investigator Global Assessment (IGA) treatment success and change in inflammatory and non-inflammatory lesion count while safety was assessed by cutaneous tolerability assessment and adverse events (AE) reported by patients.

Results:

Out of 100, 91 patients completed 12-week treatment and were included in final analysis. Table 1 depicts the baseline characteristics of all patients in both the groups. Both the treatments were found to be effective in reducing inflammatory and non-inflammatory lesions ($p < 0.05$) at week 12 from baseline but minocycline was found to be statistically significant than clindamycin (Table 2 & 3). Moreover, minocycline was statistically significant than clindamycin in mean absolute change in inflammatory as well as non-inflammatory lesions at week-12 from baseline (Figure 1). In terms of IGA success, similar results were noted for minocycline (Table 4). No AE were reported by any patients in both the groups but on cutaneous tolerability, minocycline scored over clindamycin gel (Table 5). Moreover, these results reflected on quality of life (QoL) as well, where minocycline was statistically significant than clindamycin in improving QoL (Table 6).

Conclusion:

Clindamycin was found to be effective in acne management in many clinical studies but increasing resistance limited its use. Though minocycline was approved in acne in systemic form earlier, its topical form was approved recently. Moreover, owing to its inherent properties, it is less likely to develop resistance. Additionally, its topical form is devoid of systemic adverse events seen with systemic form.

This was the first clinical comparative study between minocycline and clindamycin gel in patients with acne. From the results, it was concluded that minocycline was statistically superior than clindamycin at week-12 in terms of reduction of acne lesions. Moreover, it was well tolerated and hence it may be considered as the first line topical

antibiotic in acne management.

Table 1: Descriptive statistics for baseline characteristics of patients in two arms

Parameter		Topical minocycline 4% gel (N=50)	Topical clindamycin 1% gel (N=50)	P- value
Age (years) Mean ± SD	Mean ± SD	19.76 ± 4.38	20.58 ± 4.59	0.363
	Median	18	20	
	Min	14	14	
	Max	31	32	
Gender [n (%)]	Male	18 (36.0)	16 (32)	0.673
	Female	32 (64.0)	34 (68)	
Grade of acne [n (%)]	1	10 (20.0)	18 (36.0)	0.069
	2	31 (62.0)	29 (58.0)	
	3	9 (18.0)	3 (6.0)	
Duration of acne (months) [Mean ± SD]	Mean ± SD	12.24 ± 13.63	8.08 ± 9.91	0.084
	Median	7	4	
	Min	1	1	
	Max	60	48	

Table 2: Between and within arm comparison of number of inflammatory lesions at different time intervals

Number of inflammatory lesions at	Topical minocycline 4% gel (N=50)						Topical clindamycin 1% gel (N=50)						P- value
	n	Mean	SD	Median	Min	Max	n	Mean	SD	Median	Min	Max	
Baseline	50	6.22	5.03	5.00	0	20	50	4.32	3.89	3.00	0	15	0.066
Week 9	49	1.80	2.26	1.00	0	7	49	2.71	2.61	2.00	0	10	0.047
Week 12	46	0.98	1.51	0.00	0	6	45	1.69	1.84	1.00	0	6	0.038
P-value	< 0.0001						< 0.0001						

Table 3: Between and within arm comparison of number of non-inflammatory lesions at different time intervals

Number of non- inflammatory Lesions at	Topical minocycline 4% gel (N=50)						Topical clindamycin 1% gel (N=50)						P- value
	n	Mean	SD	Median	Min	Max	n	Mean	SD	Median	Min	Max	
Baseline	50	14.06	8.22	12.00	2.00	42.00	50	12.74	6.21	12.00	0.00	35.00	0.618
Week 9	49	4.39	3.70	4.00	0.00	15.00	49	6.69	3.70	6.00	2.00	18.00	0.001
Week 12	46	2.07	2.45	1.50	0.00	8.00	45	4.49	2.84	4.00	0.00	14.00	< 0.0001
P-value	< 0.0001						< 0.0001						

Table 4: Comparison of investigator global assessment treatment success between two arms

Investigator Global Assessment – Treatment success		Topical minocycline 4% gel (N=50)		Topical clindamycin 1% gel (N=50)		P- value
		n	%	n	%	
Week 9	No	34	69.4%	47	95.9%	0.001
	Yes	15	30.6%	2	4.1%	
Week 12	No	12	26.1%	24	53.3%	0.015
	Yes	34	73.9%	21	46.7%	

Table 5: Comparison of tolerability assessment for different parameters at time points between two arms

Tolerability assessment parameter		Topical minocycline 4% gel (N=50)		Topical clindamycin 1% gel (N=50)		P-value
		n	%	n	%	
Erythema	None	46	100.0%	40	88.9%	0.062
	Mild	0	0.0%	5	11.1%	
Dryness	None	40	87.0%	22	48.9%	< 0.0001
	Mild	6	13.0%	23	51.1%	
Hyperpigmentation	None	44	95.7%	45	100.0%	0.484
	Mild	2	4.3%	0	0.0%	
Skin peeling	None	45	97.8%	38	84.4%	0.060
	Mild	1	2.2%	7	15.6%	
Itching	None	44	95.7%	30	66.7%	0.001
	Mild	2	4.3%	15	33.3%	

Table 6: Acne QOL comparison between and within arm

Acne QOL	Topical minocycline 4% gel (N=50)						Topical clindamycin 1% gel (N=50)						P-value
	n	Mean	SD	Median	Minimum	Maximum	n	Mean	SD	Median	Minimum	Maximum	
Baseline	50	66.02	20.67	67.00	25.00	109.00	50	70.24	16.20	70.00	27.00	105.00	0.301
Week 12	46	99.72	11.11	100.00	70.00	114.00	45	89.84	12.76	92.00	50.00	112.00	< 0.001
P-value	< 0.0001						< 0.0001						

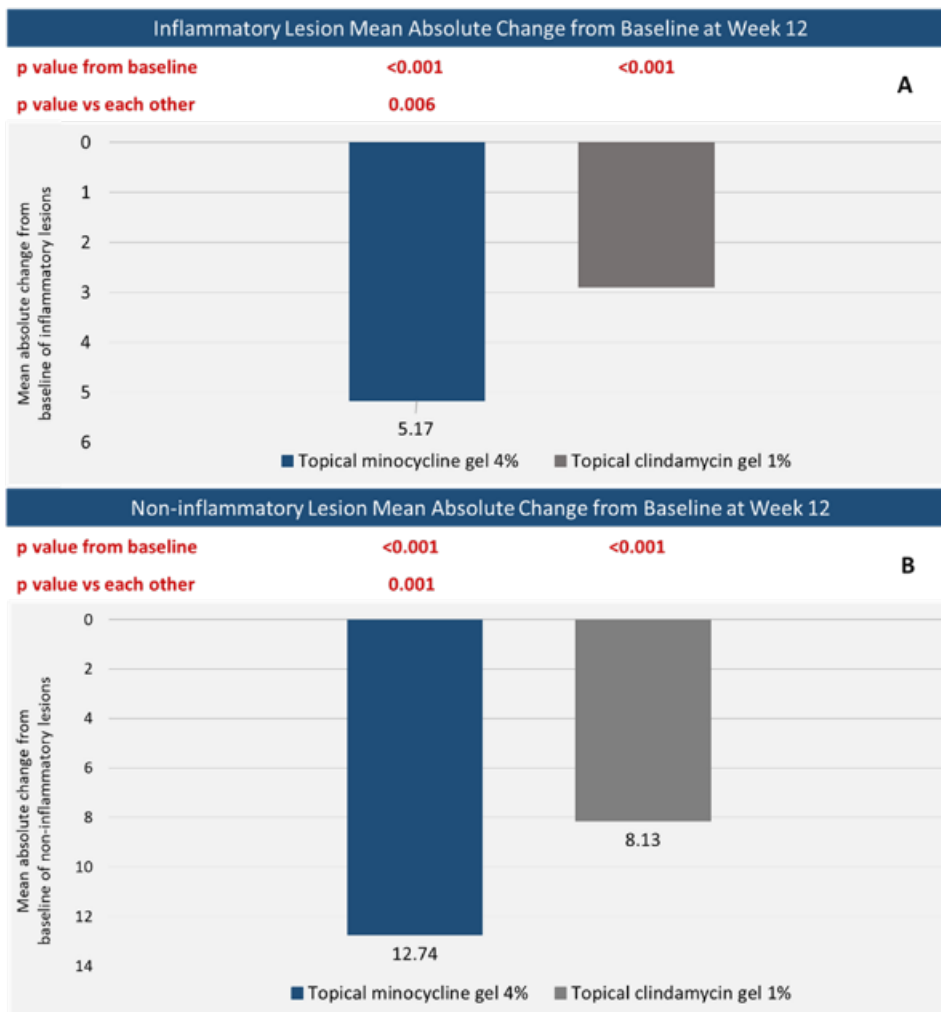


Fig. 1: Mean absolute change at week-12 from baseline in inflammatory and non-inflammatory lesions



Abstract N°: 896

A tailored skincare routine provides benefits to patients with moderate acne vulgaris and post-inflammatory hyperpigmentation in combination with topical trifarotene

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Introduction & Objectives:

Post-inflammatory hyperpigmentation (PIH) is defined as an acquired hypermelanosis following cutaneous inflammation and is very common in patients with acne vulgaris. It is established that retinoids such as trifarotene act on acne vulgaris as potent modulators of inflammation, cellular differentiation and keratinization. Topical depigmenting and antipigmenting activity of trifarotene was shown in vivo.

The primary objective of this study was to evaluate the efficacy and safety of trifarotene 50 µg/g cream (TF)

vs vehicle (Veh group) in the treatment of moderate acne vulgaris with acne-induced PIH in subjects with skin types I-VI (NCT05089708). Proper skin care is considered as an important component of the total management of acne. A facial skin care routine consisting of a gentle cleanser, a moisturizing lotion and a SPF30 was provided in both groups. This analysis will evaluate specifically the benefits of a tailored skin care routine in patients with moderate acne vulgaris and PIH.

Materials & Methods:

Multi-center randomized, double-blind, vehicle-controlled parallel-group study. Approximately 120 subjects (13-35 y.o) were randomized (1:1). Enrolled population was targeted to include approximately 30% light skin (I-III) and 70% dark skin (IV-VI). PIH was assessed using the PIH overall disease severity (ODS) score. Subjects were provided with a skin care routine including a Gentle Skin Cleanser (twice daily morning and evening), a Moisturizing lotion (extra moisturizer to be used as needed) both containing vitamins B5 & B3 and glycerin and a Sunscreen SPF 30 specifically formulated for oily skin (used daily on the face, morning) and to be re-applied to face before sun exposure). Subjects were assessed from week(W) 4 to W24. Subjects answered to a satisfaction questionnaire about each products and the full skincare routine.

Results:

A nominally significant improvement from baseline in the PIH ODS score was achieved with trifarotene vs vehicle (-1.6 vs -1.1; $p=0.03$) at W12; however, the absolute change was comparable between the groups at W24 and both the groups showed improvements from baseline. In the TF group, 91.1% of subjects agreed not being bothered by the side effects of the treatment and more than 90% of them agreed that the cleanser and the moisturizing lotion help to reduce skin irritation and dryness and increase compliance with the acne treatment. In parallel, we observed a decrease of Treatment Emergent adverse events (TEAE) linked with Retinoids associated dermatitis up to 50%. Focussing on the Veh group only, we observed a significant 40% reduction of PIH vs D0 showing significant effect of the dermocosmetic regimen on PIH.

Conclusion: A tailored skincare routine is warranted as part of the integral management of moderate acne with PIH. This analysis demonstrated the additional benefits of the skincare routine on top of the TF treatment for the management of PIH. Additionnally, the skincare routine improved side effects (irritation & dryness) related to TF

treatment and showed a high level of satisfaction and compliance in acne patients.

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Abstract N°: 909**Clinical burden of hidradenitis suppurativa with draining tunnels**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a debilitating, chronic, inflammatory skin disease that affects an estimated 0.3–1.0% of people worldwide and is associated with a considerable clinical burden. Patients present with painful skin lesions typically affecting skin folds in the axillary, groin, gluteal and perianal regions. These lesions include inflammatory nodules (IN), abscesses and draining tunnels (dT). Although the overall burden of HS has previously been described, there are no data on the impact of dT on clinical burden.

Materials & Methods:

This cross-sectional study used real-world, retrospective, clinical data from the Adelphi HS Disease Specific Programme (DSP) across the United States, France, Germany, Italy, Spain and the United Kingdom. Data were collected from November 2020 to April 2021 through a combination of physician surveys, medical record data extraction (also completed by the physician) and patient surveys. All physicians in the study were dermatologists who were actively involved in the management of HS. Patients were classified as having moderate-to-severe HS based on physician assessment.

Results:

Of the 580 patients with moderate-to-severe HS included in this study, 46% (n=264) had dT. Demographics were similar between the two groups. For patients with and without dT, mean age was 38.9 and 33.3 years, 55.3% and 57.6% were female, and mean body mass index was 28.6 and 28.4 kg/m², respectively. The most common comorbidities reported in patients with HS were obesity, depression, acne, anxiety and dyslipidaemia. More patients with dT than without dT had deteriorating or unstable disease in the 12 months before study initiation (51.6% vs 35.1%). In addition, patients with dT had more skin lesions (nodules/abscesses); half of patients (50.4%) with dT had 2–5 abscesses, compared with 33.5% of patients without dT, and more patients with dT had ≥6 IN (18.6% vs 6.3%) or scarring (92.0% vs 71.2%). More patients with dT than without dT experienced inflammation (73.5% vs 63.5%), drainage of lesions (62.1% vs 40.0%), malodorous drainage (40.5% vs 21.3%) and depression (29.5% vs 18.1%). In addition, more patients with dT than without dT had lesions affecting the anus/perianal skin (24.6% vs 13.3%) and genitalia (39.8% vs 26.6%). The most common treatments for HS that patients with dT received at the time of data collection were systemic antibiotics (49.6% of patients with dT vs 48.8% without) and biologics (40.6% of patients with dT vs 27.5% without). Patients with dT were also more likely to receive treatment

with systemic/intralesional corticosteroids (17.7% vs 8.5%). A considerable proportion of patients were eligible to receive biologics but were not receiving them (58.4% of patients with dT vs 30.3% without), often because the physician wanted to exhaust other treatment options first. Moreover, more physicians felt unsatisfied with the available treatments for patients with dT than without dT (61.4% vs 51.2%). Although some patients had been treated with surgical incision and drainage (48.5% of patients with dT vs 31.3% without), many had never received surgical intervention (40.5% of patients with dT vs 60.8% without).

Conclusion:

Overall, our findings show that patients with HS with dT experience a greater clinical burden than patients without dT. This highlights an unmet need for more effective disease management approaches in this population, such as biologics and surgery.

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Abstract N°: 956**A dermocosmetic regimen is beneficial in the management of skin sensitivity caused by a retinoid-based acne fixed combination**

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Introduction & Objectives:

Topical retinoids and benzoyl peroxide cause skin discomfort mainly during the first weeks of application. In this context, a dermocosmetic is important to reduce treatment-related signs and symptoms.

This study assessed the benefit of a DC compared to routine care (RC) in mitigating local tolerance issues caused by a retinoid/BPO-based fixed combination in acne subjects.

Materials & Methods:

Double-blind, randomised study in subjects ≥ 16 years with mild to moderate acne. Evaluations took place at Day 0, 7, 14, 28, 56 and Day 84 including erythema, desquamation, burning, itching and stinging all assessed on a 4-point scale (none to important), skin discomfort (SD) being a composite score of local treatment-related signs and symptoms and acne severity. Subjects applied the DC or RC daily together with the fixed combination for 84 days.

Results:

The mean age of the 88 subjects was 21 years; 84% were females.

Clinical signs and symptoms scores were significantly reduced with DC than with RC after 14 days ($p < 0.05$). At Day 0 the SD score was 0.8 in both groups. The difference was statistically significant with DC compared to RC (1.6 points, vs 2.4 points $p < 0.05$) after 14 days. DC performed better than RC at all time points. Acne severity improved in both groups.

Local tolerance was good for both regimens.

Conclusion:

DC significantly reduces retinoid/BPO-based fixed combination-related local signs and symptoms as well as skin discomfort compared to RC especially during the first 14 days of treatment without interfering with the clinical efficacy of the treatment thus helping to maintain treatment adherence. Both regimens were well tolerated.

Abstract N°: 962**Dermocosmetic application improves postadolescent acne and quality of life during menstrual cycles**

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Introduction & Objectives:

Few clinical studies have shown that adult female acne may worsen during their luteal (premenstrual) period of the menstrual cycle (MC). Elevated progesterone levels may be transformed into elevated testosterone levels. The latter stimulate androgen receptors present on sebocyte nuclei resulting in an increased sebogenesis with a modified sebum composition leading to flares of non-inflammatory and inflammatory lesions.

This study assessed the benefit of a dermocosmetic (DC) containing the keratolytic agent salicylic acid at 2%, sarcosine and an extract of hydrolysed alginon, on the acne lesion count, sebum levels, marks as well as on quality of life (QoL) of women with postadolescent facial acne during MC.

Materials & Methods:

39 women aged 18 to 45 years, with regular MC, not using hormonal contraception and with a varying oily or combined skin type, ≥ 10 non-inflammatory and ≥ 2 inflammatory lesions and a sebum level $\geq 100\mu\text{g}/\text{cm}^2$ on the frontal area, all increasing during their MC, were enclosed in this study.

Twice-a-week assessments (24 visits) during the 1st (MC0), 2nd (MC1) and 3rd MC (MC2) included an exposome questionnaire at MC0, non-inflammatory and inflammatory lesions count, sebum level determination, red and brown marks count and self-perceived skin oiliness (scale from 0=none to 4=very oily and greasy). QoL using the AcneQoL questionnaire was assessed on Day 0, Day 28 and Day 56. DC was applied daily during MC1 and MC2.

Results:

All subjects had regular MC, oily or mixed skin and/or acne lesion flares during MC0. The majority of subjects were stressed (74%), tired (69%) and exposed to environmental pollution (64%).

After MC2, DC had significantly decreased the peaks of non-inflammatory lesions (-29% of maximum value, 74% had improved) and inflammatory lesions (-20% of maximum value, 67% had improved). DC decreased the peak sebum level (-20.8 $\mu\text{g}/\text{cm}^2$, 77% had improved), red and brown marks (-17%, 67% had improved) and the peak of skin oiliness (-28% of maximum value; 62% had improved). All changes from MC0 were statistically significant ($p < 0.05$).

At MC2, QoL had significantly ($p < 0.05$) improved from MC0: self-perception 43% (90% reported improvement), emotion: 40% (87% reported improvement), social role: 22% (62% reported improvement), acne symptoms: 46% (97% reported improvement) and total score: 38% (92% total score improved).

Conclusion:

The results from the present study provide evidence that the tested DC applied daily during menstrual cycles is

beneficial in reducing peaks of acne lesions, peak of sebum level as well as red and brown marks, additional improving the women's QoL.

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Abstract N°: 1086**International expert consensus recommendations for the use of dermocosmetics in acne**

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Introduction & Objectives:

Acne vulgaris is a very common global problem. Efficacious treatments are available, but clinicians and patients alike are continuously searching for ways to improve acne management. Recently, attention has focused on use of dermocosmetics to enhance outcomes in patients with acne. Dermocosmetics (or “cosmeceuticals”) are skincare products that use sophisticated active ingredients to directly support and care for the symptoms of various skin conditions. They potentially have a biologic activity in skin that supports skin integrity and relieves skin conditions.

Materials & Methods:

A systematic literature review was performed and a panel of dermatologists with interest and expertise in acne management analyzed the literature, held a live meeting, and then conducted a three-step Delphi process online. The panel acknowledged the evidence base for dermocosmetics is less robust than that for prescription products but utilized available evidence and expert opinion to come to consensus.

Results:

The panel suggested that dermocosmetics may be used as monotherapy to treat milder forms of acne or maintain the benefit post Rx treatment, supported by studies demonstrating improved global assessment, reduced acne lesions counts and skin oiliness, and effective maintenance after acne clearance. In addition, the panel recommends dermocosmetics may be used as adjunctive therapy to prescription treatments. As adjuncts, dermocosmetics may help to prevent and manage irritation and/or drug-induced adverse effects, and may also reduce skin oiliness, improve barrier function, and improve adherence, satisfaction, or quality of life of acne patients. Limited evidence also suggests adjunctive use of dermocosmetics may enhance efficacy, perhaps by facilitating the ability of patients to adhere to prescription therapy.

Conclusion:

Together the literature review and expert consensus through Delphi method support the use of dermocosmetics in acne management.

Abstract N°: 1117**Association of smoking burden with disease activity in patients with hidradenitis suppurativa: a hospital-based cohort study**

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Introduction & Objectives:

Although smoking has been associated with disease severity in hidradenitis suppurativa (HS), the current literature is lacking tangible data on smoking habits of patients with HS. The aim of this study was to evaluate the clinical associations of smoking burden in patients with HS.

Materials & Methods:

A total of 678 outpatients (age ≥ 18) with HS from a dermatological university department were included. Data were obtained through interview and clinical examination. HS severity was measured by Hurley stage and International Hidradenitis Suppurativa Severity Score System (IHS4). Demographic factors and smoking history were examined. Pack-years were calculated as the number of years smoked the equivalent of 20 cigarettes per day.

Results:

The median age was 38.6 years (IQR 28.3-51.2); 62.7% were female. A total of 37.2%, 49.6%, and 13.3% had Hurley stage I, II, and III, respectively, and the median IHS4 was 3 (IQR 1-8.25). In total, 55.3%, 22.1%, and 22.6% were current, former, or never smokers. Among smokers, the median number of pack-years were 13.3 (IQR 6-28.1) and the median dose rate (cigarettes per day) was 15 cigarettes (IQR 10-20). Smoking duration was a median 21.7 years (IQR 11.6-35.7), and the median age of smoking onset was 15.7 years (IQR 13.9-18.4). The median time since cessation was 2.7 years (IQR 0.7-7.4) in former smokers. In unadjusted analysis, IHS4 was significantly associated with a high number of pack-years ($r=0.2$, $p<0.001$), dose rate ($r=0.1$, $p=0.009$), and smoking duration ($r=0.2$, $p=0.001$). After adjusting for age and sex, IHS4 was still associated, although not significantly, with number of pack-years ($r=0.3$, $p=0.18$), dose rate ($r=0.3$, $p=0.43$), and smoking duration ($r=0.3$, $p=0.12$). In former smokers, IHS4 was significantly associated with years since smoking cessation ($r=0.3$, $p=0.037$) after adjustment. Mean C-reactive protein and leukocytes were significantly elevated in current smokers compared to those who never smoked (8.3 vs. 5.1, $p=0.04$) and (9.5 vs. 7.0, $p<0.001$), respectively, and when asked how bothersome their skin disease was on a visual analog scale from 0-10, current smokers ranked higher compared to non-smokers (7.2 vs. 6.1, $p=0.001$). The mean age of HS onset was 25.4 years (SD 12). Interestingly, non-smokers had earlier disease onset compared to patients that smoked (20.5 vs. 28.9 years, $p<0.001$). Among smokers, the mean time from smoking onset until HS symptoms began was 12.8 years (SD 12.1).

Conclusion:

Our data indicated that HS patients who are active smokers have a greater inflammatory load and more severe symptoms. A significant correlation between number of pack-years, dose rate and smoking duration and disease severity was demonstrated.

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Abstract N°: 1191**Quality of life impairment of patients with acne sequels**

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Introduction & Objectives:

Inflammatory forms of acne lead to the development of sequels such as scarring and hyperpigmentation, especially on the face, which usually affects quality of life (QoL). Scarring is due to alterations in healing, severity and duration of the inflammatory phenomenon. Multiple studies reported that acne impacts negatively on the QoL and in personal, social and work activities. We aim to assess the effect on the quality of life of acne patients who develop scars through the application of the dermatologic quality of life index (DLQI).

Materials & Methods:

A descriptive retrospective study between May 2021 and December 2022 was conducted in a dermatologic center in Bogota, Colombia. Variables were taken from medical records of patients with acne. Age, sex, presence of AS (scars and hyperpigmentation), and DLQI punctuation were analyzed. Statistical analysis was performed in Microsoft Excel.

Results:

Of 578 patients, 66.10% (n=382) were women. Median age was 20 years. Scars were in 84.42% (n=488) of patients, of which 63.93% (n=312) were women. Ice-pick scars were in 20.93% (n=121), boxcar-scars 10.72% (n=62), rolling-scars in 16.60% (n=96), hypertrophic scars 4.67% (n=27) and postinflammatory hyperpigmentation in 65.39% (n=378). Low impact on QoL was in 45.50% (n=263), 87.45% (n=230) of them presented AS; 31.66% (n=183) had no impact on QoL, of these 77.05% (n=141) presented AS; 16.61% (n=96) had moderate QoL impairment, of these 90.63% (n=87) developed AS; 5.36% (n=31) had great impact on QoL, of them 80.64% (n=25) had AS; and 0.86% (n=5) showed an extremely great impact on QoL, and 100% of them showed AS.

Conclusion:

Acne frequently causes sequels that affect the QoL of patients. In our study, women were the most affected by both acne and the appearance of scars and hyperpigmentation, which is consistent with other studies. The frequency of hyperpigmentation was remarkably high, suggesting that patient education regarding sun protection should be reinforced to the patient, and regarding the opportune initiation of treatments in primary health care. In contrast to other publications, we found that the impact on the QoL was mild, so we consider that the degree of involvement could be assessed with more accurate instruments in future studies. Further studies in our population should evaluate patients with great impact in QoL and the presence of AS, and assess how these variables are interconnected and influence each other in order to establish the best individualized treatment.

Abstract N°: 1200**Intralesional galvanic current: a new therapeutic tool in the treatment of fistulas of patients with hidradenitis suppurativa**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic disease with currently unmet therapeutic needs, especially in lesion-directed therapies. Treatments described to date, such as intralesional corticosteroids, photodynamic therapy or laser, have limited efficacy, especially for the treatment of established structural lesions such as fistulas or tunnels, and are not exempt from adverse effects. The mechanism of action of the intralesional galvanic current (GC) administered by percutaneous needle is based on the production of a stimulus capable of provoking cell necrosis and inducing a new activation of the NLRP3 inflammasome to restart the inflammation control process, and also with a potential positive effect on bacterial biofilms present in some lesions. It has demonstrated safety and efficacy in the treatment of lesions structurally similar to those of HS, such as mammary fistulas. We aimed to describe the short-term effectiveness and safety of intralesional GC for the treatment of inflammatory fistulas in patients with HS.

Materials & Methods:

An open-label study was conducted with 3 scheduled visits. At the baseline visit, patients received the first cycle of GC. At 4 weeks, at visit 2, patients without complete clinical and ultrasonographic response received a second course of GC. At 12 weeks, at visit 3, the final assessment was performed. At each visit, longitudinal and transverse diameters and lesion depth were measured by ultrasonographic examination, and symptoms (pain, suppuration, bad odour and pruritus) were assessed using a visual analogue scale (VAS). Sociodemographic and clinical data were also recorded. The criterion for complete response was the combination of clinical response (absence of suppuration and symptoms) and ultrasound response (reduction of at least 75% in ultrasound size considering the 3 axes).

Results:

Twenty-six patients with HS (61.5% female, 16/26) and inflammatory fistulas were included. In case the patient had several fistulas, only one of them was treated. The mean age was over 35 years, with a mean BMI in overweight grade II range. The most frequent locations treated were the axillae (46.2%, 12/26) and the groin (30.8%, 8/26). At 4 weeks, a significant reduction in diameters and symptom VAS was observed; 80.8% (21/26) of patients achieved clinical remission, while 15.4% (4/26) achieved complete response (clinical + ultrasound). At 12 weeks, diameter and symptom reduction continued; 87.5% (14/16) of patients achieved clinical remission, and 62.5% (10/16) achieved combined remission (12-week follow-up data from 10 patients will be available in June 2023 and will be added in the statistical analysis for presentation at the congress). Adverse effects in the days following the procedure occurred in 42.3% (11/26) and were mild and transient, including mild pain, dysesthesia and pruritus.

Conclusion:

We present intralesional GC as a new safe and effective therapeutic alternative for the treatment of fistulas in patients with HS.

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Abstract N°: 1299

Using setons in the treatment of fistulae in hidradenitis suppurativa: a case series

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is an inflammatory disease of the pilosebaceous-apocrine unit. HS most frequently occurs in young adults. Lesions have a predilection for the axilla and inguinal area. It's characterized by chronic deep-seated nodules, abscesses, fistulae, sinus tracts and scars all of which decreases the quality of life.

Treatment is challenging, focused on decreasing the inflammation involved in HS pathogenesis, and, on the other hand, acting on the lesions resulting from it.

Fistulae and sinus tracts are treated, generally, with wide excisions, and closed using skin grafts or flaps. This is associated with significant morbidity. Furthermore, patients usually present various fistulae in different anatomical regions, requiring several surgeries.

Placement of setons has been used widely for management of perianal fistula tracts in Crohn's disease.

Materials & Methods:

Based on this purpose, we have designed a longitudinal prospective study to evaluate efficacy of the use of setons in HS. The primary endpoint of this study is to demonstrate improvement in the visual analogue scale (VAS) for pain in patients with setons, therefore, getting a better quality of life.

Results:

A first analysis on 16 patients evaluated with 25 fistulae treated with setons exhibit an improvement of VAS; initial mean VAS was 4.68 and after 4-6 weeks from placement of setons mean VAS was 2.33. Adverse events reported included local irritation and their early fall.

Conclusion:

Even though these are preliminary results and a larger number of patients and longer-term follow up are needed, these findings suggest that using setons may be an effective option for patients with fistulae in HS.



Abstract N°: 1414**Efficacy of a dermocosmetic cream compared to benzoyl peroxide gel on acne vulgaris treatment**

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Introduction & Objectives:

Acne vulgaris is a skin inflammatory disease characterized by non-inflammatory (comedones) and inflammatory lesions. Benzoyl peroxide (BPO) is widely used as an efficient, approved treatment for acne. However, this treatment is often associated with skin irritation and/or contact allergy. Current scientific research of the best combinations of ingredients is generating highly efficient dermocosmetic products which could potentially be used as monotherapy for patients with milder forms of acne.

The objective of this study was to compare the efficacy of a dermocosmetic cream ("DC-Eff") containing salicylic acid, lipohydroxy acid, niacinamide, procerad, glycerin, octopirox, zinc salt of L-pyrrolidone carboxylic acid (Zinc PCA), mannose, aqua posae filiformis, thermal spring water, with that of a gel containing 5% BPO in the treatment of acne vulgaris.

Materials & Methods:

The study was approved by an Ethics Committee. A total of 150 Caucasian subjects presenting at least 10 inflammatory lesions (IL) and 10 non-inflammatory lesions (NIL) were randomized in 2 parallel groups (DC-Eff or BPO applied twice a day). Dermatologist evaluated the number of acne lesions at baseline and after 28 and 56 days of treatment.

Results:

A significant reduction of acne lesions was observed versus baseline for both products. The effect of DC-Eff on lesion counts was an average reduction of 8.3 and 10.9 lesions for IL and 11.7 and 20.4 lesions for NIL after 28 and 56 days, respectively. BPO effect on lesion counts was an average reduction of 7.7 and 9.9 lesions for IL and 14.1 and 25.1 lesions for NIL over the same treatment periods. There were no statistically significant differences between the treatments.

Conclusion:

The studied DC-Eff efficiently reduced the number of acne lesions with a level of efficacy comparable to that of BPO.



Abstract N°: 1490**Investigating the Impact of Acne's Anatomical Variations on Social Perception.**Marek Jankowski*¹, Agnieszka Goroncy²¹Collegium Medicum Uniwersytetu Mikołaja Kopernika, Katedra Dermatologii i Wenerologii, Bydgoszcz, Poland,²Uniwersytet Mikołaja Kopernika. Wydział Matematyki i Informatyki, Katedra Statystyki Matematycznej i Eksploracji Danych, Toruń, Poland**Introduction & Objectives:**

Acne has been reported to have a negative impact on quality of life, however quality-of-life scores poorly correlate with disease severity scores. Previous research demonstrated existence of facial areas in which skin lesions have greater impact on gaze patterns. Therefore, we hypothesized that anatomical variants of acne may be perceived differentially. The aim of this study was to investigate effect of anatomic variants of acne on natural gaze patterns and resulting impact on social perception of acne patients.

Materials & Methods:

We have tracked eye movements from 245 adults (mean age = 31,63 SD = 10,63) viewing neutral and emotional faces with clinically relevant anatomical variants of acne (n=130). Images were additionally rated for acne-related visual disturbance while emotional faces were rated for valence intensity. Respondents of an online survey (205 participants, mean age = 35,08 SD = 11,48). were asked to rate their perception of pictured individuals' personality traits.

Results:

Overall, faces with acne were perceived as significantly less attractive (difference: 1.1593; 95% CI, 1.0191 to 1.2995), trustworthy (difference: 0.3549; 95% CI, 0.2260 to 0.4838), confident (difference: 0.9573; 95% CI, 0.7853 to 1.1293), successful (difference: 0.6220; 95% CI, 0.4994 to 0.7445), and dominant (difference: 0.9086; 95% CI, 0.7495 to 1.0675), with mid-facial acne presenting smallest deviation from healthy faces. (Fig 1) T-zone and generalized acne exhibited the least significant difference in respondents gaze behavior pattern from each other. (Fig 2) In concert, there was no significant difference in respondents grading of acne visual disturbance, and ratings for attractiveness, successfulness, and trustworthiness. Adult female acne was rated most visually disturbing and received lowest scores for attractiveness ($F(3; 147)=78.252, p<0,001, \eta^2=0.615$). (Fig 3) Happy faces with adult female acne were rated as less happy than clear-skin faces ($p<0.001$). (Fig 4)

Conclusion:

Anatomic variants of acne have distinct impact on gaze patterns and social perception. Adult female acne has the strongest negative effect on recognition of positive emotions in affected individuals, on attractiveness ratings and, on forming social impressions. If perioral acne lesions are absent frontal lesions determine impact of acne on social perception irrespective of the presence of mid-facial lesions. This perceptive hierarchy should be taken into consideration while deciding treatment goals in acne patients prioritizing achieving remission in perioral and frontal area.

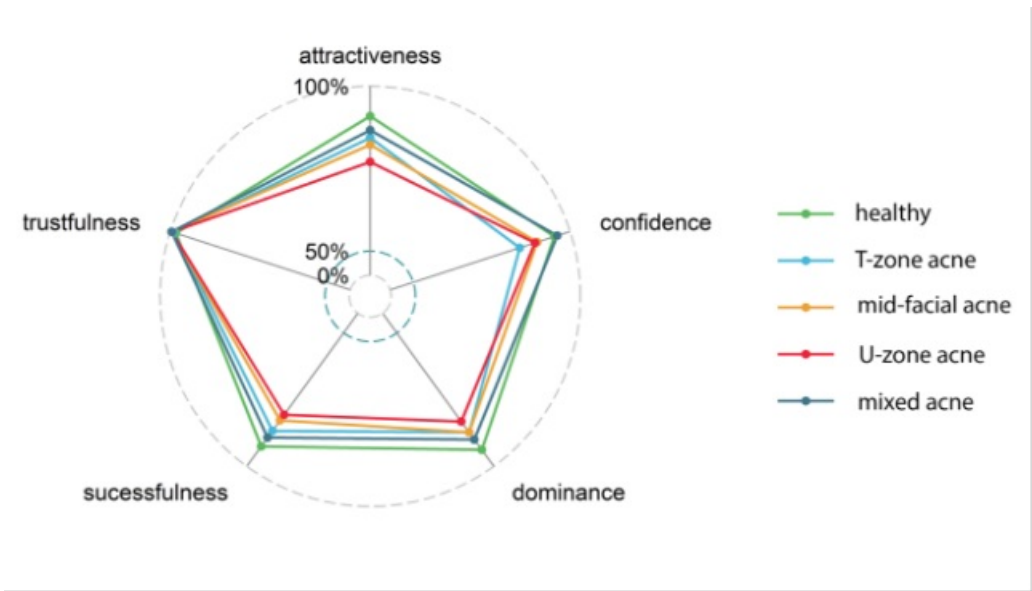


Fig. 1: Radar plot of personality ratings for each analyzed acne variant



Fig. 2: Gaze behavior while watching faces with acne. From left to right: healthy faces, mid-facial acne, T-zone acne, mixed acne, and U-zone acne. Upper row: calculated centroids of gaze fixation. Middle row: Exemplary heat map of spontaneous gaze fixations; Lower row: Exemplary heat map from respondents instructed to assess acne.

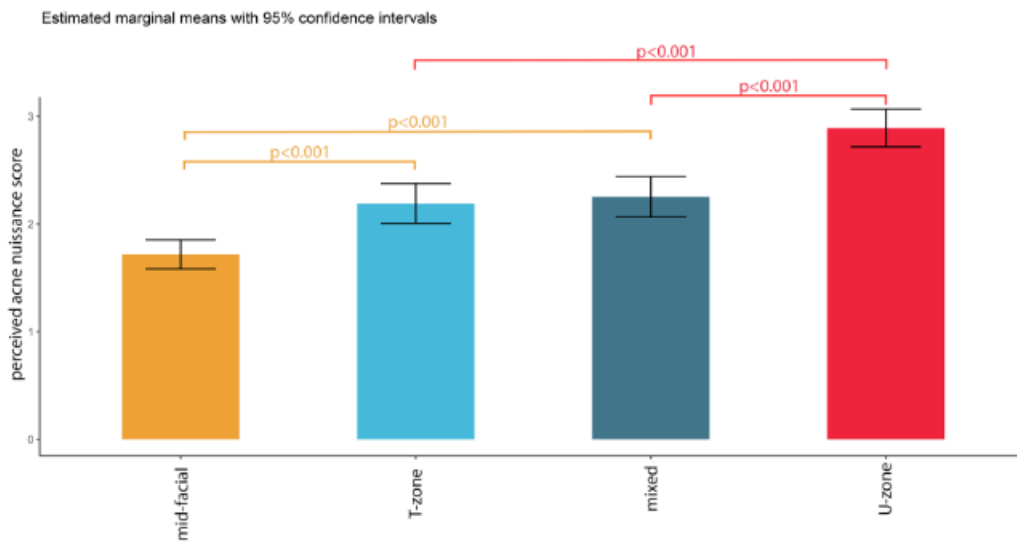
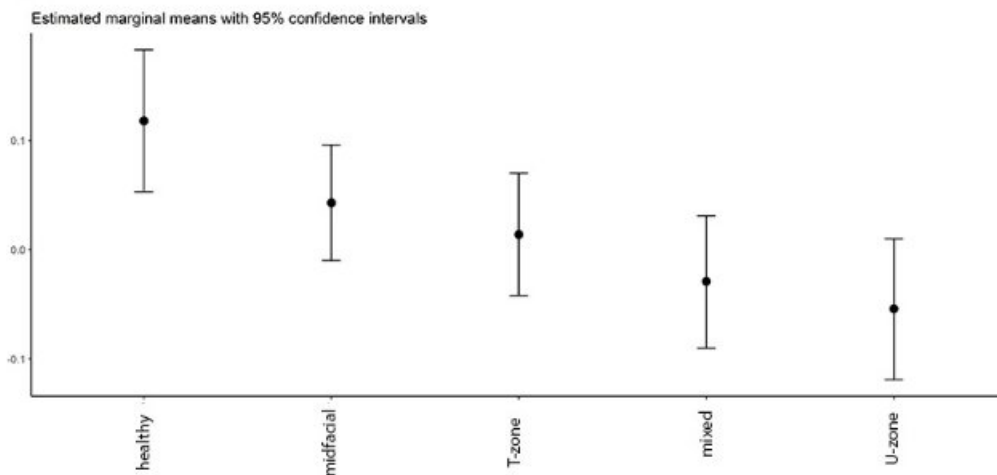


Fig. 3: Main effects of acne variant for the score of visual disturbance. Bars represent means of participants' score of acne visual disturbance on a 5-grade Likert-like scale. Whiskers represent 95% CI.

(a)



(b)

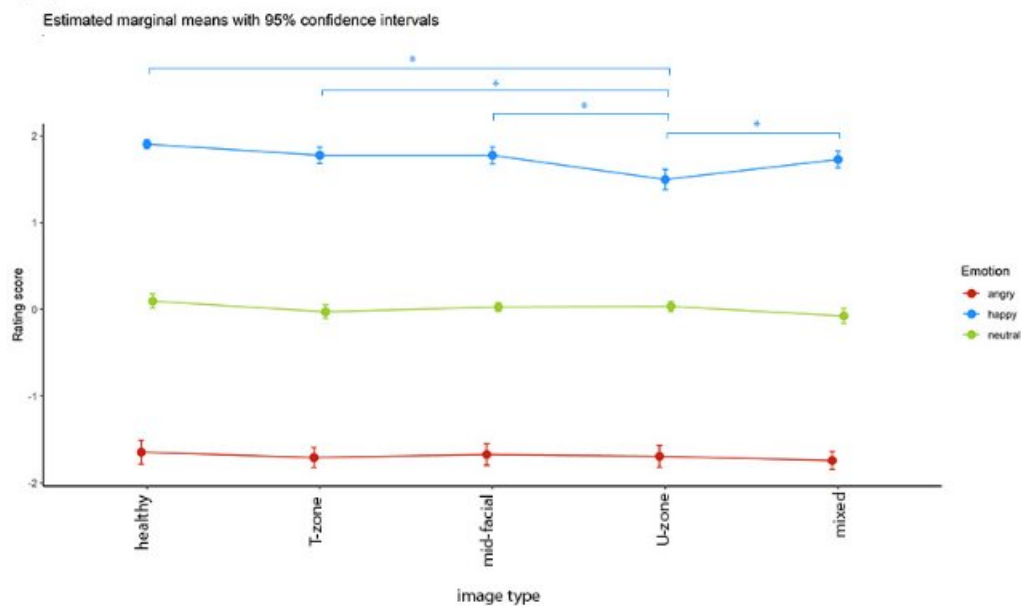


Fig. 4: Impact of acne on emotion valence ratings. Differences with $p < 0.001$ are marked with asterisk. Panel a: mean emotion valence rating for all images of respective acne variant; Panel b: valence rating for happy, angry, and neutral faces separately



Abstract N°: 1591

SMAE modulates the the Angiopoietin-TIE2 receptor tyrosine kinase pathway and contributes to Homeostasis in Rosacea Prone Skin : Long term Real Life Data from the Geneva Chronic Facial Dermatitis Registry 2016-2023

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SMAE modulates the the Angiopoietin-TIE2 receptor tyrosine kinase pathway and contributes to Homeostasis in Rosacea Prone Skin : Long term Real Life Data from the Geneva Chronic Facial Dermatitis Registry 2016-2023.

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Introduction & Objectives: The Angiopoietin-TIE2 receptor tyrosine kinase pathway regulates vascular homeostasis, and is the “gatekeeper of vascular quiescence”. Our goal was to identify a phyto-extract that would interact with this pathway in order to address an unmet need in rosacea prone skin: the long term maintenance of vascular homeostasis.

Materials & Methods: SMAE (Silybum Marianum marianum Angiopausin Extract) is nowadays a patented specific extract that we selected through molecular screening for its modulating properties on the Angiopoietin-TIE2 pathway. Patients with rosacea are followed in the registry “Homeostasis in chronic facial dermatosis” (HCFD Swissethics CCER 2021-02174), an observational, real-life, cohort . Rosacea patients used SMAE topically twice a day and mild soap as sole permanent routine. Topical ivermectin (Soolantra®) and oral Doxycyclin 100 mg were given as/when/ needed, according to current guidelines. Patients were followed through regular visits including clinical scoring, cyanoacrylate superficial biopsies, and permanent numeric follow-up. To date 70 rosacea patients entered in the cohort had used SMAE for a total of 5550 weeks, mean 79,3 wweeks per patient (median 58w weeks)

Results:

in vitro: SMAE was found to induce in vitro a strong differential expression (RNA-Sseq & qPCR) of a cluster of major genes of the Angiopoietin-TIE2 receptor tyrosine kinase pathway, such as TEK/Tie2, ANGPT1, ANGPT2, ANGPT4, ANGPTL4, ESM1, REM1, UNC13B, QRFPR, PCDH20, EDNRB, NEDD9, ANKRD1. Modulation of the related protein was already observed by westernWestern-blot in for some. These data indicate that SMAE regulates this pathway, which is likely related to its clinical effect in rosacea patients.

in vivo: Clinical observations :** SMAE was very well tolerated** whatever the vehicle and concentration used and no drop out due to intolerance, with good compliance for months and high patient satisfaction. Efficacy is summarized for each severity score item as follows : Mean W0 /Mean all weeks on SMAE/ Mean last, most recent, week: **IGA:** 3,1 /1,9/0,9/ -/; **ECA:** 10,2/4,1/1,9 /-; **Flushing:** 1,9/0,7/0,3/- ; **PP:** 9,1/3,5/0,6.

When needed : **topical ivermectin** (192 weeks- , 9,1% of total weeks), **doxycycline 100 mg** (54 weeks - , 2,6% of total) and **isotretinoin low dose** (50 weeks - , 2,4% of total) were prescribed); no signs of incompatibility with SAME SMAE were observed. Analysis of patients who used SAME SMAE *only* (n=13, 1089 weeks, mean 83,8, weeks) provides information on its intrinsic activity:/ : **IGA:** 3,1 /2,1/1,3/ ; **ECA:** 9,5/4,8/2,9 /-; **Flushing:** 2,2/1,0/0,3/- ; **PP:**

6,8/4/2,9/.

Conclusion: SMAE may contribute to the long term maintenance of vascular homeostasis in rosacea prone skin.

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Abstract N°: 1595

Treatment Options Prescribed for Patients With Physician-Diagnosed Hidradenitis Suppurativa in England From the CPRD-HES Database

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a painful, chronic inflammatory skin disease affecting up to 1.19% of the population in England.¹ There is substantial delay of 7-10 years in the diagnosis of HS, which results in more severe disease and is associated with higher comorbidities, decreased productivity and increased surgical interventions.² Given the challenging nature of HS and the impact on patients' quality of life, understanding current management strategies is important to optimise patient care. This study aims to characterise the patient profile and treatment pathways for patients with physician-diagnosed HS in England, using real-world data from the primary care Clinical Practice Research Datalink (CPRD) linked with the Hospital Episode Statistics (HES) database. Here, we report the treatment options prescribed for patients with HS in England.

Materials & Methods:

This retrospective observational study utilised data from the CPRD-HES linked database for the study period from January 2009 through March 2021. The follow-up period covered 2 years after the index date (date of the first HS diagnosis). Sequential HS treatments in an individual were reported as first-, second- or third-line therapies.

Results:

Overall, 40,036 patients with HS were identified via ICD-10 diagnostic codes. The mean \pm standard deviation [SD] age at diagnosis was 34.5 ± 13.1 years. The majority of the patients were female (73.7%). Oral antibiotics and pain medications were the most commonly prescribed first-line (72.9%, 9.9%) and second-line (11.3%, 27.4%) treatments, respectively (**Table 1**). The duration (sum of days prescribed in the 2 years post-index) of topical antibiotics (clindamycin solution) was 73.1 ± 134.9 days per patient-year (ppy). Considering oral antibiotics, the longest treatment duration was for the tetracyclines (131.9 ± 181.7 days ppy) (**Table 2**). Most oral antibiotics were prescribed for a course of 28 days. Among the pain medications prescribed, opioids had the longest treatment duration (225.6 ± 534.6 days ppy), followed by non-steroidal anti-inflammatory drugs (164.2 ± 349.8 days ppy) and non-opioid analgesics (130.9 ± 277.8 days ppy). Prescriptions of adalimumab and other biologics were slightly higher as third-line therapy; however, the uptake of biologics was considerably low in England (<0.06%). In patients treated with adalimumab, the treatment duration was 37.7 ± 48.3 days ppy. Surgery and laser destruction treatment were recorded only in 6.1% and 0.1% of patients with HS, respectively.

Conclusion:

The results highlight that the prescription rates of oral antibiotics and pain medications were high and had the longest treatment durations. Overall, the proportion of patients prescribed adalimumab or any other biologics was very low. This indicates a missed opportunity for early intervention with biologics, which may avoid HS disease progression and reduce the associated socioeconomic burden. The rates of surgery and laser treatment were low in patients with HS. The findings suggest the need for optimal management involving a multidisciplinary approach

to improve outcomes in patients with HS.

Table 1. Treatment Pathways for Patients With Physician-Diagnosed HS in England

Variable	Overall (N = 40,036)
Medications, N (%)	
As first-line therapy	
Oral antibiotics	29,166 (72.9%)
Pain medication	3960 (9.9%)
Topical antibiotics (clindamycin solution)	1074 (2.7%)
Metformin	560 (1.4%)
Isotretinoin	84 (0.2%)
Spironolactone	42 (0.1%)
Systemic corticosteroids	15 (<0.1%)
Acitretin	10 (<0.1%)
Intralesional corticosteroids	9 (<0.1%)
Adalimumab	9 (<0.1%)
Other biologics	<5
As second-line therapy	
Pain medication	10,959 (27.4%)
Antibiotics	4510 (11.3%)
Metformin	1345 (3.4%)
Antibiotic washes (clindamycin solution)	1281 (3.2%)
Isotretinoin	137 (0.3%)
Spironolactone	105 (0.3%)
Intralesional corticosteroids	45 (0.1%)
Systemic corticosteroids	27 (<0.1%)
Acitretin	19 (<0.1%)
Adalimumab	8 (<0.1%)
Other biologics	7 (<0.1%)
As third-line therapy	
Pain medication	2075 (5.2%)
Metformin	760 (1.9%)
Antibiotic washes (clindamycin solution)	645 (1.6%)
Antibiotics	586 (1.5%)
Spironolactone	89 (0.2%)
Intralesional corticosteroids	87 (0.2%)
Systemic corticosteroids	58 (0.1%)
Isotretinoin	78 (0.2%)
Acitretin	27 (<0.1%)
Adalimumab	24 (<0.1%)
Other biologics	13 (<0.1%)
Procedure,* N (%)	
Laser destruction treatment	52 (0.1%)
Surgery	2456 (6.1%)
Incision and draining	1706 (4.3%)
Deroofing	882 (2.2%)
Excision (not drainage)	10 (<0.1%)
*Procedures are not grouped by treatment lines. HS, hidradenitis suppurativa; N, total number of patients.	

Table 2. Treatment Duration for Patients With Physician-Diagnosed HS in England

Variable	Overall (N = 40,036)
	Duration of treatment in days (Mean ± SD)
Duration of Treatment	
Antibiotic washes (clindamycin solution)	73.1 ± 134.9
Intralesional corticosteroids	38.0 ± 28.5
Pain medication	
NSAIDs	164.2 ± 349.8
Opioids	225.6 ± 534.6
Aspirin	61.8 ± 130.7
Other analgesics	130.9 ± 277.8
Oral antibiotics	
Tetracyclines	131.9 ± 181.7
Clindamycin	69.7 ± 108.9
Rifampicin	79.6 ± 124.3
Dapsone	122.2 ± 195.8
Other antibiotics	
Isotretinoin	68.5 ± 121.4
Acitretin	62.9 ± 91.7
Adalimumab	37.7 ± 48.3
Other biologics	
Infliximab	106.4 ± 293.5
Certolizumab pegol*	28.0
Etanercept	36.1 ± 25.2
Secukinumab	19.0 ± 15.6
Apremilast*	28.0
Systemic corticosteroids	
Spirolactone	182.6 ± 241.6
Metformin	335.6 ± 746.6
Metformin	457.2 ± 666.1
Combined contraceptive pill	220.2 ± 234.6
Total prescription of dressings and all wound care related products	0.4 ± 2.9

*Only 1 patient had prescription in the group. All numbers are N per patient-year.
HS, hidradenitis suppurativa, N, total number of patients; NSAID, non-steroidal anti-inflammatory drug; SD, standard deviation.

References:

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2. Kokolakis G et al. *Dermatology.* 2020;236:421-430.

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Abstract N°: 1629**Earlier Advanced Treatment in Hidradenitis Suppurativa Associated With Better Treatment Outcomes**Gianna Melendez*¹¹Spherix Global Insights, Exton, United States**Introduction & Objectives:**

Hidradenitis suppurativa (HS), or acne inversa, is a chronic inflammatory condition that presents as painful and recurrent abscesses that progress to sinus tracts and scarring in the intertriginous locations of the body causing low quality of life in most patients. HS often develops when hair follicles become blocked and is potentially linked to hormones, genetics, and/or compromised immune function. Standard of care includes topical and systemic antibiotics, corticosteroids, hormonal therapies, immunomodulators, and surgical modalities, though is associated with poor treatment outcomes. Currently, adalimumab is the only proven and indicated biological treatment for patients with moderate to severe disease. At the time of research, secukinumab's US approval was pending. This research sought to understand the current treatment landscape and patient outcomes.

Materials & Methods:

An independent market analytics firm collaborated with US community dermatologists (n=102) from October 12 to 16, 2022 to gain insight on the current market. Data collected included patient symptomology, treatments, unmet needs, and attitudinal responses. Qualitative interviews were also conducted (n=10).

Results:

Within the past three months, dermatologists recall seeing 34% of mild, 45% of moderate, and 21% of severe adult HS patients, with slightly more adolescents presenting with mild HS (51%). Regardless of severity, HS patients typically begin treatment with concomitant topical therapies. Only a minority of patients are successfully managed with topicals alone, and the majority require the addition of systemic antibiotics. Intralesional steroid injections are also prescribed at this point for patients with large cystic lesions. Though 96% of dermatologists prescribe adalimumab, it is often reserved for severe HS patients (49% adults, 37% adolescents) who do not adequately respond to systemic antibiotics and topicals. Qualitatively, respondents note the ideal adalimumab patient is one with more moderate disease in which inflammation can be addressed prior to the occurrence of scarring or tunnel, while adalimumab is less effective in the most severe patients in which irreversible symptoms have already occurred. As such, only 40% of adalimumab patients are well managed; 60% of patients are not well maintained. Overall satisfaction with adalimumab is moderate inclusive of overall efficacy, duration of response, HiSCR, and response rate.

Regardless of current therapy, substantially more mild patients were well managed than moderate or severe patients (42% vs 13% vs 11%). Additionally, a greater percentage of moderate patients (53%) were improving, but not optimal (mild: 35% severe: 33%), while the highest rate of severe patients (44%) were not having a good response to treatment (mild: 3% moderate: 11%).

Conclusion:

Although adalimumab is used by nearly all dermatologists, it is predominately prescribed for severe HS patients. However, dermatologists note that the ideal adalimumab patient presents with moderate disease, allowing for the reduction of inflammation prior to the onset of more severe symptoms such as scarring and tunneling that

biologics cannot address. Further, mild and moderate patients were associated with more positive treatment outcomes than severe patients. These data suggests that adalimumab and new advanced systemics should be prescribed to patients earlier in the treatment algorithm to improve patient outcomes.

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Abstract N°: 1754

Impact of secukinumab on hidradenitis suppurativa-related work productivity and activity impairment: a post-hoc analysis of the SUNSHINE and SUNRISE phase 3 trials

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic, recurrent, inflammatory skin disease which has a substantial impact on patient's quality of life.^{1–3} HS provokes a significant decrease in work ability and productivity.^{4,5} The SUNSHINE and SUNRISE clinical trials of secukinumab in patients with moderate to severe HS have previously demonstrated sustained efficacy with a favourable safety profile.⁶ However, the impact of secukinumab on work productivity and activity impairment (WPAI) in HS is unknown.

Materials & Methods:

SUNSHINE (NCT03713619) and SUNRISE (NCT03713632) are identical, multicentre, phase 3 trials. In both trials, patients with moderate to severe HS were randomised to receive subcutaneous secukinumab 300 mg every 2 (SECQ2W) or 4 weeks (SECQ4W), or placebo (PBO) in a 1:1:1 ratio between weeks 0–16. Patients receiving PBO were switched to SECQ2W or SECQ4W while patients receiving SECQ2W or SECQ4W remained on the same treatment from weeks 16–52. WPAI was assessed at six time points during the trials (baseline and weeks 2, 16, 28, 44, and 52) using the WPAI-specific health problem (WPAI-SHP) questionnaire which included questions related to four parameters: work productivity loss (percent overall work impairment due to HS), activity impairment (percent activity impairment due to HS), presenteeism (percent impairment while working due to HS), and absenteeism (percent work time missed due to HS). Further, patients' HS clinical response (HiSCR) status at weeks 16 and 52 were assessed in a correlative analysis with WPAI parameters. All data are reported as pooled and observed.

Results:

Overall, 1084 patients were enrolled in SUNSHINE and SUNRISE; 972 patients completed the WPAI-SHP questionnaire at baseline (SECQ2W [N=324]; SECQ4W [N=314]; PBO [N=334]). Baseline patient characteristics are shown in **Table 1**. Based on absolute change from baseline, at week 16, both secukinumab treatment arms had improved work productivity loss (SECQ2W [-11.7%]; SECQ4W [-8.7%]; PBO [-1.0%]), activity impairment (SECQ2W [-14.0%]; SECQ4W [-10.0%]; PBO [-3.6%]), presenteeism (SECQ2W [-11.9%]; SECQ4W [-9.1%]; PBO [-1.6%]), and absenteeism (SECQ2W [-5.9%]; SECQ4W [-1.1%]; PBO [0.1%]) versus PBO, with negative values indicating improved WPAI (**Figure 1**). Responses with secukinumab treatment were generally sustained with a trend for improvement to week 52 (**Figure 1**). Further, patients in the SECQ2W and SECQ4W arms who achieved HiSCR at week 16 and 52 had numerically higher WPAI improvements compared to patients not achieving HiSCR, although improvements were still observed in patients not achieving HiSCR (**Table 2**).

Conclusion:

Data from SUNSHINE and SUNRISE demonstrated that secukinumab treatment has a beneficial effect and provided sustained improvement on WPAI in patients with moderate to severe HS and may mitigate the known negative impact of the disease on employment and work productivity.

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Table 1: Baseline patient characteristics of patients who completed the WPAI questionnaire at baseline, overall and based on employment status and on pooled data from the SUNSHINE and SUNRISE trials.

Characteristic	Overall			Employed			Not employed		
	SECQ2W (N=324)	SECQ4W (N=314)	PBO (N=334)	SECQ2W (N=201)	SECQ4W (N=196)	PBO (N=231)	SECQ2W (N=123)	SECQ4W (N=118)	PBO (N=103)
Age, mean (SD)	37.0 (12.0)	35.7 (11.7)	35.8 (10.9)	37.9 (11.1)	36.3 (10.7)	35.9 (10.3)	35.5 (13.3)	34.7 (13.2)	35.6 (12.3)
Females, n (%)	182 (56.2)	177 (56.4)	194 (58.1)	112 (55.7)	114 (58.2)	130 (56.3)	70 (56.9)	63 (53.4)	64 (62.1)
White race, n (%)	251 (77.5)	247 (78.7)	256 (76.6)	161 (80.1)	160 (81.6)	180 (77.9)	90 (73.2)	87 (73.7)	76 (73.8)
Weight, ≥90 kg, n (%)	178 (54.9)	157 (50.0)	170 (50.9)	115 (57.2)	107 (54.6)	122 (52.8)	63 (51.2)	50 (42.4)	48 (46.6)
BMI, mean (SD)	32.4 (7.6)	32.0 (7.6)	31.7 (7.2)	32.8 (7.8)	32.4 (7.6)	31.5 (7.0)	31.8 (7.3)	31.2 (7.4)	32.1 (7.7)
Current smokers, n (%)	170 (52.5)	163 (51.9)	188 (56.3)	108 (53.7)	104 (53.1)	132 (57.1)	62 (50.4)	59 (50.0)	56 (54.4)
Hurley stage, n (%)									
Hurley I	13 (4.0)	15 (4.8)	9 (2.7)	5 (2.5)	12 (6.1)	4 (1.7)	8 (6.5)	3 (2.5)	5 (4.9)
Hurley II	178 (54.9)	189 (60.2)	212 (63.5)	119 (59.2)	120 (61.2)	150 (64.9)	59 (48.0)	69 (58.5)	62 (60.2)
Hurley III	133 (41.0)	110 (35.0)	113 (33.8)	77 (38.3)	64 (32.7)	77 (33.3)	56 (45.5)	46 (39.0)	36 (35.0)
Family history of HS, n (%)	65 (20.1)	82 (26.1)	87 (26.0)	33 (16.4)	46 (23.5)	57 (24.7)	32 (26.0)	36 (30.5)	30 (29.1)
Time since HS diagnosis, years, mean (SD)	7.0 (7.4)	7.4 (7.7)	7.1 (6.7)	7.3 (7.9)	7.5 (7.6)	7.2 (6.9)	6.4 (6.4)	7.1 (7.8)	7.0 (6.5)
AN count, mean (SD)	13.5 (9.8)	12.8 (8.4)	13.0 (8.4)	13.2 (10.5)	13.0 (8.7)	12.5 (8.2)	14.0 (8.7)	12.5 (8.0)	14.0 (8.8)
Work productivity loss (mean % impairment [SE])	-	-	-	41.8 (2.1) (N=187)	40.0 (2.1) (N=179)	38.9 (2.0) (N=204)	-	-	-
Activity impairment (mean % impairment [SE])	46.7 (1.5) (N=324)	43.8 (1.6) (N=314)	44.5 (1.5) (N=334)	-	-	-	-	-	-
Presenteeism (mean % impairment [SE])	-	-	-	39.1 (2.0) (N=187)	37.8 (2.0) (N=179)	36.2 (1.9) (N=204)	-	-	-
Absenteeism (mean % impairment [SE])	-	-	-	11.7 (1.8) (N=201)	10.0 (1.8) (N=196)	11.2 (1.7) (N=231)	-	-	-

AN, abscess and inflammatory nodule; BMI, body mass index; HS, hidradenitis suppurativa; N, number of patients in group; n, number of patients with characteristic; PBO, placebo; Q2W, every 2 weeks; Q4W, every 4 weeks; SD, standard deviation; SE, standard error; SEC, secukinumab 300 mg; WPAI, work productivity and activity impairment.

Table 2: Absolute change from baseline in WPAI parameters by patients achieving/not achieving HiSCR at week 16 and week 52 based on pooled data from the SUNSHINE and SUNRISE trials.

Endpoint and timepoint	Patients achieving HiSCR at respective timepoint (%)					Patients not achieving HiSCR at respective timepoint (%)				
	SECQ2W	SECQ4W	PBO	PBO-SECQ2W	PBO-SECQ4W	SECQ2W	SECQ4W	PBO	PBO-SECQ2W	PBO-SECQ4W
Work productivity loss (percent overall work impairment due to HS [employed patients only])										
Week 16	-18.3 (N=64)	-12.1 (N=56)	-8.5 (N=49)			-7.2 (N=77)	-7.2 (N=81)	2.5 (N=66)		
Week 52	-17.0 (N=62)	-14.7 (N=57)		-11.1 (N=26)	-11.2 (N=34)	-13.7 (N=37)	-6.8 (N=36)		-2.6 (N=22)	-7.1 (N=21)
Activity impairment (percent activity impairment due to HS)										
Week 16	-20.2 (N=126)	-15.9 (N=128)	-11.7 (N=90)			-8.8 (N=160)	-6.1 (N=152)	0.4 (N=183)		
Week 52	-21.1 (N=132)	-17.3 (N=121)		-19.0 (N=87)	22.6 (N=65)	-14.7 (N=79)	-11.3 (N=80)		-13.4 (N=50)	-6.3 (N=51)
Presenteeism (percent impairment while working due to HS [employed patients only])										
Week 16	15.9 (N=64)	-12.1 (N=56)	-8.5 (N=49)			-7.9 (N=77)	-7.6 (N=81)	1.6 (N=66)		
Week 52	19.1 (N=63)	-14.0 (N=57)		-12.5 (N=26)	12.7 (N=34)	-14.3 (N=37)	-5.8 (N=36)		-6.8 (N=22)	-7.1 (N=21)
Absenteeism (percent work time missed due to HS [employed patients only])										
Week 16	-3.2 (N=73)	-2.8 (N=68)	-2.0 (N=55)			-4.2 (N=89)	-0.1 (N=95)	1.2 (N=117)		
Week 52	-1.5 (N=70)	-5.5 (N=70)		2.6 (N=33)	1.6 (N=42)	0.7 (N=41)	-4.5 (N=42)		-10.4 (N=30)	1.4 (N=26)

HiSCR, hidradenitis suppurativa clinical response; HS, hidradenitis suppurativa; N, number of patients in group; PBO, placebo; Q2W, every 2 weeks; Q4W, every 4 weeks; SEC, secukinumab 300 mg; WPAI, work productivity and activity impairment.

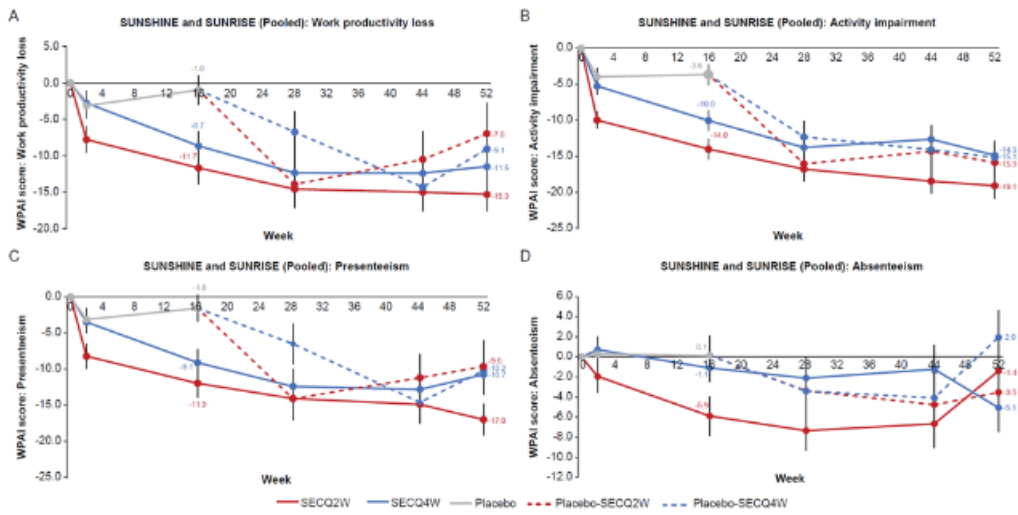


Figure 1: Absolute change from baseline in WPAI parameters through week 52 based on pooled data from the SUNSHINE and SUNRISE trials.

Line graphs detailing the effects of secukinumab versus placebo from baseline to week 52 based on absolute change from baseline pooled data from the SUNSHINE and SUNRISE trials on (A) work productivity loss; (B) activity impairment; (C) presenteeism; and (D) absenteeism.

Work productivity loss is the percent overall work impairment due to HS (employed patients only). Activity impairment is the percent activity impairment due to HS. Presenteeism is the percent impairment while working due to HS (employed patients only). Absenteeism is the percent work time missed due to HS (employed patients only). Error bars represent standard error.

HS, hidradenitis suppurativa; Q2W, every 2 weeks; Q4W, every 4 weeks; SEC, secukinumab 300 mg; WPAI, work productivity and activity impairment.

Abstract N°: 1820**Adalimumab treatment of hidradenitis suppurativa results in a rapid and sustained reduction of biomarkers of systemic inflammation and cardiovascular risk**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is associated with major adverse cardiac events (MACE). Systemic immune inflammation index (SII), neutrophil/lymphocyte ratio (NLR), platelet/lymphocyte ratio (PLR) and monocyte/lymphocyte ratio (MLR) are biomarkers of both systemic inflammation and cardiovascular risk. One small study identified a lower NLR and PLR following 12 weeks of adalimumab treatment. Our aim was to assess change in SII, NLR, PLR and MLR in a large cohort treated with adalimumab for HS.

Materials & Methods:

We completed a post-hoc analysis of the PIONEER I and PIONEER II phase 3 randomised placebo-controlled clinical trials in addition to the subsequent open-label extension study. A linear mixed model was used to estimate treatment effect.

Results:

In both PIONEER I and PIONEER II, the mean SII ($p < 0.001$), NLR ($p < 0.001$), PLR ($p < 0.001$) and MLR ($p = 0.007$) reduced significantly with adalimumab but not placebo treatment at week 12. This change occurred early at week 4 and was maintained to week 36. In patients who were re-randomised from placebo to adalimumab at week 12, SII, NLR, PLR and MLR followed the same trend with a significant reduction at week 24 maintained to week 36. In patients who were re-randomised at week 12 from adalimumab to placebo, SII, NLR, PLR and MLR returned to baseline by week 24. In patients who continued adalimumab during the open-label extension study, SII, NLR, PLR and MLR did not return to baseline during 3 years of follow-up.

Conclusion:

Treatment of HS with adalimumab results in a rapid sustained reduction in systemic inflammation as measured by these simple full blood count parameters. SII, NLR, PLR and MLR are also biomarkers of cardiovascular risk. Reducing these biomarkers of systemic inflammation in HS with adalimumab treatment may translate into reduced risk of MACE. This requires a long-term observational study to evaluate the incidence of MACE in patients receiving biologic treatment.



Abstract N°: 1859**Multidisciplinary Dermatology-General Surgery outpatient consultation: a step forward in the management of hidradenitis suppurativa**Carlos Cuenca-Barrales¹, Cristina Peralta-Ríos¹, Alberto Carrillo-Acosta¹, Alejandro Molina-Leyva¹¹Hospital Universitario Virgen de las Nieves**Introduction & Objectives:**

Hidradenitis suppurativa (HS) is a chronic inflammatory disease that affects the intertriginous areas and manifests as recurrent flares of inflammatory nodules and abscesses. In some cases, these lesions are associated with other structural lesions in the form of tunnels. The management of the disease is complex and requires a combination of various medical treatments and surgical techniques. Therefore, multidisciplinary and consensual management of patients with HS is essential to achieve optimal control of the disease. In many cases, this need for the involvement of different specialists leads to confusion in the referral of HS patients to the appropriate specialist, as well as long waiting lists for both consultation and surgery.

Materials & Methods:

A new specialized consultation has been created at your center for the management of patients with complex HS requiring a combination of medical treatment and advanced surgical techniques. There, a dermatologist from our HS unit and a general surgeon specialized in HS visit the patient together. The flow of patients in the consultation room, the different referral channels, the functioning and the different decisions taken are described.

Results:

Patients with suspected HS are referred by primary care physicians, emergency department physicians, other dermatologists or other hospital physicians to the HS unit (run only by dermatologists with expertise in HS). In this consultation, the patient's medical treatment is decided and simple surgical interventions are scheduled (wide excision and closure by secondary intention in uncomplicated anatomical areas, deroofting, excision and primary closure for cystic lesions...), which are carried out by the dermatologists of the HS unit. Patients requiring more complex surgeries are referred to the new HS Dermatology-General Surgery consultation, to which general surgeons and physicians from other surgical specialties can also refer patients. In the consultation room, patients are seen jointly by the dermatologist and the general surgeon, with explorations of the tunnels, ultrasound of the affected areas, rectal examination in patients with perianal affectation... Finally, a joint decision is made on the management of the patient: the medical treatment is optimized by the dermatologist if necessary, the programming and surgical planning is carried out by the general surgeon, complementary imaging tests such as MRI are requested if necessary, as in the case of perianal involvement to characterize the presence of anal fistulas, or the patient is referred to other specialists such as the urologist or plastic surgeon depending on the lesions the patient presents.

Conclusion:

To the best of our knowledge, we present for the first time the data of a combined HS consultation between Dermatology and General Surgery. This consultation allows to optimize consensus decision-making and reduce waiting times for these patients, taking a further step in the management of HS.

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Abstract N°: 1862**Assessing cardiovascular risk parameters in patients with hidradenitis suppurativa receiving biologic therapies before and after treatment: a prospective cohort study**

Carlos Cuenca-Barrales¹, Cristina Peralta-Ríos¹, Manuel Sanchez-Díaz¹, Pablo Díaz-Calvillo¹, Antonio Martínez López¹, Salvador Arias-Santiago¹, Alejandro Molina-Leyva¹

¹Hospital Universitario Virgen de las Nieves

Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic inflammatory disease affecting intertriginous areas. Knowledge about the disease is rapidly evolving. Several comorbidities have been described, with increased cardiovascular risk being one of the most important. Indeed, an increased risk of major adverse cardiovascular events has been described in patients with HS, as well as increased carotid intima-media thickness (IMT). IMT and pulse wave velocity (PWV), which measures the distensibility/stiffness of arteries, are parameters related to endothelial function, and seem to improve after biologic therapy in other diseases such as rheumatoid arthritis and psoriasis. Our aim was to assess the possible improvement of IMT and PWV in patients with HS receiving biologic therapy.

Materials & Methods:

We conducted a prospective cohort study. Patients who started biologic therapy (adalimumab or secukinumab according to standard clinical practice) between October 2021 and October 2022 were included. Carotid IMT and PWV were measured before starting treatment and after 8 months. Sociodemographic (age, sex, smoking), biometric (height, weight) disease-related data (time of evolution, affected locations, intensity of symptoms measured by Numeric Rating Scales - NRS -, Hurley stage and the International Hidradenitis Suppurativa Severity Score System - IHS4) were determined by clinical interview and physical examination.

Results:

A total of 23 patients were included, 16 starting adalimumab and 7 starting secukinumab, with a predominance of males (65.2%, 15/23), a mean age slightly over 40, a mean time of disease evolution of over 12 years and a mean diagnosis delay of over 7 years. The mean cumulative tobacco consumption (pack-years) was over 17, with 60.9% (14/23) of patients being active smokers. The average body mass index was in the overweight grade II range (above 28). The most frequently affected locations were the axillae and groin (60.9%, 14/23). The mean IHS4 before starting treatment was in the severe disease range (above 10), with Hurley stage II being the most frequent (47.8%, 11/23). After 8 months of treatment, a significant reduction in symptoms, especially pain, and IHS4 was observed, with no significant difference between the two treatments. There was a trend towards a reduction in IMT in the right carotid artery, as well as in the ALx@75 augmentation index, which measures peripheral vascular resistance, with no differences between the two treatments.

Conclusion:

Biological treatments reduce the inflammatory load in patients with HS, and are essential for disease control. This may be accompanied by an improvement in endothelial function parameters, which has been investigated for the first time in our study. The main limitation is the small sample size. Studies with larger sample sizes are needed to confirm this hypothesis and to elucidate whether there are differences between different biologic treatments such as adalimumab and secukinumab.

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Abstract N°: 1892**Secukinumab provides sustained improvements in pain in patients with moderate to severe hidradenitis suppurativa: A post-hoc analysis of the SUNSHINE and SUNRISE phase 3 trials**

John R. Ingram¹, Jacek Szepietowski², Lukasz Matusiak², Joslyn Kirby³, Georgios Kokolakis⁴, Magdalena B. Wozniak⁵, Christine-Elke Ortmann⁶, Angela Llobet Martinez⁶, Shoba Ravichandran⁷, Ivette Alarcon⁶, Christelle Pieterse⁶, Presser Dagmar⁸, Maryam Shayesteh Alam⁹, Dimitrios Ioannides¹⁰, Alexa B. Kimball¹¹

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic, inflammatory skin disease that is under-recognised and under-treated.¹ Severe disease-related pain is one of the most impactful symptoms for patients with HS.² Secukinumab, a fully human monoclonal antibody that selectively neutralises interleukin-17A, has demonstrated sustained efficacy with a favourable safety profile in patients with moderate to severe HS.³ Herein, the effects of secukinumab on HS-related pain at worst are reported.

Materials & Methods:

SUNSHINE (NCT03713619) and SUNRISE (NCT03713632) are identical, phase 3, multicentre, trials. In both trials, patients were randomised to receive subcutaneous secukinumab 300 mg every 2 (SECQ2W) or 4 weeks (SECQ4W), or placebo (PBO) in a 1:1:1 ratio between weeks 0–16. Patients receiving PBO were switched to SECQ2W or SECQ4W, while patients receiving SECQ2W or SECQ4W remained on the same treatment from weeks 16–52.³ Skin pain at its worst in the 24 hours prior to the visit (daily up to week 16 and weekly thereafter) was assessed via the Patient's Global Assessment of Skin Pain on a continuous numeric rating scale (NRS; 0–10 scale). Analysis of skin pain at its worst were as follows: NRS=0 (no pain); NRS>0–≤6; NRS>6–≤8; NRS>8 (severe pain).⁴ Pooled data from both trials are reported as observed.

Results:

Overall, 1084 patients from the SUNSHINE and SUNRISE trials were included (SECQ2W, N=361; SECQ4W, N=360; PBO, N=363). The mean NRS±standard deviation (SD) at baseline (BL) was 5.3±2.5, 5.1±2.5 and 5.2±2.5 in the SECQ2W, SECQ4W and PBO groups, respectively. A greater mean (±SD) reduction from BL in pain was observed in patients treated with any secukinumab dose compared to PBO, with a numerically greater reduction observed with SECQ2W at week 16 (SECQ2W, -1.4±2.2; SECQ4W, -1.1±2.0; PBO, -0.6±2.2); improvements were sustained to

week 52 (SECQ2W, -1.8 ± 2.6 ; SECQ4W, -1.5 ± 2.7) (**Figure 1**). Further, beneficial changes were observed in PBO switcher patients from week 16 to week 52 (PBO-SECQ2W, -1.7 ± 2.8 ; PBO-SECQ4W, -1.6 ± 2.5). A total of 6.8% and 68.3% (week 16), and 16.9% and 65.9% (week 52) of the SECQ2W group reported NRS=0 and NRS>0-≤6 at worst, respectively. A total of 7.9% and 68.2% (week 16), and 17.5% and 65.4% (week 52) of the SECQ4W group reported NRS=0 and NRS>0-≤6 at worst, respectively (**Table 1**). The improvement in pain severity between BL and week 52 is shown in **Figure 2**; of the patients in the SECQ2W group with NRS>6-≤8 and NRS>8 at BL respectively, after 52 weeks 8.3% and 8.6% had NRS=0 while 63.3% and 45.7% had NRS>0-≤6. Of the patients in the SECQ4W group with NRS>6-≤8 or NRS>8 at BL respectively, after 52 weeks 13.6% and 0.0% had NRS=0 while 67.8% and 46.4% had NRS>0-≤6. When pain categories were combined, 65.3% and 70.1% of patients with NRS>6 at BL in the SECQ2W and SECQ4W groups, respectively improved to NRS≤6 after 52 weeks.

Conclusion:

Pooled data from the SUNSHINE and SUNRISE trials demonstrated that secukinumab improved HS-related skin pain at week 16 compared to PBO and showed a numerical trend for further improvement over time. The improvement in pain from BL through week 52 was numerically higher in the SECQ2W group compared to the SECQ4W group at all timepoints. Improvement in pain was also observed in patients who switched from PBO to secukinumab at week 16 and was sustained through week 52. Overall, >65% of patients with NRS>6 at BL improved to NRS≤6 or no pain at week 52 following treatment with secukinumab.

References:

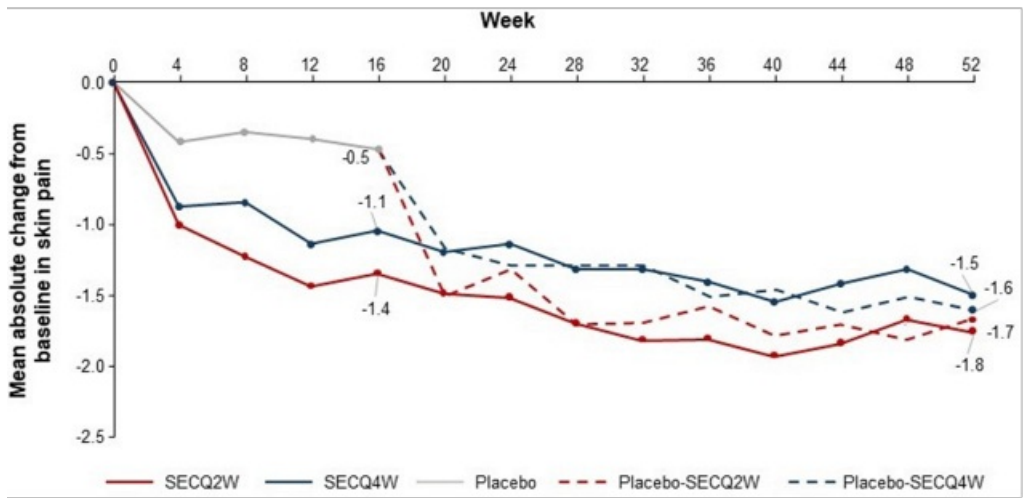
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2. Dufour DN, et al. *Postgrad Med J.* 2014;90(1062):216–21.
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Table 1. Skin pain at worst (NRS) by severity (percentage) in the SUNSHINE and SUNRISE trials (pooled)

	NRS	SUNSHINE and SUNRISE trials (pooled)				
		SECQ2W N=361 % (n/m)	SECQ4W N=360 % (n/m)	Placebo N=363 % (n/m)	Placebo-SECQ2W N=180 % (n/m)	Placebo-SECQ4W N=183 % (n/m)
Baseline	NRS=0	1.2 (4/329)	1.2 (4/326)	2.1 (7/328)	-	-
	NRS>0-≤6	59.9 (197/329)	59.8 (195/326)	58.1 (184/328)	-	-
	NRS>6-≤8	24.6 (81/329)	27.3 (89/326)	29.3 (96/328)	-	-
	NRS>8	14.3 (47/329)	11.7 (38/326)	12.5 (41/328)	-	-
Week 16	NRS=0	6.8 (20/293)	7.9 (22/277)	5.1 (14/274)	4.4 (6/135)	5.8 (8/139)
	NRS>0-≤6	68.3 (200/293)	68.2 (189/277)	66.1 (181/274)	68.7 (90/135)	65.5 (91/139)
	NRS>6-≤8	16.7 (49/293)	18.1 (50/277)	20.8 (57/274)	24.4 (33/135)	17.3 (24/139)
	NRS>8	8.2 (24/293)	5.8 (16/277)	8.0 (22/274)	4.4 (6/135)	11.5 (16/139)
Week 52	NRS=0	16.9 (43/255)	17.5 (42/240)	-	15.3 (18/118)	18.2 (25/137)
	NRS>0-≤6	65.9 (168/255)	65.4 (157/240)	-	70.3 (83/118)	62.0 (85/137)
	NRS>6-≤8	11.4 (29/255)	10.0 (24/240)	-	11.9 (14/118)	14.6 (20/137)
	NRS>8	5.9 (15/255)	7.1 (17/240)	-	2.5 (3/118)	5.1 (7/137)

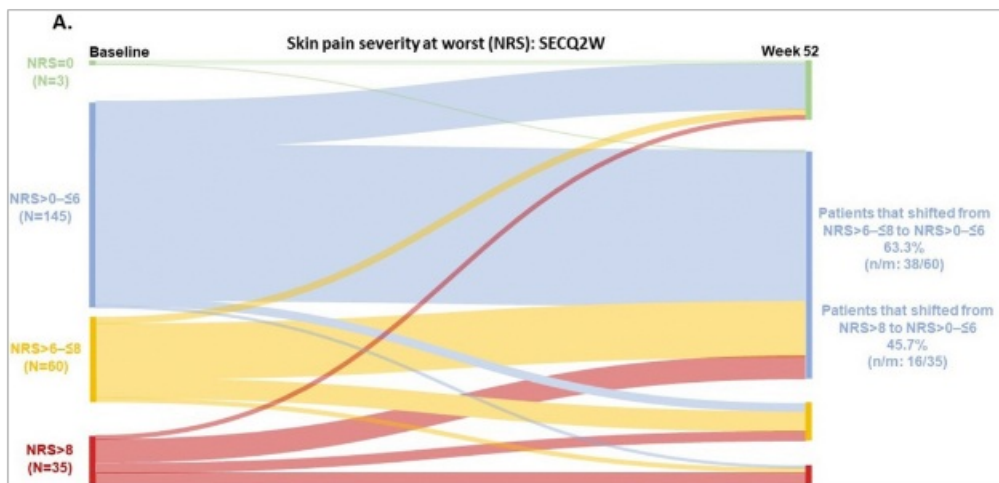
N, number of patients in group; n, number of patients with outcome; m: number of patients evaluable at the visit.
 NRS is the numeric rating scale of the Patient's Global Assessment of Skin Pain - at worst. NRS=0; NRS>0-NRS≤6; NRS>6-≤8; NRS>8.
 Baseline is the average of the latest 7 assessments before the date of the first administration of the study treatment.
 Q2W, every 2 weeks; Q4W, every 4 weeks; SEC, secukinumab 300 mg.

Figure 1. Absolute change from baseline in skin pain at worst (NRS) to week 52 in the SUNSHINE and SUNRISE trials (pooled)



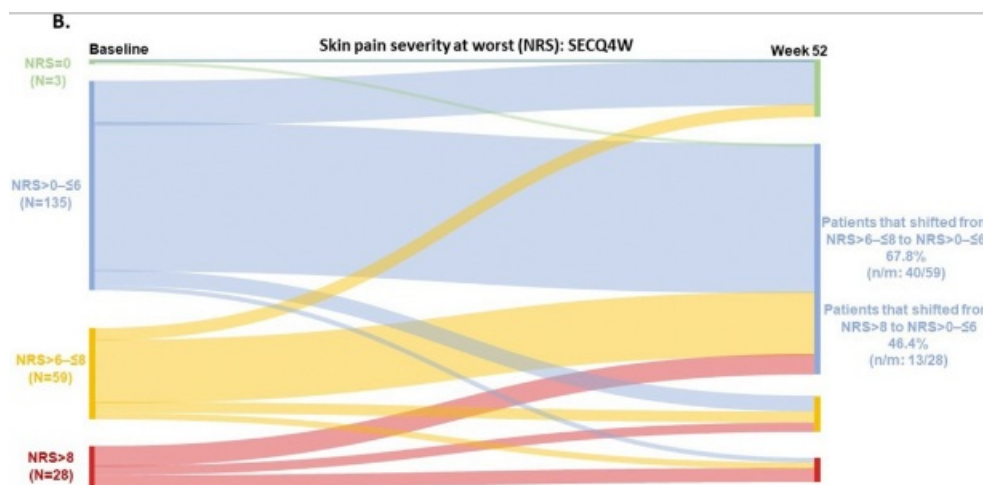
NRS is the numeric rating scale of the Patient's Global Assessment of Skin Pain - at worst. NRS=0; NRS>0-NRS≤6; NRS>6-≤8; NRS>8.
 Baseline is the average of the latest 7 assessments before the date of the first administration of the study treatment.
 Q2W, every 2 weeks; Q4W, every 4 weeks; SEC, secukinumab 300 mg.

Figure 2. Sankey plots of shift table data on skin pain severity in the SUNSHINE and SUNRISE trials (pooled)



NRS at baseline: SEC2QW

NRS after 52 weeks	NRS=0 %	NRS>0-≤6 %	NRS>6-≤8 %	NRS>8 %
NRS=0	66.7	22.1	8.3	8.6
NRS>0-≤6	33.3	72.4	63.3	45.7
NRS>6-≤8	0.0	4.1	23.3	20
NRS>8	0.0	1.4	5.0	25.7



NRS at baseline: SEC4W

NRS after 52 weeks	NRS=0 %	NRS>0-≤6 %	NRS>6-≤8 %	NRS>8 %
NRS=0	33.3	20.7	13.6	0.0
NRS>0-≤6	66.7	69.6	67.8	46.4
NRS>6-≤8	0.0	7.4	11.9	21.4
NRS>8	0.0	2.2	6.8	32.1

N, number of patients in group; n, number of patients with outcome; m: number of patients evaluable at the visit. NRS is the numeric rating scale of the Patient's Global Assessment of Skin Pain - at worst. NRS=0; NRS>0-NRS≤6; NRS>6-≤8; NRS>8. Baseline is the average of the latest 7 assessments before the date of the first administration of the study treatment. Percentages are based on the number of patients with non-missing data at baseline and the post-baseline visit for each respective baseline category. Q2W, every 2 weeks; Q4W, every 4 weeks; SEC, secukinumab 300 mg.



Abstract N°: 1917**Comprehensive Codified Algorithm to Identify the Underestimated Burden of Hidradenitis Suppurativa in the United States**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic, recurrent inflammatory skin disease. Population-based estimates using codified data may miss undiagnosed cases and therefore underestimate prevalence. To identify potentially missed cases, Ingram *et al.* developed and validated an algorithm using the Clinical Practice Research Datalink (CPRD) in the United Kingdom (UK), linked with the Hospital Episodes Statistics database¹. Physician-diagnosed cases of HS were identified from specific Read codes (M25y100 and M25y111) or International Classification of Diseases Tenth revision Clinical Modification (ICD-10-CM) code L73.2. Read code algorithms were also created to capture undiagnosed potential cases by identifying patients attending primary care for multiple skin boil consultations. Here, we report the application of an adapted version of this algorithm to estimate the prevalence of diagnosed and possible cases in the United States (US).

Materials & Methods:

This was a retrospective cohort study utilising the US MarketScan Medicaid and Optum electronic health records (EHR) databases during an identification period of Jan 2014–Dec 2018. Included patients had continuous medical/pharmacy benefits in the 1-year pre-index period and the 1-year post-index period; a gap of ≤ 45 days was allowed in both instances. All age groups were included. Diagnosed/possible cases were identified through application of the US-adapted algorithm, for which ICD-9 and -10, Current Procedural Terminology (CPT), Healthcare Common Procedure Coding System and National Drug Code codes were used. The index date was defined as date of first claim derived from the US-adapted algorithm or first claim of a diagnosis code for HS.

Results:

After application of all inclusion/exclusion criteria, 53,716 diagnosed HS patients were detected in MarketScan and 86,700 in Optum within the identification period; 14,720 (27.4%) and 31,793 (36.7%) in MarketScan and Optum, respectively, had continuous medical/pharmacy benefits in the 1-year post-index period. The diagnosis sub algorithm detected >90% possible/diagnosed HS patients in MarketScan and Optum, respectively (**Table 1**).

The 5-year algorithm prevalence estimates were substantially higher for diagnosed and possible HS, versus diagnosed HS patients (**Table 2**). Overall, the estimated prevalence ranged from 0.06–0.12% for diagnosed HS patients and 0.49–0.78% for diagnosed and possible HS patients. Prevalence of adults (≥ 18 years) ranged from 0.07–0.20% for diagnosed and 0.56–1.23% for diagnosed and possible HS patients. The estimated prevalence of females was 0.09–0.17% for diagnosed patients with HS and 0.53–0.92% for diagnosed and possible HS patients. Estimated prevalence of diagnosed patients with HS and diagnosed and possible patients in African Americans was 0.17–0.19% and 0.77–0.82%, respectively. MarketScan and Optum provided different prevalence estimates,

but the trend for increased detection with the US-adapted algorithm was similar.

Conclusion:

Diagnosis codes alone may underestimate the prevalence of HS by varying margins. The use of other coded parameters such as multiple skin boils in site-specific areas may identify undiagnosed cases.

1. Ingram JR, et al. Br J Dermatol. 2018 Apr;178(4):917-924.

Table 1. Overview of the US-adapted algorithm

Sub algorithm	Description	MarketScan Medicaid, n (%)	Optum EHR, n (%)
Diagnosis			
1a	≥ 2 diagnoses of boils, furuncle, carbuncle or abscess of axilla, groin, perineum, or buttocks within a 6-month period	171,640 (90.9)	355,738 (97.2)
1b	≥ 3 diagnoses of boils, furuncles, carbuncles or abscesses of the axilla, groin, perineum, or buttocks (any time)	1989 (1.1)	2006 (0.5)
Procedures			
2a	≥ 3 CPT codes for incision and drainage of boils, furuncles, carbuncles or abscesses of the axilla, groin, perineum, or buttocks (any time)	15,154 (8.0)	8414 (2.3)
	Possible/diagnosed HS patients	188,783 (100.0)	366,158 (100.0)

Possible/diagnosed patients with HS were identified through the application of the US-adapted algorithm, for which ICD-9 and -10, Current Procedural Terminology (CPT), Healthcare Common Procedure Coding System (HCPCS) and National Drug Code (NDC) codes were used. Diagnosed patients had ≥2 outpatient or 1 inpatient diagnosis codes of HS (ICD-9-CM code 705.83 and ICD-10-CM code L73.2). CPT, Current Procedural Terminology; EHR, electronic health records; HS, hidradenitis suppurativa.

Table 2. Prevalence estimates for diagnosed and possible HS cases in the MarketScan Medicaid and Optum EHR databases

Category	5-year prevalence estimates (%)			
	Diagnosed patients with HS		Diagnosed and possible patients with HS	
	MarketScan	Optum	MarketScan	Optum
Overall	0.12	0.06	0.78	0.49
Adults (≥18 years)	0.20	0.07	1.23	0.56
Male	0.05	0.03	0.59	0.45
Female	0.17	0.09	0.92	0.53
White	0.09	0.05	0.87	0.51
African American	0.17	0.19	0.77	0.82

EHR, electronic health records; HS, hidradenitis suppurativa.



Abstract N°: 1918**Hidradenitis suppurativa in transgender patients: a case series**

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Introduction & Objectives:

Gender incongruence affects 1.8% of children in the United States. Hormone therapy is the mainstay of treatment for masculinisation or feminization. Adverse effects including acne and alopecia are classically described with testosterone. Feminizing treatment with estrogens and antiandrogens are not usually associated to cutaneous side effects. Three cases of onset of hidradenitis suppurativa (HS) in patients under masculinizing hormone therapy (MHT) are described in the literature. We report 6 new cases of HS, concerning both male and female hormones administration in transgender patients.

Materials & Methods:

Multicentric retrospective case series.

Results:

A 23-year-old transgender man (assigned female at birth (AFAB)) developed HS Hurley 1 lesions and severe acne 6 months after the initiation of MHT (testosterone enantate). He was successfully treated with isotretinoin for acne. Doxycyclin was initiated without any HS flare after 8 months.

A 18-year-old transgender man (AFAB) had a personal history of Hurley 1C HS since the age of 13, partially controlled with cyclins. He presented no more HS flare after MHT at stable dosage with 5 years of hindsight.

A 48-year-old transgender woman (assigned male at birth (AMAB)), with personal history of Crohn's disease treated with sulfasalazine presented with mammary nodules and abscesses. HS lesions developed one year after initiation of feminizing hormone therapy (FHT) (cyproterone acetate). HS management required antibiotics, adalimumab and surgery. Despite all treatments, HS remained active with frequent flares.

A 17-year-old transgender woman (AMAB) had a personal history of Hurley 2 HS associated to a severe acne, treated with infliximab after failure of antibiotics and isotretinoin. FHT was started after infliximab. HS evolution remained severe even after optimisation of infliximab dosage.

A 36-year-old transgender woman (AMAB), with history of severe acne developed Hurley 2 lesions HS, 1 year after initiation of FHT (cyproterone acetate, oestrogens). She was treated with cyclins and hair removal laser without efficacy, then with adalimumab with a good control maintained after 12 months.

A 32-year-old transgender woman (AMAB), developed Hurley 1C HS 8 months after FHT (cyproterone acetate, triptoreline). Treatment with hair removal laser, antibiotics was insufficient and adalimumab led to a good control maintained after 15 months.

None of our patients had familial history of HS, was obese or underwent modification of hormonal treatment.

Conclusion:

Impact of hormones in the pathophysiology of HS is still debated, but androgens are thought to play a role, with evidence mostly based on epidemiologic associations. HS comorbidities with elevated androgens as polycystic ovarian syndrome or obesity are also associated with elevated level of pro-inflammatory cytokines. Oestrogen metabolites (16 α estrogens) are known to modulate local immune responses in other inflammatory diseases and could be mechanistically important in some HS patients.

In this series, we report 5 cases of transgender patients for whom modification of hormonal balance led to onset or exacerbation of HS. Most of our patients had no risk factor for HS. It is therefore possible that hormonal changes, whatever their direction (sudden excess of male or female hormones), might promote HS.

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Abstract N°: 2016**The efficacy of combination therapy in patients with rosacea**Gyulnara Fimochkina¹, Anna Sokolova¹

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Introduction & Objectives:

Rosacea is a common chronic inflammatory disease that manifests itself with recurrent redness, diffuse erythema, telangiectasia, papules or pustules predominantly on the nose, chin, cheeks and forehead. Most treatments are aimed at reducing inflammation with concomitant reduction of inflammatory and localized erythema. However, persistence of diffuse vascular erythema remains a therapeutic problem in patients with papulopustular and erythematoteleangiectatic subtype of Rosacea. The aim of the study is to evaluate the effectiveness of combination therapy in patients with Rosacea.

Materials & Methods:

We observed 24 patients aged 18 to 58 years, with an established diagnosis of Rosacea erythematoteleangiectatic and papulopustular subtypes of mild and moderate severity, as well as with their combination. The first group of 12 patients received pulsed dye laser (PDL, with a wavelength of 595 nm) procedures and topical therapy with 15% azelaic acid gel in combination with 1% ivermectin cream. The laser treatment protocol included repeated passes over the treated areas of the face using subpurple settings with a spot size of 7 to 10 mm, a pulse duration of 3, 6, or 10 ms, and an intensity of 6 to 10 J/cm². Course was 3 procedures with an interval of 1 month. In the second group, 12 patients received intradermal injections of incobotulinumtoxinA in the area of redness with an interval of 1 cm between injections in combination with topical therapy with azelaic acid and ivermectin creams. IncobotulinumtoxinA was used at a dilution of 1 ml per 100 units of toxin, from 10 to 20 units per cheek in an additional dilution of 1:7. On the first and last visit, erythema was assessed by spectrophotometric intradermal analysis on the SIAscan of hemoglobin distribution, the success of therapy was assessed using the Investigator Global Assessment (IGA) scale. The severity of clinical manifestations in patients was assessed in points according to the dermatological index of the symptom scale (DISS scale) before treatment at baseline and after 16 weeks of therapy - from 0 to 15 points.

Results:

All patients tolerated the treatment satisfactorily; no side effects were registered, which indicates the possibility of combined use of azelaic acid and ivermectin preparations in combination with botulinum therapy with incobotulinumtoxinA and PDL 595nm. According to the data of photofixation, SIAscopy, assessment of the dynamics of the DISS scale, the IGA index, the effectiveness of therapy of all treatment methods in relation to inflammatory and local erythema is shown. In the first group, the DISS index reduction was 70.2% (from 5,7 ± 1,4 to 1,7 ± 1,2, p <0.05), in the second group — 61,4 % (from 5,7 ± 1,7 to 2,2 ± 1,2, p <0.05). After 16 weeks of therapy, 65% of patients achieved an IGA score of 0 - "clear skin", 35% - "almost clear skin". Reducing diffuse erythema, telangiectasias is more significant in the first group, narrowing of pores and improving skin quality - in the second group.

Conclusion:

Laser therapy PDL 595 nm is a leader in the treatment of individual telangiectasias and vascular pattern. Topical

application of azelaic acid in combination with ivermectin shows a reduction in the inflammatory component in the form of pustules. Combination therapies are effective against both vascular and inflammatory components and represent a promising approach to the treatment of patients with erythematoteleangiectatic and papulopustular subtypes of Rosacea.

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Abstract N°: 2024**Modulation of beta-defensin 2 and peptidase inhibitor 3 serum protein markers by secukinumab in hidradenitis suppurativa: Results from the SUNSHINE and SUNRISE phase 3 trials**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic, disabling, inflammatory skin disease for which only limited therapeutic options exist.¹ HS pathogenesis involves profound dysregulation of the immune system and release of pro-inflammatory cytokines, including interleukin 17A (IL-17A).¹ High serum levels of the antimicrobial peptide, beta-defensin 2 (BD-2), have previously been shown in patients with psoriasis.² Expression of the elastase inhibitor, peptidase inhibitor 3 (PI3), has also demonstrated correlation with disease severity in psoriasis.³ Both BD-2 and PI3 may act as biomarkers for anti-IL-17A treatment.^{2,3} We assessed changes within the serum proteomic landscape of HS patients post treatment with secukinumab, an IL-17A neutralizing monoclonal antibody, to identify pharmacodynamic biomarkers linked to disease activity responding to IL-17A blockade.

Materials & Methods:

SUNSHINE (NCT03713619) and SUNRISE (NCT03713632) are identical, phase 3, randomised, placebo-controlled, clinical trials evaluating short term (up to Week 16) and long term (up to Week 52) efficacy/safety of two secukinumab dosing regimens (300 mg every 2 [SECQ2W] or 4 [SECQ4W] weeks) in adults with moderate to severe HS.¹ Patients were randomised in a 1:1:1 ratio within SECQ2W, SECQ4W or placebo arms at baseline. At Week 16, patients previously randomised to SECQ2W or SECQ4W continued the same dosing regimen, while patients on placebo were switched 1:1 to SECQ2W or SECQ4W up to Week 52. Serum samples were collected at baseline, Week 16 and Week 52.¹

Serum samples were obtained by centrifuging EDTA-treated blood at 1.9 g-force for 15 minutes. The serum was collected, aliquoted and utilized immediately, or frozen at -80°C. Protein profiling was performed using multiplex 7K aptamer profiling (SomaLogic SomaScan assay) to measure relative expression of 7,596 aptamers (6,597 proteins) in 1,994 serum samples from 1,058 patients. Serum samples were analysed at baseline (n = 1,038) and Week 16 (n = 956), within the three arms: SECQ2W (n = 668), SECQ4W (n = 669), and placebo (n = 657). We applied linear models to identify changes within the serum proteome specifically associated with secukinumab treatment.

Results:

Secukinumab treatment significantly downregulated expression of BD-2 and PI3 in both treatment regimens in contrast to placebo (baseline vs Week 16; linear mixed model; q-value ≤ 0.05), in line with secukinumab treatment of psoriatic disease.²⁻⁴

Conclusion:

Secukinumab modulates the serum proteins BD-2 and PI3 in HS. This reflects the findings observed in previous studies of secukinumab-treated patients with psoriasis.^{2,4}

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Abstract N°: 2063**Effect of Prior Surgery on the Efficacy and Safety of Secukinumab in Patients with Moderate to Severe Hidradenitis Suppurativa: A Post-hoc Analysis of the SUNSHINE and SUNRISE Trials**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) requires a multifaceted treatment approach. SUNSHINE (NCT03713619) and SUNRISE (NCT03713632) were identical Phase 3 randomized, placebo-controlled clinical trials assessing efficacy of secukinumab in patients with moderate to severe HS. Here we report on post hoc analyses of the SUNSHINE and SUNRISE trials evaluating the impact of secukinumab on efficacy and safety outcomes up to week 52 in patients with and without prior HS surgery.

Materials & Methods:

Patients with moderate to severe HS were randomized to receive subcutaneous secukinumab 300mg every 2 (SECQ2W) or 4 weeks (SECQ4W), or placebo (PBO) in a 1:1:1 ratio between weeks 0–16. Patients receiving PBO were switched to SECQ2W (PBO-SECQ2W) or SECQ4W (PBO-SECQ4W) while those receiving SECQ2W or SECQ4W remained on the same treatment from weeks 16–52. Analyses by HS surgery status prior to enrolment are based on observed pooled data of the SUNSHINE and SUNRISE trials. Prior surgery for HS included incision and drainage, derroofing, local excision and wide excision.

Results:

The proportion of patients at baseline with or without prior surgery was balanced across treatment groups (no prior surgery: SECQ2W [58.7%, 212/361], SECQ4W [60.0%, 216/360], PBO [58.7%, 213/363]; ≥ 1 prior surgery: SECQ2W [41.3%, 149/361], SECQ4W [40.0%, 144/360], PBO [41.3%, 150/363]). There was no substantial difference in baseline abscess and inflammatory nodule or draining tunnel counts, by treatment group, in patients with or without prior surgery.

Hidradenitis Suppurativa Clinical Response (HiSCR) was greater for SECQ2W and SECQ4W vs PBO at week 16 in both subsets (no prior surgery: SECQ2W [45.1%], SECQ4W [45.3%], PBO [34.4%]; ≥ 1 prior surgery: SECQ2W [45.7%], SECQ4W [43.2%], PBO [33.1%]). Treatment outcomes continued to improve between weeks 16–52 (no prior surgery: SECQ2W [59.6%], SECQ4W [60.4%]; ≥ 1 prior surgery: SECQ2W [63.3%], SECQ4W [57.3%], at week 52, **Figure 1**).

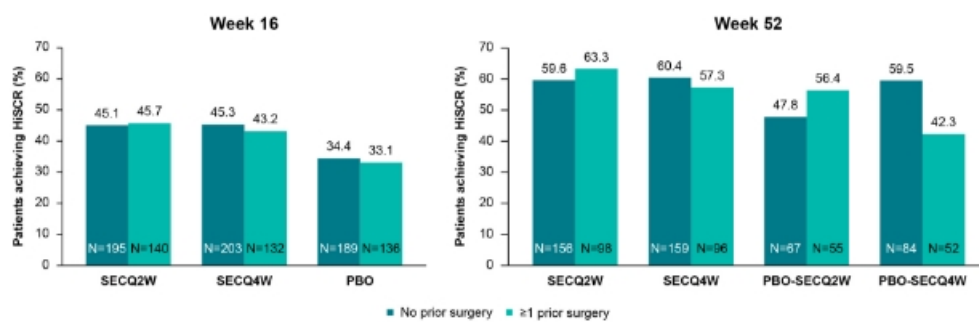
Mean \pm SD change in International Hidradenitis Suppurativa Severity Scoring System (IHS4) from baseline to week 16 was numerically greater in SECQ2W and SECQ4W groups vs PBO in both subsets (no prior surgery: SECQ2W [-11.5 \pm 13.9], SECQ4W [-10.2 \pm 14.4], PBO [-5.3 \pm 18.0]; ≥ 1 prior surgery: SECQ2W [-11.7 \pm 16.1], SECQ4W [-8.3 \pm 13.9],

PBO [-5.0±13.4]). IHS4 improvement was sustained through week 52 (no prior surgery: SECQ2W [-11.8±18.9], SECQ4W [-13.0±16.1]; ≥1 prior surgery: SECQ2W [-13.4±20.8], SECQ4W [-9.5±23.0]).

The proportion of patients with any adverse event (AE) at week 16 was slightly higher in the active treatment groups vs PBO in patients with no prior surgery; the opposite was observed in patients with ≥1 prior surgery (no prior surgery: SECQ2W [65.1%, 138/212], SECQ4W [60.2%, 130/216], PBO [57.7%, 123/213]; ≥1 prior surgery: SECQ2W [67.1%, 100/149], SECQ4W [73.6%, 106/144], PBO [76.0%, 114/150]). At week 52, the proportion of patients with any AE was similar for SECQ2W and SECQ4W in patients with no prior surgery; in patients with ≥1 prior surgery the proportion of patients with AEs was higher for SECQ4W vs SECQ2W (no prior surgery: SECQ2W [81.6%, 173/212], SECQ4W [81.0%, 175/216]; ≥1 prior surgery: SECQ2W [85.9%, 128/149], SECQ4W [91.7%, 132/144]).

Conclusion:

Prior surgery was not predictive of a differential response to secukinumab treatment: patients both with and without prior surgery responded at similar rates, with the rates being better vs PBO up to week 16. No new safety signals were identified.



Abstract N°: 2156**What does concern people with hidradenitis suppurativa?**

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Introduction & Objectives:

Individuals with hidradenitis suppurativa (HS) often have numerous questions and concerns about different aspects of the disease. Dermatologists are primarily responsible for addressing these questions. It is important to identify the main concerns of patients with HS, to develop educational content that provides them with relevant information and to define future research and treatment goals.

Materials & Methods:

Two dermatologists who specialize in HS and a patient with HS developed a set of potentially relevant and frequently asked questions regarding HS. These questions covered seven different topics: etiology and pathophysiology, epidemiology, signs and symptoms, prognosis, diagnosis and complementary tests, treatment, and the influence on pregnancy. People with HS were invited through the Spanish association of patients with HS (ASENDHI) to assess these questions anonymously by means of an online form using a numerical scale system. Patients rated the relevance of each question on a scale of 0 to 5, with 0 being "not at all relevant" and 5 being "very relevant." The mean score was calculated for each question and each section.

Results:

The form contained 42 questions, and 107 patients filled out the form. The three highest-rated questions belonged to the "treatment" section and were: "I have a flare-up of HS, what can I do?" (4.86/5), "What can I do to improve the symptoms of my HS?" (4.84/5), and "What can I do to get rid of my HS?" (4.80/5). The "treatment" section received the highest mean score (4.62/5).

Conclusion:

Although it is essential to provide individualized information to each patient according to their specific needs, the results of this study suggest that the focus should be on providing information about the treatment of HS, as this is the aspect that concerns people with HS the most.



Abstract N°: 2180

Adalimumab as a successful treatment for acne fulminans and bilateral acute sacroiliitis with hip synovitis complicating isotretinoin therapy

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Introduction & Objectives:

We report a case of an adolescent male patient who was treated by isotretinoin for moderate acne vulgaris with sudden development of acne fulminans and incapacitating acute sacroiliitis with bilateral hip arthritis presenting new challenges for therapy

Materials & Methods:

A 16-year-old male patient presented to the emergency unit of Al-Hada armed forces hospital, Taif, KSA complaining of severe progressive back pain of sudden onset with inability to ambulate.

Over the last 6 months, he had received oral isotretinoin for the treatment of moderate acne vulgaris starting at 0.6 mg/ kg (30 mg/d) with gradually increasing dosage till 1.5 mg/ kg (80 mg/d) in the last month with no response and even worsening of lesions. We prescribed adalimumab

Results:

Adalimumab 40 mg subcutaneously every other week with no loading dose on the basis of the dose used in spondyloarthropathy treatment. Patient's ability to move was restored after 1 week of the first injection and continued improving with subsequent injections. Acne lesions showed gradual improvement during the first month of therapy and interestingly comedones disappeared almost completely after 3 months of therapy.

The patient was maintained on adalimumab for 12 months without any adverse effects, which was later stopped with followup period of 3 months, with no relapse and complete resolution of the lesion on MRI

Conclusion:

In conclusion, although acute sacroiliitis and large joint synovitis are rare complications of isotretinoin therapy, they may be so severe, incapacitating, and resistant to conventional therapy. Adalimumab could be used as a successful treatment for acute sacroiliitis and acne fulminans complicating isotretinoin therapy.



Abstract N°: 2296**ASC40, an oral once-daily fatty acid synthase (FASN) inhibitor, in patients with acne vulgaris: topline results from a phase 2 randomized, double-blind, placebo-controlled, multicenter trial**

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Introduction & Objectives: ASC40 is a potent (IC₅₀ = 0.05µM) and selective small molecule inhibitor of fatty acid synthase (FASN). Mechanisms of action of ASC40 for acne treatment are novel: (1) direct inhibition of facial sebum production through inhibition of de novo lipogenesis (DNL) in sebocytes; and (2) inhibition of inflammation through decreasing cytokine secretion. Previous clinical studies showed that ASC40 treatment for 10 days reduced significantly facial sebum palmitic acid levels. Here we report the efficacy and safety results from a phase 2 study of ASC40 in patients with moderate to severe acne vulgaris after 12-week treatment.

Materials & Methods: This phase 2 trial (NCT05104125) was a randomized, double-blind, placebo-controlled, multicenter study. 180 patients with moderate to severe acne vulgaris were randomized into three active treatment arms and one placebo control arm at the ratio of 1:1:1:1 to receive ASC40 (25, 50 or 75 mg tablet) or matching placebo tablet orally, once daily for 12-week treatment and 2-week follow-up. Efficacy and safety of 12-week treatment of ASC40 or placebo were assessed.

Results: In total, 179 patients received at least one tablet of ASC40 or placebo and were included in the following analyses. One patient in 50 mg ASC40 arm did not take any study drug tablet, thus was excluded from the analyses. Table 1 summarized the topline data of primary and key secondary efficacy endpoints at Week 12 versus baseline. Overall, all three doses of ASC40 demonstrated good efficacy compared to placebo. The efficacy of ASC40 seemed maxed out at 50 mg dose. As a secondary efficacy endpoint, treatment success, defined as at least a 2-point reduction in Investigator's Global Assessment (IGA) from baseline and an IGA of 0 or 1 at week 12, was also assessed. Treatment success rates at Week 12 were 19.4% and 5.1% for 50 mg ASC40 arm and placebo, respectively, resulting a placebo-adjusted treatment success rate of 14.3%. The incidence rates of study drug related AEs were comparable among 25 mg (grade 1 = 28.9%; grade 2 = 20.0%), 50 mg (grade 1 = 36.4%; grade 2 = 11.4%), 75 mg (grade 1 = 44.4%; grade 2 = 17.8%) ASC40 and placebo (grade 1 = 35.6%; grade 2 = 13.3%). The most common study drug related AE was dry eyes whose incidence rates were similar among 25 mg (grade 1 = 17.8%; grade 2 = 6.6%), 50 mg (grade 1 = 22.7%; grade 2 = 2.3%), 75 mg (grade 1 = 15.5%; grade 2 = 11.1%) ASC40 and placebo (grade 1 = 28.9%; grade 2 = 6.6%). There were no clinically significant findings in clinical laboratory, vital signs and electrocardiography. There were no ASC40 related grade 3 or 4 AEs and no ASC40 related serious AEs (SAEs).

Conclusion: Results of this study showed that oral ASC40 with once-daily, 12-week treatment was safe and well tolerated, improved significantly acne lesions and demonstrated excellent efficacy. Based on efficacy and safety assessment of this phase 2 study, the phase 3 clinical trial is warranted and will be initiated soon.

Table 1. Primary and key secondary efficacy endpoints of 25 mg, 50 mg and 75 mg ASC40, oral, once daily tablet for 12 weeks vs placebo (n=179)

Endpoint	25 mg ASC40, oral, once daily, 12 weeks (n=45)	50 mg ASC40, oral, once daily, 12weeks (n=44)	75 mg ASC40, oral, once daily, 12 weeks (n=45)	Placebo, oral, once daily, 12 weeks (n=45)
% change from baseline in total lesion count at week 12 (primary endpoint) §	-53.1	-61.3	-53.1	-34.2
<i>P</i> value vs placebo	0.006	0.008	0.008	NA
Absolute change from baseline in total lesion count at week 12 (key secondary endpoint) §	-56.0	-60.5	-46.0	-37.0
<i>P</i> value vs placebo	0.024	0.030	0.083	NA
% change from baseline in inflammatory lesion count at week 12 (key secondary endpoint) §	-54.4	-65.0	-60.0	-31.4
<i>P</i> value vs placebo	0.006	0.003	0.029	NA
Absolute change from baseline in inflammatory lesion count at week 12 (key secondary endpoint) §	-25.0	-26.0	-22.0	-13.0
<i>P</i> value vs placebo	0.007	0.003	0.032	NA

Note: § Data are medians.

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Abstract N°: 2307**Concordance between IHS4-55 response and HiSCR: A post hoc analysis of the SUNSHINE and SUNRISE phase 3 randomised trials of secukinumab in patients with moderate to severe hidradenitis suppurativa**

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Introduction & Objectives:

The dichotomous Hidradenitis Suppurativa Clinical Response (HiSCR) score is a well-recognized efficacy endpoint currently used in Hidradenitis Suppurativa (HS) clinical trials to assess treatment effect.¹ The International Hidradenitis Suppurativa Severity Score System (IHS4) is a validated tool to classify disease severity by weighting nodules/abscesses/draining tunnels in HS; and is currently being used as a secondary outcome measure in HS clinical trials.² The need for dichotomous outcomes in clinical trial reporting led to the development and validation of IHS4-55, a dichotomous version of IHS4, based on a 55% decrease in the total score.³ Although IHS4-55 has been previously validated, the concordance between dichotomous outcomes such as IHS4-55 or HiSCR and patient-reported outcomes has not yet been evaluated. A post hoc analysis of data from SUNSHINE and SUNRISE trials was conducted to determine the concordance between IHS4-55 and HiSCR response.

Materials & Methods:

In the identical placebo-controlled SUNSHINE and SUNRISE phase 3 trials, patients with moderate to severe HS were randomised to receive subcutaneous secukinumab (SEC) 300 mg every 2 (SECQ2W) or 4 weeks (SECQ4W) or placebo (PBO) in a 1:1:1 ratio from weeks 0–16. At week 16, patients receiving PBO were switched to SECQ2W or SECQ4W, while those receiving SECQ2W or SECQ4W remained on the same treatment up to week 52.⁴ The concordance was assessed between IHS4-55 and HiSCR response at weeks 16 and 52, independent of the active treatment assignment. The concordance was estimated as the proportion of patients whose IHS4-55 and HiSCR

responses were concordant at a given visit within the SEC or PBO arms. Similarly, concordance between IHS4-55 and Dermatology Life Quality Index (DLQI) response (a decrease of ≥ 5 points on DLQI total score from baseline) and HiSCR and DLQI responses were estimated at weeks 16 and 52 in patients with baseline DLQI ≥ 5 . All analyses were conducted on pooled and trial-wise data from SUNSHINE and SUNRISE and were based on observed data from the full analysis set comprising all randomised patients.

Results:

In total, 1084 patients with moderate to severe HS from the SUNSHINE and SUNRISE trials were included in this analysis to evaluate concordance between IHS4-55 response and HiSCR. A high concordance between IHS4-55 and HiSCR response at week 16 and week 52 (both $\geq 85.7\%$ in pooled analysis and by trial) was observed in all treatment arms. Concordance between IHS4-55 and DLQI responses and between HiSCR and DLQI responses was assessed in 905 patients. There was a moderate concordance between IHS4-55 and DLQI responses (57.1% to 66.2%), which was similar to that observed between the HiSCR and DLQI responses (54.6% to 71.4%) (**Table**).

Conclusion:

This post hoc analysis showed that there was high concordance between IHS4-55 and HiSCR and moderate concordance between IHS4-55 and DLQI. With IHS4 including quantification of draining tunnels in a validated manner, these results support IHS4-55 as a suitable efficacy outcome for HS by its own or in addition to HiSCR.

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Table: Concordance (%) between IHS4-55 and HiSCR responses, IHS4-55 and DLQI responses, and HiSCR and DLQI responses

Concordance	Any SEC		PBO	PBO-Any SEC
	Week 16	Week 52	Week 16	Week 52
SUNSHINE				
IHS4-55 and HiSCR	87.5 (N=361)	85.7 (N=361)	87.6 (N=180)	86.0 (N=180)
IHS4-55 and DLQI	57.1 (N=290)	58.9 (N=290)	65.9 (N=145)	64.3 (N=145)
HiSCR and DLQI	58.2 (N=290)	54.6 (N=290)	71.4 (N=145)	69.4 (N=145)
SUNRISE				
IHS4-55 and HiSCR	86.2 (N=360)	88.3 (N=360)	88.5 (N=183)	87.6 (N=183)
IHS4-55 and DLQI	60.3 (N=304)	62.4 (N=304)	66.2 (N=166)	60.0 (N=166)
HiSCR and DLQI	63.8 (N=304)	62.9 (N=304)	70.4 (N=166)	58.2 (N=166)
Pooled				
IHS4-55 and HiSCR	86.8 (N=721)	87.0 (N=721)	88.1 (N=363)	86.8 (N=363)
IHS4-55 and DLQI	58.7 (N=594)	60.8 (N=594)	66.0 (N=311)	62.0 (N=311)
HiSCR and DLQI	61.1 (N=594)	59.0 (N=594)	70.9 (N=311)	63.5 (N=311)

IHS4-55 is a dichotomous outcome based on a 55% reduction in the total IHS4 score from baseline. HiSCR is defined as decrease of at least 50% in AN count with no increase in the number of abscesses and/or in the number of draining tunnels compared to baseline. DLQI response is defined as decrease of ≥ 5 points in DLQI total score from the baseline. Concordance with DLQI is estimated in patients with baseline DLQI ≥ 5 . All data are reported as observed. Concordance was assessed independently of treatment assignment.
AN, abscess and inflammatory nodules; DLQI, Dermatology Life Quality Index; HiSCR, Hidradenitis Suppurativa Clinical Response; IHS4, International Hidradenitis Suppurativa Severity Scoring System; PBO, placebo; PBO-Any SEC, patients on placebo switching to seoukinumab after week 16; Any SEC, seoukinumab 300 mg every 2 or 4 weeks.



Abstract N°: 2340**Identification of patients affected by hidradenitis suppurativa and inflammatory bowel disease overlap using type VII collagen biomarkers**

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Introduction & Objectives:

Patients with hidradenitis suppurativa (HS) have more than double the risk of being diagnosed with inflammatory bowel disease (IBD), such as Crohn's disease (CD) and ulcerative colitis (UC), compared to individuals without HS. Type VII collagen is synthesized by keratinocytes and fibroblasts and is crucial for the function and stability of the extracellular matrix, connecting the epidermal basement membrane to the dermis. In addition to its presence in the skin, type VII collagen has also been linked to the pathogenesis of IBD, especially CD. We investigated novel blood-based biomarkers of type VII collagen in serum from healthy controls, and HS patients with or without IBD, with the aim to investigate the biomarker's ability to identify patients with HS+IBD overlap.

Materials & Methods:

Blood samples from 430 HS patients, 387 without IBD (mean \pm SD age 39.64 \pm 14.06, 67.7% female), 31 with HS+CD (mean \pm SD age 42.83 \pm 14.34, 51.6% female), 12 with HS+UC (mean \pm SD age 33.73 \pm 19.75, 91.7% female), totaling 43 with HS+IBD (mean \pm SD age 40.23 \pm 16.35, 64.3% female), and 26 healthy donors (mean \pm SD age 42.62 \pm 10.53, 50% female), were collected. The two biomarkers C7M and PRO-C7, measuring degradation and formation of type VII collagen, respectively, were measured in serum from all subjects. Statistically significant differences between groups were calculated by ANCOVA, corrected for Hurley stage, age, and sex.

Results:

C7M and PRO-C7 were both significantly upregulated in patients with HS, HS+CD, HS+UC and HS+IBD, compared to healthy controls (all $p < 0.0001$, Figure 1). No differences were found between HS patients with or without IBD for C7M, while PRO-C7 showed significantly higher levels in patients with HS+CD and HS+IBD compared to the patients only having HS (both $p < 0.0001$). In an AUROC analysis, PRO-C7 showed a separation between HS and HS+CD with an AUC=0.862, $p < 0.0001$, and between HS and HS+IBD an AUC=0.821, $p < 0.0001$, while no difference was found between HS and HS+UC.

Conclusion:

Formation of type VII collagen, quantified by PRO-C7, is significantly elevated in patients with HS+CD overlap, compared to HS alone, which indicates an excessive collagen production. Such biomarker could potentially be used to identify patients affected by both manifestations, and guide treatment decisions.

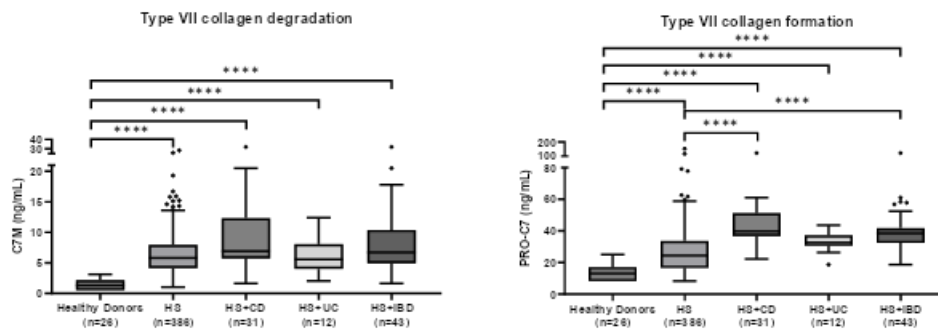


Figure 1. Biomarker levels of type VII collagen degradation (C7M) and formation (PRO-C7). Data are plotted as Tukey Box-plots and analyzed by an analysis of covariance (ANCOVA) corrected for Hurley stage, age, and sex.

Abstract N°: 2348**Screening for inflammatory bowel disease in hidradenitis suppurativa**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is associated with inflammatory bowel disease (IBD). Using healthcare databases, an estimated 2.1% of HS patients have IBD. Prospective screening for IBD in HS has not been studied. Our aim was to evaluate the prevalence of IBD in HS and utility of IBD screening using a symptom-based questionnaire and faecal calprotectin (FC) testing.

Materials & Methods:

All patients with HS attending two dermatology clinics were invited to participate. Information was collected on demographics, HS severity and IBD risk factors. Faecal samples were returned by patients for calprotectin testing (≤ 50 =negative, 50–150=borderline, ≥ 150 =positive).

Results:

We recruited 150 patients including 124 females (82.7%) with a median age of 36 years. The majority were Hurley stage 2/3 (88.6%) and were current/former smokers (74%). Just 11 patients had known IBD (7.3%). There was a high frequency of reported IBD symptoms including abdominal pain (44.7%), faecal urgency/incontinence (30.7%), diarrhoea with blood/mucous (27.3%), perianal abscess/fistula (16.7%), nocturnal bowel movements (14.7%), mouth ulceration (11.3%) and unexplained weight loss (4.7%). Among 92 patients who returned a sample, 77 had a negative FC (83.7%), 11 had a borderline FC (12%) and 4 had a positive FC (4.3%). In 11 patients with a borderline result, 2 had an established diagnosis of IBD (18.2%). Of the remaining 9 patients, 6 returned a repeat sample for testing. Just 1 patient had a repeat FC in the borderline range (16.7%) while the remaining 5 patients had a negative FC (83.3%) Among 4 patients with a positive result, 2 had an established diagnosis of IBD (50%). The two patients without established IBD were referred for gastroenterology assessment. One patient had a negative endoscopic evaluation reporting an acute diarrhoeal illness at the time of their positive FC result while the second patient awaits endoscopic evaluation.

Conclusion:

We report an IBD prevalence of 7.3% in this real-world cohort. This is higher than studies using healthcare databases. Routine IBD symptom-based assessment is currently recommended in HS which, in this cohort, would grossly overestimate IBD. Use of FC testing can effectively rule out intestinal inflammation in symptomatic and asymptomatic patients. There were not any patients subsequently diagnosed with incident occult IBD using FC in this study. In the absence of any new incident occult IBD cases, FC was not useful as part of routine screening and indeed resulted in additional unnecessary investigations including repeat FC testing and endoscopic evaluation

which is not without risk. This requires further study but routine IBD symptom-based assessment and FC screening in HS may not provide any additional diagnostic utility in the dermatology clinic. The lack of new incident IBD among 92 patients with HS is reassuring for clinicians who may soon have access to IL-17 antagonists for their patients.

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Abstract N°: 2461**Socio-economic impact of hidradenitis suppurativa**

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Introduction & Objectives:

Hidradenitis suppurativa (HS), psoriasis (PS), atopic dermatitis (AD) and chronic urticaria (CU) together affect 1 in 5 French adults. The high impact of HS on quality of life is well documented. We wanted compare the socio-economical impact of HS to those of others chronic inflammatory dermatosis.

Materials & Methods:

We performed an observational multicentre study including all adult patients with moderate-to-severe HS, AD, PS or CU. Demographic data, disease history, severity, treatments were recorded by the investigator at inclusion; data on disease impact were collected directly from the patient. We analyzed here the socio-economical impact of HS in comparison to the 3 others chronic inflammatory dermatosis at inclusion.

Results:

2042 patients were included: HS n=360, PS n=1026, AD n= 448, CU n=208, whose main characteristics are detailed in Table 1. For HS patients, mean IHS4 score at inclusion was 13.7+-16.7, with 86% patients having moderate to severe HS according to IHS4. Numerically more HS patients were single (47.2%) compared to patients with PS, AD and CU (27.2%), and also compared to the AD cohort (38.2%) which mean age was the closest to HS cohort (35.5+-12.6 years). The highest degree for 37.6% of HS patients was GCSE, BTEC, NVQ or A level, compared to 31.7% of PS, AD and CU patients. More HS patients were unemployed (11.9 versus 6.9%) and benefit from supplementary universal health care insurance (15.3%) (accorded to people with the lowest income) than PS, AD and CU patients (7.3%). The number of sick leave days the last 6 months in HS cohort was 45.1+-125.8 compared to 26.3+-48.6 in PS, AD and CU patients. In HS cohort, socio-economical impact was comparable according to the age and to the age at HS diagnosis. The impact of HS on social relationships, choice of clothes, sexual life was greater for women compared to men. The impact of HS on familial and professional life, physical

pain, social relationships, sport activities, work, and sexual life was greater in case of genital involvement of HS.

Conclusion:

Our study illustrate the high socio-economical impact of HS compared to PS, AD and CU. We identified factors associated with increased impact, such as female gender and genital localisation of HS lesions.

	Hidradenitis suppurativa (n=360)	Psoriasis, atopic dermatitis and chronic urticaria (n=1682)	
Mean age +- SD (years)	32.8+- 9.9	41.0 +- 12.9	p<0.001
Female sex (%)	61.9	48.7	P<0.001
Mean impact on professional life +- SD*	6.5+-2.8	5.7+-3.2	p<0.001
Mean impact on familial life +-SD*	6.1+-2.9	5.3+-3.0	p<0.001
Hospitalisation for chronic dermatosis the last 6 months (%)	27.9	8.2	p<0.001
Significant impact of physical pain on domestic or professional activities (%)	60.2	38.2	p<0.001
Significant impact of health status on social relationships (%)	40.3	26.9	p<0.001
Significant influence on the choice of clothes (%)	66.7	50.9	p<0.001
Significant impact on sport activities (%)	49.4	28.6	p<0.001
Significant impact on sexual life (%)	54.7	29.3	p<0.001
Moderate to severe impact on quality of life (%)	88.9	77.7	p<0.001
Sick leave days the last 6 months (%)	44.6	23.5	p<0.001

*Visual analogic scale (0 to 10)

Table 1. Characteristics of patients



Abstract N°: 2476**A comparison of cosmetic active's efficacy used in acne adjunctive care in reducing TRPV1 activation in hypersensitive skin cells**Alexandra Vogelsang¹, Chiara Knoblich¹, Katja Warnke¹, Julia Gallinger¹, Julia Weise¹¹Beiersdorf AG**Introduction & Objectives:**

Acne affects an estimated 9.4 % of the global population, making it one of the most common skin diseases (Layton et al, 2021; Tan & Bhate, 2015). For a successful acne treatment with prescribed medication the compliance of the patient is a crucial factor. Often dermatologists face non-compliant patients due to pronounced side effects of acne medication such as itching, burning, and dryness of the skin (Snyder et al, 2014).

Skin pruritus is a condition characterized by a hyperresponsiveness of sensory neurons and stimulation of neuroreceptors such as calcium-permeable transient receptor potential (TRP) channels. The thermoreceptor TRPV1 (capsaicin receptor) is known to mediate skin sensitivity including sensation of pain, itch, warmth, and afferent functions to chemical stimuli (Kitakka et al, 2017, Sulzberger et al, 2016, Sun et al, 2016, Yun et al, 2011, Gibson et al, 2014). The Nobel Prize in Physiology or Medicine 2021 was awarded to David Julius and Ardem Patapoutian for their discovery of temperature receptors such as TRPV1 (Latorre & Díaz-Franulic, 2022).

This in vitro study aims to evaluate the effects of different anti-irritant and soothing active ingredients in TRPV1 overexpressing keratinocytes.

Materials & Methods:

We investigated the inhibition of capsaicin-induced TRPV1 activation in vitro.

Keratinocytes (HaCaTs) with stably transfected TRPV1 receptor were stained with a Ca²⁺-sensitive fluorescent dye. After baseline recording cells were treated with the TRPV1 agonist capsaicin (1 µM) alone or in combination with actives. 100 µM of the respective actives (4-t-butylcyclohexanol, allantoin, glycyrrhethinic acid, niacinamide, dextran sulfate) were analyzed. A solvent control as well as cells treated only with the respective actives served as unstimulated controls. The Ca²⁺ influx dependent fluorescent signal was measured in a kinetic mode over 40 cycles (approx. 90 s) in a spectrophotometer. The area under the curve (AUC) was determined for each treatment. For TRPV1 activation the differences between the AUC of the capsaicin-stimulated samples and the respective unstimulated controls were calculated.

Results:

The in vitro model confirmed significant efficacy of 4-t-butylcyclohexanol to reduce Ca²⁺ influx into cells, thus 4-t-butylcyclohexanol efficiently acts as a TRPV1 antagonist. No reduction of Ca²⁺ influx was observed for the other tested actives (allantoin, glycyrrhethinic acid, niacinamide, dextran sulfate).

Conclusion:

4-t-butylcyclohexanol proved to be superior in inhibiting TRPV1 stimulation in keratinocytes compared to other tested actives. Thus, cosmetic formulations containing 4-t-butylcyclohexanol are suitable as adjunctive care for prescribed acne medication to actively reduce symptoms of itching and burning and therefore increase patient adherence.

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Abstract N°: 2477

Efficacy of a dermocosmetic acne treatment in reducing post-inflammatory hyperpigmentation in subjects with phototypes IV to VI

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Introduction & Objectives: Post-inflammatory hyperpigmentation (PIH) represents a significant burden for individuals with dark phototypes (IV to VI), as it can lead to long-lasting, highly visible, and aesthetically disfiguring skin alterations. In this study, our objective is to evaluate the efficacy of a novel acne-dedicated dermocosmetic (DC) treatment in reducing PIH in subjects with phototypes IV to VI suffering from mild to moderate acne.

Materials & Methods: In this 8-week, single-arm clinical study, subjects with phototypes IV to VI and mild to moderate acne were treated with a DC containing salicylic acid, lipohydroxy acid, niacinamide, procerad, mannose, and APF (a biomass of *Vitreoscilla Filiformis* grown in TSW culture medium), alongside an acne dedicated cleanser. An independent dermatologist reviewed D0 and D56 face profile images to score global PIH severity, hypopigmentation intensity, and the number of PIH.

Results: The study involved 43 subjects with 60% females (mean age 19.1 years, range 11-42 years) with diverse phototypes (31% IV, 51% V and 18% VI). The results demonstrated a significant reduction in the number of PIH by an average of 19.7% at D56 compared to D0. Treatment showed non-statistically significant improvements in global PIH severity and hypopigmentation intensity.

Conclusion: The DC treatment, combined with a cleanser, effectively reduced PIH in subjects with phototypes IV to VI and mild to moderate acne. Evaluating global PIH severity and hypopigmentation intensity can be challenging due to the highly subjective nature of the available scales. Further research should be performed to improve the assessment methods for global PIH severity and hypopigmentation intensity.** C1 - Internal use

C1 - Internal use



Abstract N°: 2500

Efficacy assessment of a face mask with Tanakura Clay, Zinc PCA and Niacinamide in subjects with mild to moderate acne

Albert Navasa¹, Georgina Logusso¹, Adrià Ribes¹, Aida Serra¹, Sonia Aladren¹, Eric Jourdan¹

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Introduction & Objectives:

Acne is a common skin condition that occurs when hair follicles under the skin become clogged by excessive production of sebum and dead cells, leading to outbreaks of lesions known as pimples, comedones, blackheads, and whiteheads. The lesions are the result of excessive sebum production, bacterial settlement and inflammation. External application of facial masks is a cosmetic procedure generally used to improve overall skin condition. Tanakura clay is a mineral-rich marine porous clay that absorbs and removes skin impurities. This facial mask product is recommended for oily and acne-prone skin. It works by inducing a flow of liquid from the inside out that transports metabolic products, cell particles, bacterial toxins and other impurities such as urban pollutants to the surface of the skin, adsorbing them to the ingredients of the mask and thus they are eliminated with the rinse.

Through clinical and preclinical studies, the efficacy of a facial mask with Tanakura clay, PCA Zinc and niacinamide to reduce the total count of acne lesions and its ability to decrease the toxic effects of pollution exposure was evaluated.

Materials & Methods:

To verify the potential anti-pollution activity of our product against urban pollution exposure (E1), an ex vivo study was carried out using organ cultures of ex vivo human skin. Anti-pollution activity was determined by quantification of Reactive Oxygen Species (ROS), using the DCFH-DA test, and semiquantitative evaluation of the Aryl hydrocarbon Receptor (AhR), a key regulator of cellular detoxification pathways, using immunohistochemistry, after application of 10µg/cm² of Diesel Particulate Matter (PM) onto the human skin explants, for 4h, on D0, D1 and D2.

To evaluate the non-comedogenic and non-acnegenic efficacy, a study (E2) was carried out in 33 adolescent and adult subjects with mild to moderate acne, under dermatological control after 4 weeks of use, twice a week. The primary objective was to evaluate inflammatory and non-inflammatory lesions after 28 days under normal conditions of use.

Results:

In the E1, the product showed a complete reduction of toxic free radical production (-101%) following exposure of skin to particulate matter and significantly prevented the activation of AhR (-58%).

In the E2, clinical evaluation was performed on subjects' faces after 28 days of use with a frequency of two times a week. The total non-inflammatory lesions significantly decreased after 28 days of product use (11,4% p=0.001) and the total inflammatory lesions showed significant decrease (-36.3% p<0.001). The global lesion count showed significant reduction (-17.0% p<0.001) after 28 days of product use.

Conclusion:

The results of the mentioned studies show that the investigational product exhibits potent anti-pollution activity

and also proves its non-comedogenic and non-acnegenic efficacy after 28 days of use.

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Abstract N°: 2529

Efficacy and safety evaluation of a facial night serum formulated with retinaldehyde, zinc PCA and niacinamide in subjects with acne

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Introduction & Objectives:

Acne is a chronic inflammatory skin disease of the pilosebaceous unit characterized by the presence of comedones, papules, pustules, and nodules.

The pathogenesis of acne is multifactorial, including excess of sebum production, follicular hyperkeratinization, *Cutibacterium acnes* (*C. acnes*) colonization, and release of inflammatory mediators into the skin.

The emotional impact of acne affects the quality of life of patients. In fact, patients with acne are at increased risk of anxiety and depression compared to the non-affected population.

The efficacy of a facial cosmetic product formulated with retinaldehyde, zinc PCA and niacinamide (night serum) was evaluated to help reduce the clinical signs of acne.

Materials & Methods:

To assess proliferation control of *C. acnes*, human skin explants were first incubated with *C. acnes* (1.5×10^6 - 5×10^6 cfu) for 24 hours and subsequently treated with the product for a further 24 hours. To evaluate the preventive action, the same procedure was performed but the product was added prior to *C. acnes* incubation. Colony counts, imaging, and IL-1 α quantification by ELISA were performed in both settings.

Clinically, 33 subjects from 12 years old with combined and oily skin, with comedones and inflammatory lesions (Study 1, S1) applied the product once a day at night for 28 days (D28). Skin lipidic index was determined (Sebumeter) at D28.

In a separate study (S2), 34 volunteers with mild to moderate acne applied the night serum for 84 days at night. Clinical acne signs [Open and closed comedones (non-inflammatory lesions), papules and pustules (inflammatory lesions) count] were evaluated after 28 (D28) and 84 (D84) days. Physician Global Assessment scale (PGA) and skin redness (ColorFace[®]) were also recorded at these timepoints.

Undesired events were collected in both studies.

Results:

The night serum inhibited the proliferation (-99,9%, $p < 0,05$) and growth (-99,9%, $p < 0,05$) of *C. acnes*. IL-1 α expression was reduced both when the product was applied prior to (-61%, $p < 0,005$) and after (-61%, $p < 0,005$) skin incubation with *C. acnes*.

In S1 the product statistically significantly decreased the skin lipidic index at D28 (-37,6%, $p < 0,05$).

In S2, in a subset of participants with more than 10 inflammatory lesions at D0, total lesions count (non-inflammatory and inflammatory) was significantly reduced at D28 (-45,2% $p \leq 0,001$) and at D84 (-59% $p \leq 0,001$) and PGA improved at both D28 (+65% of subjects, $p \leq 0,05$) and at D84 (+85% of subjects, $p \leq 0,05$).

After 28 days of use, skin redness was decreased in 34 subjects (-1,3%, $p < 0,042$).

Only 4 out of 67 subjects reported mild events (burning and itching) in specific applications that receded almost immediately.

Conclusion:

The night serum presented a visible reduction of the acne clinical signs after 84 days of use and a very good dermatological compatibility and acceptability.

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Abstract N°: 2576**Long-standing genital hidradenitis with severe outcome: report of two patients.**

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Introduction & Objectives:

Anogenital hidradenitis (HS) has a serious impact on quality of life and is frequently refractory to treatment. Moreover, genital involvement has been associated with greater disease severity and is difficult to treat given anatomic and functional factors. Our aim is to present two cases of long-standing HS developing serious consequences.

Case report:

Case 1

65-year-old woman, smoker and with a body mass index (BMI) of 26 kg/m².

16-year history of HS, treated over the years with topical and oral antibiotics.

She presented to the emergency department with a severe outbreak for the previous two months consisting on inflammatory nodules in both axillae and multiple complex fistulae and ropelike scars in groins and vulva. On the right labium majus she presented a hard and painful swelling. MRI confirmed abscesses and superficial fistulae in the right labium majus, inguinal fold and perineal area. HS severity was rated as Hurley III.

A biopsy of the labium majus ruled out malignancy and showed scarring and fibrous tissue.

She initiated adalimumab 40mg weekly, but after 6 months she discontinued it due to lack of response and switched to guselkumab 100mg monthly with clinical improvement of the inflammatory features. However, vulvar edema failed to respond after 10 months. Finally, she underwent a radical excision of bilateral inguinal folds and the right labium majus and the wounds were left to heal by secondary intention with optimal cosmetic and functional result.

Case 2

45-year-old man, BMI 22.7, smoker and with personal history of acne, Chron disease and HLA-B27 negative ankylopoietic spondylitis in the context of SAPHO syndrome.

Development of inguinal and perianal HS at 35 years old, initially responsive to oral antibiotics. After 3 years, HS progressed to severe scrotal involvement with multiple inflammatory nodules and abscesses, intersphinteric and communicating fistulae in the perianal and genital area visible by MRI. HS was rated as Hurley III.

After 9 years of HS diagnosis, he developed penile and scrotal edema and consequently phimosis. He initiated adalimumab 80mg weekly for two years with optimal response for articular and digestive involvement but due to loss of cutaneous effectiveness; we switched to ustekinumab 390mg induction dose and later 90mg every 8 weeks with partial response after 6 months. Genital edema proved refractory to both biologic agents. Currently, the patient awaits surgical excision of his lesions.

Discussion:

Lymphedema is a complication of severe and long-standing HS that results from chronic inflammation and lymphatic drainage obstruction and is more frequent in males with an average age of 46.

Penile and scrotal lymphedema is the most common presentation. It can present as a swelling mass, with a woody appearance or polypoid lesions; ranging from mild swelling to scrotal elephantiasis. Furthermore, in advanced stages, the lesions can be clinically indistinguishable from verrucous carcinoma, so they need to be biopsied.

Combined surgical and medical therapy is the gold standard in the management of HS, but for lymphedema the only curative option with good results is surgical removal. Medical therapy remains critical for control the inflammatory component.

Conclusion:

Genital HS has an enormous impact on quality of life and is usually refractory to medical treatment. Early and intensive management can prevent serious disfigurement and need to aggressive surgery.

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Abstract N°: 2593

Depth of the Efficacy Response to Upadacitinib Treatment in Moderate-to-Severe Hidradenitis Suppurativa (HS)

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Introduction & Objectives:

Patients with HS endure unpredictable progressive disease. With systemic therapies targeting the underlying cytokine-driven mechanisms of chronic inflammatory diseases, increasingly higher clinical efficacy benchmarks are expected. We assessed whether patients with moderate-to-severe HS treated with the selective JAK inhibitor upadacitinib (UPA) can achieve higher HS Clinical Response (HiSCR) and the dichotomous International HS Severity Score System endpoint, IHS4-55, that dynamically assesses inflammatory nodules, abscesses, and draining tunnels, and was validated using PIONEER I/II and oral antibiotic-treated patient datasets.

Materials & Methods:

In a phase 2, multicenter, randomized, double-blinded, placebo-controlled study (NCT04430855), adults (≥ 18 yrs) with moderate-to-severe HS were randomized (2:1) to once daily oral UPA 30 mg or placebo for 12 weeks (period 1). After 12 weeks, placebo patients switched to blinded UPA 15 mg, and UPA 30-mg patients continued assigned treatment through week 48 (period 2). Primary endpoint was the achievement of $\geq 50\%$ reduction from baseline in abscess and inflammatory nodule (AN) count with no increase in abscess or draining fistula count (HiSCR) at week 12 (UPA 30 mg vs historical placebo rate based on PIONEER I/II). Post hoc efficacy assessments through week 40 included the proportion of patients achieving $\geq 75\%$ and $\geq 90\%$ reduction from baseline in AN count with no increase in abscess or draining fistula count (HiSCR 75 and HiSCR 90, respectively) and the proportion of patients achieving $\geq 55\%$ reduction in IHS4 (IHS455). Nonresponder imputation incorporating multiple imputation to handle missing data due to COVID (NRI-C) and observed cases (OC) approaches were used.

Results:

A total of 68 patients (77.9% female; mean [SD] age 36.6 [11.9] years) were enrolled. At week 12 (NRI-C), 38.3% of patients receiving UPA 30 mg ($n = 47$) and 23.8% of patients receiving placebo ($n = 21$) achieved HiSCR (nominal $P = .087$; Table). A higher proportion of UPA 30mg patients achieved HiSCR 75 (21.3%, nominal $P < .001$) and HiSCR 90 (8.5%, nominal $P = .015$) vs placebo at week 12; no patients in the placebo group achieved HiSCR 75 or HiSCR 90. Among patients in the UPA 30mg group, 40.4% achieved IHS4-55 compared with 19.0% of patients in the placebo group at week 12 (nominal $P = .020$ vs placebo). The proportions of patients receiving UPA 30 mg who achieved these benchmarks at week 12 were slightly higher for the OC analysis (Table). At week 40 (OC), HiSCR, HiSCR 75, and HiSCR 90 was achieved by 75.9%, 62.1%, and 31.0% of patients receiving UPA 30 mg ($n = 29$), respectively, and by 71.4%, 50.0%, and 28.6% of patients who switched to UPA 15 mg ($n = 14$), respectively. At

week 40, IHS455 was achieved by 72.4% of patients receiving UPA 30 mg and 85.7% of patients switching to UPA 15 mg.

Conclusion:

UPA-treated patients can achieve the more stringent efficacy endpoints of HiSCR 75 and HiSCR 90 by week 12. Given the lack of achievement by placebo-treated patients, these higher HiSCR efficacy levels may more clearly differentiate responders. The response to UPA was durable with the proportions of patients achieving HiSCR 75 and HiSCR 90 increasing through week 40. Analyses using IHS4-55, which weights draining tunnels, were consistent with those reported for HiSCR. In summary, UPA can provide higher levels of clinical efficacy across HS lesion types, including draining tunnels, to address the unmet needs of patients with moderate-to-severe HS.

Table. Achievement of Higher Clinical Efficacy With Upadacitinib Among Patients with Moderate-to-Severe Hidradenitis Suppurativa

Parameter	Patients, n (%)							
	NRI-C ^a				Observed Case			
	Week 12		Week 40		Week 12		Week 40	
	UPA 30 mg (n = 47)	PBO (n = 21)	UPA 30 mg/UPA 30 mg (n = 47)	PBO/UPA 15 mg (n = 19)	UPA 30 mg (n = 39)	PBO (n = 18)	UPA 30 mg/UPA 30 mg (n = 29)	PBO/UPA 15 mg (n = 14)
HiSCR	18 (38.3) [*]	5 (23.8)	22 (46.8)	10 (52.6)	18 (46.2)	5 (27.8)	22 (75.9)	10 (71.4)
HiSCR 75	10 (21.3) [†]	0	18 (38.3)	7 (36.8)	10 (25.6)	0	18 (62.1)	7 (50.0)
HiSCR 90	4 (8.5) [‡]	0	9 (19.1)	4 (21.1)	4 (10.3)	0	9 (31.0)	4 (28.6)
IHS4-55	19 (40.4) [§]	4 (19.0)	21 (44.7)	12 (63.2)	19 (48.7)	4 (22.2)	21 (72.4)	12 (85.7)

HiSCR, Hidradenitis Suppurativa Clinical Response defined as ≥50% reduction from baseline in abscess and inflammatory nodule (AN) count with no increase in abscess or draining fistula count; HiSCR 75, a ≥75% reduction from baseline in HiSCR; HiSCR 90, a ≥90% reduction from baseline in HiSCR; IHS4-55, a ≥55% reduction in International Hidradenitis Suppurativa Score System; NRI, nonresponder imputation; PBO, placebo; UPA, upadacitinib.

^aNonresponder imputation incorporating multiple imputation to handle missing data due to COVID (NRI-C).

*Nominal P = .087 vs in-trial placebo.

†Nominal P < .001 vs in-trial placebo.

‡Nominal P = .015 vs in-trial placebo.

§Nominal P = .020 vs in-trial placebo.



Abstract N°: 2612

Adalimumab Treatment Failure in Hidradenitis Suppurativa: Associated Factors From a Retrospective Observational Study Using Data From the CPRD-HES Database in England

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a difficult-to-manage, painful, chronic inflammatory skin disease affecting an estimated 1.19% of the population in England.¹ Adalimumab is approved in the UK to treat active moderate to severe HS in adult patients with an inadequate response to conventional systemic therapy.¹ This study aimed to characterise the patient profile, patient journey, treatment pathways and treatment outcomes of patients with physician-diagnosed HS in England, using real-world data from the Clinical Practice Research Datalink (CPRD) linked with the Hospital Episode Statistics (HES) database. Here, we report the factors that may be associated with treatment failure of adalimumab in patients with HS.

Materials & Methods:

This retrospective observational study utilised data from the CPRD-HES linked database in England for the study period of January 2009 through March 2021. A Cox proportional hazard model was applied to investigate factors associated with treatment failure of adalimumab. The outcome variable was the time from adalimumab initiation to the first treatment failure (among patients with HS who were treated with adalimumab), which was defined as treatment discontinuation at ≥ 90 days.

Results:

Overall, 52 of 40,036 patients with HS recorded in the CPRD-HES database were treated with adalimumab after diagnosis. The mean \pm standard deviation (SD) age at diagnosis was 35.60 ± 13.41 years, and the majority were female (71.2%). Overall, 36.5% were current smokers and 19.2% were ex-smokers. Patients receiving metformin prior to HS diagnosis had a 3-fold higher risk of treatment discontinuation ($P < 0.005$). Patients with prior exposure to non-steroidal anti-inflammatory drug (NSAID) treatment (between 365 days prior to HS diagnosis and the first adalimumab prescription) and patients with acne had 1.5 times higher risk of treatment discontinuation, but this did not reach statistical significance ($P > 0.005$), which may be due to the small sample size. Factors such as prior exposure to oral rifampicin showed a trend towards lower risk of treatment discontinuation (**Table 1**).

Conclusion:

The results highlight that only 0.13% of the patients with HS were prescribed adalimumab in England, which suggests that under-treatment is likely. Low patient numbers receiving adalimumab also mean that confidence intervals are relatively wide for factors that may predict treatment failure. Nevertheless, the risk of treatment discontinuation with adalimumab was significantly higher in patients with exposure to metformin prior to HS diagnosis. There was a non-significant trend in patients with prior exposure to NSAID treatment and patients with acne, whereas factors such as prior exposure to oral rifampicin were associated with a trend towards lower risk.

Table 1. Factors Associated With Treatment Failure of Adalimumab

Predictor	HR	SE	P-value	95% CI of the HR	
				Lower bound	Upper bound
Metformin (prior to HS diagnosis)	3.24	0.36	0.001	1.61	6.54
Oral clindamycin (prior to HS diagnosis)	1.60	0.28	0.095	0.92	2.79
Non-steroidal anti-inflammatory drugs (pre-adalimumab)	1.52	0.17	0.012	1.09	2.10
Acne (HS-related comorbidity)	1.48	0.16	0.012	1.09	2.02
Sex Female (reference: Male)	0.81	0.15	0.145	0.60	1.08
Topical antibiotics (pre-adalimumab)	0.81	0.15	0.170	0.60	1.09
Opioids (prior to HS diagnosis)	0.75	0.16	0.066	0.55	1.02
Oral rifampicin (pre-adalimumab)	0.74	0.15	0.042	0.55	0.99
Pilonidal cysts / sinuses (HS-related comorbidity)	0.61	0.28	0.073	0.35	1.05
Metformin (pre-adalimumab)	0.49	0.28	0.011	0.28	0.85
Renal failure (Elixhauser comorbidity)	0.48	0.47	0.119	0.19	1.21

Pre-adalimumab=Between 365 days prior to HS diagnosis and the first adalimumab prescription.

CI, confidence interval; HR, hazard ratio; HS, hidradenitis suppurativa; SE, standard error.

Reference:

1. Ingram JR et al. *Br J Dermatol.* 2018;178(4):917-924.

Abstract N°: 2643**Autoinflammatory syndromes associated with hidradenitis suppurativa: A case report**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) or acne inversa, is a chronic, inflammatory skin disease characterised by recurrent inflammation and deep-seated lesions in apocrine gland-bearing, intertriginous areas of the body that can be potentially scarring and debilitating. While HS frequently presents with other comorbidities, it rarely can be an essential cutaneous manifestation of autoinflammatory syndromes of which several have been reported in the literature. These include the triad of pyoderma gangrenosum (PG), acne, and HS (PASH), which is clinically differentiated by the absence of the arthritis component from the pyoderma gangraenosum, acne, hidradenitis suppurativa and pyogenic arthritis (PAPASH) and pyoderma gangraenosum, acne, and spondyloarthritis (PASS) as well as from the psoriatic arthritis, pyoderma gangraenosum, acne, and hidradenitis suppurativa (PsAPASH) syndromes. Pyoderma gangraenosum, acne, and ulcerative colitis (PAC) can also manifest in the context of an autoinflammatory disease. These phenotypes share a common pathogenesis involving an innate immune system response to an abnormal follicular keratinization with interleukin (IL)-1 signaling activation leading to sterile neutrophilic inflammation. They generally, appear to be more severe and are associated with a lower quality of life compared to the non-syndromic form.

Materials & Methods:

We report on a 40-year-old man with conglobate acne on his back during puberty and the subsequent development of inflammatory nodules, recurrent abscesses, and draining tunnels on the axillae and the perianal/perineal and genital area. The patient presented in our emergency center because of severe pain, swelling in the wrist, morning stiffness in the right elbow joint, right shoulder and on the both upper ankle. The clinical examination revealed a demarcated, livid ulceration on the right upper arm and one abscess on the lower leg with clinical characteristics of pyoderma gangrenosum. On the family history his sister was also diagnosed with HS. Interestingly, our patient was first diagnosed with type 2 diabetes during his hospitalisation. Biopsies on both localizations revealed a mixed-cell granulomatous reaction and a neutrophilic dermatosis with necrotic epidermis.

Results:

Our patient displayed an interesting variation of syndromic HS with osteoarticular manifestations.

Conclusion:

This case underlines the important role of the dermatologist in the prompt diagnosis and targeted therapy (anti-TNF α , anti-IL-1 α) of such complex syndromes. Control of the inflammation in early disease stages might hinder the development of scarring and joint impairment, which would result in a significantly higher quality of life for those patients.

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Abstract N°: 2678**Is there an association between Keratosis pilaris and Hidradenitis suppurativa? Preliminary results of a single-center cohort as part of a multi-center prospective observational study**Georgios Nikolakis^{1, 2}, Annabelle Pohl^{1, 2}, Ditte Marie Saunte^{2, 3, 4}, Christos C. Zouboulis¹

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Introduction & Objectives:

Hidradenitis suppurativa (HS) and keratosis pilaris (KP) are both diseases characterized by follicular hyperkeratinisation. Keratosis pilaris was already found to be associated with obesity, diabetes mellitus and atopic dermatitis. Keratosis pilaris is correlated with a distorted barrier homeostasis, due to filaggrin mutations. Obesity is a common risk factor for both diseases. Interestingly, a current metanalysis of observational studies demonstrated a significant association with HS and asthma, suggesting a common pathogenetic mechanisms between the two diseases. A recent case report described an improvement of severe HS under dupilumab, which was administered for the treatment of a concomitant severe atopic dermatitis, strengthening the aforementioned suspicion. In order to elucidate the association between the two follicular entities, a multicenter prospective ERN-Skin project was designed.

Materials & Methods:

This study focuses on the preliminary data of a single-center cohort of 90 patients and 36 controls, which were examined in our Departments at the "Staedtisches Klinikum Dessau" during the period of July to December 2022. A standardized documentation sheet and questionnaire was used to document the demographic data of HS patients and controls (ratio 2:1), their height and BMI, Hurley stage and IHS4, as well as the KPASI score for keratosis pilaris. In order to assess a potential association between the prevalence of HS and KP, the groups were compared using Chi-square test with the help of SPSS. A logistic regression analysis was subsequently performed in order to include the differences in gender and age between the two groups. Lastly, we investigated a potential association of KP with BMI, IHS4 and Hurley Stage using Student's t-test. The differences were considered significant at a p-value lower than 0.05.

Results:

The age of the of the HS group was 42±14 years and of the control group 55±20 years. 47% of the HS group were women, while the percentage of women in the control group was 64%. 27% of the HS group reported the development of itchy skin of a period of 10 years. 16% of the HS group patients reported a positive family history for HS. 22% of the cases were diagnosed with KP; KP was significantly associated with HS ($p < 0.001$). The logistic regression analysis confirmed the result with a p value of 0.023. The independent t-test confirmed the already previously described correlation of KP with BMI

Conclusion:

These preliminary results increase the interest for a potential association between HS and KP. Data from more patients are essential to further elucidate this hypothesis and offer the rationale to further investigate common

molecular pathways, offering better targeted primary and secondary prevention strategies to avoid the hidradenitis “march” in a similar manner to atopy-associated diseases. Moreover, such a correlation might suggest different targeted therapies for the treatment of the disease and its long-term remission.

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Abstract N°: 2727**Interest of a cleanser product on subjects with mild to moderate acne with very dry skin due to acne treatments**

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Introduction & Objectives: Topical or oral retinoids use are one of the standard therapeutics in acne. They provide anti-inflammatory effects and reduce comedones, but lead to several cutaneous side effects, such as local skin irritation, dehydration, desquamation, pruritus, and lipid level alteration at the surface of the skin, which intensity depends on their concentration and formulation of the product. Biologically, these side effects are related to an excessive decrease in sebum production and an altered skin barrier, representing a key issue in patients' adherence to treatment. Therefore, the aim of this study was to evaluate, under dermatological and ophthalmological control, the safety and the subjective efficacy of a cleansing product in promoting skin comfort to patients undergoing retinoid treatment.

Materials and methods: In an observational, blinded control study, which includes two visits at day(D)0 and D28, 30 subjects, aged from 14 to 29 years (mean: 20.6 years) under treatment with mild to moderate acne and very dry skin were included and used the studied product on the face twice daily for 28 days. The Subjects Global Assessment (SGA) of acne severity was evaluated by the subjects at the end of study. Cutaneous and ocular safety assessments were performed at D0 and D28 by a dermatologist and ophthalmologist, respectively. The skin hydration and the lipidic index measurements were performed at each visit. In the same way, the efficacy and the cosmetic properties appreciation of the product were evaluated by the subjects at D0 and D28.

Results: All subjects were compliant with the treatment and** 80% of them had a remarkable improvement in terms of acne severity comparing to D0. For 28 days of product use, no cutaneous and ocular reactions or discomfort sensations ascribable to the tested product were reported. The skin hydration was significantly improved by 53.1%, and no significant decrease in the lipidic index was observed compared to D0. The gently cleansing of the product was validated by 100% of the subjects as well as the soothing effect by 90% at D28. All subjects agreed that the product allows to do less frictions on the skin during the cleansing.

Conclusion: The studied product was very well dermatological and ophthalmological tolerated by the subjects under retinoids treatment. Moreover, while treatment was being efficient on acne lesions, this cleansing product was able to counteract treatment side effects by restoring the skin hydration level and preserving the cutaneous lipid rate. These results show that its moisturizing and nourishing effectiveness may therefore contribute to a better compliance to ultra-drying acne treatments.



Abstract N°: 2729**A split-face study assessing the clinical benefit, tolerability and subject satisfaction of dermocosmetic cream containing sphingobioma and neurosensine in subjects with rosacea associated with erythema and sensitive skin**

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Introduction & Objectives:

Rosacea is a chronic inflammatory skin condition associated with an altered skin barrier and microbiome, inflammation and vasodilation. Persistent erythema is a common primary feature, and can be associated with flushing, papules, pustules. Rosacea is associated with sensitive skin symptoms including tightness, stinging, burning and pain. A specific dermocosmetic (DC) containing Sphingobioma to restore skin barrier, decrease inflammation and redness, as well as Neurosensine to improve sensitive symptoms, and shea butter to moisturise the skin barrier has been developed for these patients. Objective to assess the efficacy and tolerability of the DC cream in patients with rosacea associated with erythema and sensitive skin.

Materials & Methods:

Intra-individual single-blind study with a split-face design comparing the DC cream applied twice daily compared to usual skin care of subjects for 28 days in 22 female adult subjects >18 years of age, phototype I to IV with very mild to mild erythema of rosacea (IGA 1-2), having sensitive skin (positive skin stinging test with 15% lactic acid). Clinical evaluations at baseline, Day15 and Day 28 included assessment of erythema, skin tightness, burning sensation, stinging and pain according to 0-10 VAS scale, rosacea severity (0-4 Modified IGA Scale), stinging test, and local tolerability. Instrumental evaluations included Chromameter, Corneometer and Tewameter. Digital images by ColorFace® and Skincam were taken at all time points on both sides. Subject quality of life was assessed at Baseline and Day 28 by Stigmatization, RosaQOL and DLQI questionnaires. Demodex density (SSSB method) was assessed at Baseline and Day 28.

Results:

Clinical evaluation of skin erythema, tightness, burning and stinging showed a statistically significant difference in favor of DC cream at both time points (all $p \leq 0.05$).

Chromameter evaluation of erythema showed a statistically significant difference in favor of DC cream at both time points ($p < 0.001$ at D15, and $p < 0.01$ at D28).

Corneometer and TEWL evaluations showed a statistically significant difference in favor of DC cream at both time points (respectively $p < 0.0001$ and $p < 0.01$ at D15, and $p < 0.0001$ and $p < 0.05$ at D28).

Skin sensitivity assessed through the skin stinging test showed a statistically significant difference in favor of DC cream at both time points ($p < 0.001$ at D15, and $p < 0.001$ at D28).

At D28, a significant ($p < 0.05$) reduction of the mean Demodex density was observed on the DC cream side compared to the opposite side.

Tolerance was excellent in all subjects.

Conclusion:

A rosacea specific DC cream significantly improves skin redness, as well as skin sensitivity symptoms, skin hydration and TEWL, as soon as after 15 days of twice-daily use, and significantly decreases Demodex count at D28, with a very good tolerance.

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Abstract N°: 2735**Acne, the usefulness of using a dermocosmetic**Charles Taieb¹, Charles Ribeyre², Anne-Laure Demessant-Flavigny²¹EMMA, ²La Roche Posay**Introduction & Objectives :**

Acne is a very common chronic inflammatory skin disease, which mainly affects adolescents and young adults of both sexes. Several studies have confirmed that acne also affects adults, 7% according to the Objectifs Peau project recently published by the SFD; however, few studies have focused on the impact of acne on this population.

Materials & Methods :

To evaluate the impact of using a DermoCosmetique [skincare containing APF, salicylic acid and panthenol], we administered the AI-ADL burden questionnaire [Dreno B, JEADV 2021] at D zero and D 30 to adults whose acne diagnosis and severity had been confirmed by a dermatologist during a spontaneous consultation.

Results:

524 respondents aged 18 years and older, sex ratio in favor of women [74%, n = 361] . Mean age 24.5, median was 21. Of these 92% [N=484] reported using DermoCosmetique which we will refer to as the exposed group. 3 severity groups were identified: 57.3% were identified as mild [n = 297], 34.9% as moderate [n = 181], 7.7% as severe [n = 40].

In terms of burden, on day 30, the prevalence of improvement in the exposed group was 79.9%. The mean burden score evolved from 19.4 to 12.8 between day zero and day 30. $P < 0.001$ In the unexposed group, the prevalence of improvement was 64.1%. The mean burden score evolved from 19 to 14.7 between day zero and day 30. $p = 0.2$ Beyond these results after 30 days of use, 95% were satisfied with the product and 91% said that the product had helped to reduce their imperfections

Conclusion:

Adherence to acne treatments is often a barrier to successful treatment. The fact that patients are satisfied with the product or that their blemishes have improved, allows us to hope for better compliance. Improved burden after 30 days of use also improves compliance.



Abstract N°: 2736

A 2023 snapshot of acne prevalence worldwide Data from the All Skins-All Colors-All Dermatoses: the ALL PROJECT:

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Introduction & Objectives:

No study has *simultaneously* evaluated the prevalence of acne worldwide The ALL PROJECT aims at providing a snapshot state of the prevalence of skin diseases and their consequences. We present the current observations for acne.

Materials & Methods:

The ALL PROJECT involves 50,552 individuals, representative of the adult populations of 20 countries spread over 5 all five continents [China 5000, USA 5000, Brazil 4001, India 3000, Australia 2000, France 4000, Italy 400, Canada; Denmark; Germany; Israel; Kenya; Mexico; Poland; Portugal; Senegal; South Africa; South Korea; Spain; UAE], which together accounts for over 50% of the world's population. In each of the 20 countries surveyed we conducted a population-based study on representative and extrapolable samples of the general population aged 16 years or more. The questionnaire was built in partnership with patient organisations and remains focused on the patient's experience.

Results:

The 2023 snapshot prevalence of acne in the population aged 16 years and older is **18.99%** [%]95%±0.34% [18.64%, 19.33%]. There was a significant difference by gender: **16.31%** [%]95%±0.45% [15.86%, 16.76%] in males versus [%]95% ±0.51% [21.44%, **22.46%**] in females p<0.00000. The prevalence of acne by age group showed a high prevalence in the 16-34 age group of 28.22% [%]95% ±0.66% [27.56%, 28.88%] and in the 35-54 age group of 16.02% [%]95%±0.51% [15.51%, 16.53%]. The prevalence among those aged 55 and over, although lower, remains at a significant absolute value of 4.56% [%]95%±0.36% [4.20%, 4.92%]. A total of 40.51% reported a location on the trunk (37.79% among women vs. 44.13 among men). To the question "Does acne leave scars or persistent marks?", 69.8% answered in the affirmative. (67.95% among women vs. 70.16% among men)

Conclusion:

By its methodology and scope, built in partnership with patient organisations and focused on the patient's experience, the ALL PROJECT is rich in information and confirmation potential. This study validates the universality of key age-related prevalence data. This tool opens the field to specific studies on "all skin" variations of other major acne traits.

Abstract N°: 2748

Immunomodulatory Effect of Mesenchymal Stem Cells in Hidradenitis Suppurativa Patients Peripheral Blood Mononuclear Cells: Experimental Pilot Study

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Introduction & Objectives:

To the best of our knowledge, the immunomodulatory potential of mesenchymal stem cells (MSCs) in hidradenitis suppurativa (HS) model has not been studied yet. The aim of this study was to evaluate MSCs immunomodulatory effect in co-culture with HS patients' peripheral blood mononuclear cells (PBMC).

Materials & Methods:

Co-cultures were performed as described by Vila et al. . Briefly, PBMC of 3 HS patients and 3 healthy volunteers were dyed with CFSE, stimulated with PMA and Ionomycin. Healthy and patient PBMC single cultures were used for controls (Healthy control and HS control, respectively). Patient PBMC were also co-cultured with naïve human placental MSC (n-MSC), 10 ng/ml TNF- α and IFN- γ activated MSC (a-MSC) or 30 μ g/ml adalimumab. Cultures were grown in triplicate. After 5 days, the PBMC were analysed by flow cytometry (10 000 events per sample) with FlowJo using the Proliferation Modelling tool to evaluate the division index. RT-qPCR and Luminex assays were used to quantify relative gene expression changes or cytokine concentrations, respectively (in triplicates). Data was analysed using the Kruskal-Wallis test with post-hoc Dunn's for multiple comparisons using IBM SPSS software.

Results:

In total, blood samples were taken from one female and two males with HS (mean age of 45.0 years, range of 37–54 years, mean body mass index (BMI)-30.76 kg/m², mean IHS4- 9, range of 7-11) and three healthy females (mean age of 25 years, range of 23–29 years, mean BMI- 20.61 kg/m²).

The PBMC division indexes were as follows: 0.54 (0.46-0.82) healthy control, 0.50 (0.45-0.62) patient control, 0.26 (0.15-0.44) n-MSC, 0.14 (0.12-0.15) a-MSC, 0.47 (0.21-0.58) adalimumab, with no significant difference between groups ($p=0.076$). However, there was a significant difference found in the post hoc multiple comparison test between a-MSC and HS control group ($p=0.036$).

The Luminex assay revealed a tendency for lower IL-9 and IL-17A cytokine production in a-MSCs and n-MSCs groups when comparing with adalimumab ($p<0.05$) and control HS group (Table 1). The similar results for cytokines level lowering were seen in a-MSCs, n-MSCs and adalimumab groups for IL-6, IL-10 and IFN- γ expression in HS patients' blood ($p<0.05$). Interestingly, a-MSCs and n-MSCs showed tendency of increase production of IL-1 β when comparing with adalimumab group ($p=0.55$ and $p=0.101$ respectively).

The real-time PCR results showed that the expression of IL-1 β gene was significantly increased in the a-MSC (p= 0.006) and n-MSC (p= 0.003) groups, when compared to the adalimumab group. There was a tendency to increase IL-17A, IL-36a and TNF- α genes expression in a-MSC and n-MSC groups without statistical significance (Table 2).

Conclusion:

Patient PBMC co-culture model can be used to evaluate the immunomodulatory effect on proliferation and cytokine secretion after stimulation with mitogens. Our results suggest, that MSCs can be promising option for HS experimental therapy, but larger samples are needed to validate the findings.

Table 1. Luminex assay of IL-1 β , IL-6, IL9, IL-10, IL-17A, IFN- γ and TNF- α secretion after PBMC stimulation.

Cytokine	Group	Median concentration (pg/ml)	Maximum	Minimum	p*
IL-1 β	n-MSC	242.13	653.08	161.26	0.121
	a-MSC	166.81	613.09	146.11	0.235
	Adalimumab	33.4	201.64	13.91	0.715
	HS control	50.13	263.90	21.58	-
	Healthy control	76.62	122.93	76.13	0.927
IL-6	n-MSC	734.63	1696.66	529.64	0.171
	a-MSC	870.18	1761.81	744.41	0.715
	Adalimumab	910.08	1709.10	639.14	0.523
	HS control	1067.13	3085.79	777.15	-
	Healthy control	638.83	661.54	625.69	0.028
IL-9	n-MSC	51.19	334.72	31.62	0.083
	a-MSC	55.44	71.23	3.56	0.022
	Adalimumab	133.06	803.07	62.18	0.361
	HS control	212.02	1399.18	146.16	-
	Healthy control	135.08	172.67	67.98	0.315
IL-10	n-MSC	9.99	44.55	7.36	0.315
	a-MSC	18.97	62.72	15.11	0.927
	Adalimumab	21	51.63	15	0.927
	HS control	19.69	56.69	17.06	-
	Healthy control	24.61	27.03	20.70	0.784
IL-17A	n-MSC	526.04	909.60	373.75	0.171
	a-MSC	397.44	484.03	303.86	0.022
	Adalimumab	672.76	1443.34	460.59	0.523
	HS control	1035.21	2155.54	530.34	-
	Healthy control	530.30	577.54	269.00	0.1
IFN- γ	n-MSC	472.20	1055.23	303.39	0.315
	a-MSC	551.57	795.43	400.26	0.584
	Adalimumab	562.13	1155.50	353.28	0.648
	HS control	778.09	1626.62	441.45	-
	Healthy control	315.22	386.61	309.24	0.036
TNF- α	n-MSC	364.33	812.86	218.45	0.171
	a-MSC	451.56	466.64	179.14	0.235
	Adalimumab	148.07	277.30	67.60	0.006
	HS control	904.20	2574.27	436.07	-
	Healthy control	380.42	458.18	372.02	0.273

*Pairwise comparison with HS Control group.

Table 2. Expression levels of IL-1 β , IL-10, IL-17A, IL-36a and TNF- α genes in the control and HS groups.

Cytokine	Group	Fold Change in Gene Expression*	Maximum	Minimum	p**
IL-1β	n-MSC	51.40	51.72	42.05	0.171
	a-MSC	41.52	86.45	26.18	0.273
	Adalimumab	0.83	0.94	0.79	0.1
	HS control	1.62	11.41	1.07	-
	Healthy control	0.97	1.07	0.96	0.411
IL-10	n-MSC	2.76	6.02	2.76	0.100
	a-MSC	1.85	2.44	1.25	0.465
	Adalimumab	0.48	0.53	0.30	0.273
	HS control	0.5	23.48	0.32	-
	Healthy control	1.15	1.43	0.61	0.927
IL-17A	n-MSC	10.15	19.84	3.58	0.855
	a-MSC	14.97	32.41	6.22	0.784
	Adalimumab	4.78	8.60	2.74	0.315
	HS control	6.41	36.04	5.23	-
	Healthy control	1.71	2.33	0.25	0.022
IL-36a	n-MSC	10.56	11.85	9.27	0.052
	a-MSC	3.42	4.17	2.67	0.166
	Adalimumab	0.6	1.10	0.21	0.723
	HS control	0.89	1.46	0.32	-
	Healthy control	0.94	1.52	0.70	0.723
TNF-α	n-MSC	17.95	18.05	16.10	0.143
	a-MSC	9.97	12.19	7.76	0.513
	Adalimumab	1.32	1.37	1.07	0.242
	HS control	1.92	5.06	1.54	-
	Healthy control	0.93	1.37	0.79	0.143

*Using Healthy control values for calibration.

**Pairwise comparison with HS Control group.

**



Abstract N°: 2773

Tolerance and efficacy of a dermo-cosmetic face care in adults, adolescents and pre-adolescents subjects with mild to moderate acne

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Introduction & Objectives:

Acne is a very common chronic inflammatory disease in adolescents and adults and there are some evidence of its increasing prevalence in pre-adolescents. Dermo-cosmetic products are now recognized as complementary care to medical treatment in acne management. The objectives of the study were to evaluate the efficacy and tolerance of a new dermo-cosmetic face care product dedicated to acne containing Rhealba® Oat Sap, Garcinia Extract, Lactic Acid, Flower Acids.

Materials & Methods:

Subjects aged 9 – 35 years old, were included in an open, non-controlled clinical study and applied the product on the whole face twice a day, during 8 weeks. Four visits were planned (D1, D8, D29, D57). Main inclusion criteria were mild to moderate acne with a total of 15 to 50 acne lesions (TL) with at least 10 non-inflammatory lesions (NIL) and at least 5 inflammatory lesions (IL) on the face for adults and adolescents, and 5 to 50 TL, with at least 5 NIL for pre-adolescents; combination to oily skin. Primary criterion of the study was to assess the tolerance of the product, based on physical and functional signs assessment. Secondary criteria included acne lesions counting, acne severity according Global Acne Evaluation (GEA) scale, clinical evaluations of pore visibility, photographic analysis of post-inflammatory erythema (PIE) and hyperpigmentation (PIH), Investigator and subject's assessment of efficacy on PIE/PIH, quality of life assessment (using Cardiff Acne Disability Index / CADI, Dermatology Life Quality Index / DLQI and Children Dermatology Life Quality Index / CDLQI). Cosmetic acceptability questionnaire and standardized photography were also performed.

Results:

Fifty-four subjects (21 adults, 23 adolescents and 10 pre-adolescents) were included. The cutaneous tolerance of the product was assessed good by the investigator. The efficacy results on adults and adolescents showed a significant decrease from baseline of inflammatory and total lesions at D8, D29 and D57 and non-inflammatory lesions and mean GEA at D29 and D57 ($p < 0.01$). Respectively, 52%, 86% and 91% of subjects reported an improvement of their acne at D8, D29 and D57. A significant decrease from baseline of the surface of PIE and PIH was observed at D29 and D57 and at D8 for PIH ($p < 0.01$). Quality of life was significantly improved according to CADI and DLQI / CDLQI at D29 and D57 ($p < 0.05$). Most subjects were very satisfied of the cosmetic qualities and efficacy of the product.

Conclusion:

The results of this study demonstrate the interest of this new dermo-cosmetic face care product dedicated to acne for adults, adolescents and pre-adolescents with mild to moderate acne. The good tolerance and cosmetic acceptability of the product will probably help to ensure good compliance.

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Abstract N°: 2795

Impact of Povorocitinib on DLQI and DLQI Subdomains in Patients With Hidradenitis Suppurativa: Results From a Randomized, Placebo-Controlled Phase 2 Study

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic inflammatory condition with symptoms that profoundly impair patients' quality of life (QoL). Povorocitinib is an oral, small-molecule, selective Janus kinase (JAK)1 inhibitor with potential activity in the treatment of moderate to severe HS. The Dermatology Life Quality Index (DLQI) is widely applied to measure the impact of dermatologic conditions and treatment on patients' QoL. We assessed improvements in DLQI scores to determine the impact of povorocitinib on QoL in patients with HS in a phase 2 trial (NCT04476043; EudraCT 2020-001981-13).

Materials & Methods:

In total, 209 adults 18–75 years old with HS (Hurley stage I–III; Hurley III \leq 25.0%) were randomized (1:1:1:1) to once-daily (qd) povorocitinib 15 mg, 45 mg, 75 mg, or placebo (PBO) for 16 weeks. Thereafter, 174 patients received povorocitinib 75 mg qd during a 36-week open-label extension (OLE). Clinically meaningful improvements in QoL were indicated by the percentage of patients with baseline DLQI total scores \geq 4 achieving a minimal clinically important difference (MCID; \geq 4-point reduction from baseline in DLQI total score). No missing data imputation was used for the analysis of DLQI MCID. Mean changes in DLQI total score or individual domain scores were also evaluated. Due to small sample sizes, statistical comparisons were not performed.

Results:

Median (range) DLQI baseline total score in the overall population was 11.0 (0–30.0), indicating HS had a “very large” or “extremely large” effect on QoL for most patients.

Among patients with baseline DLQI total score \geq 4, improvements in DLQI at the 45- and 75-mg doses were already apparent at the first postbaseline visit DLQI was assessed (ie, Week 4). At Week 16, percentages of patients achieving MCID in DLQI score were 35.0%, 51.3%, and 63.2% with povorocitinib 15 mg, 45 mg, and 75 mg, respectively, vs 34.2% with PBO. After crossover to povorocitinib 75 mg at Week 16, higher percentages of patients achieved MCID in DLQI at Week 52 (15→75 mg, 46.4%; 45→75 mg, 70.4%; 75 mg, 60.7%). The most substantial improvement from Week 16 was observed in the PBO→75 mg group, at 60%. The percentage of patients originally randomized to 75 mg who achieved MCID remained generally constant between Weeks 16 and 52, suggesting maintenance of response (**Figure**).

In the overall population, improvements during the PBO-controlled period were seen in each of the 6 DLQI subdomain scores in the povorocitinib groups vs PBO, with highest-magnitude improvements vs PBO in the

Treatment, Work/School, and Personal Relations subdomains. Continued improvements in all DLQI subdomain scores were observed in the OLE (in which all patients received povorcitinib 75 mg) and were maintained through Week 52.

Conclusion:

In patients with HS, most of whom had a very/extremely large impairment in QoL at baseline, treatment with povorcitinib was associated with early and sustained improvements in total DLQI and DLQI subdomains. Patients had a greater probability of achieving clinically meaningful improvement in DLQI in the povorcitinib 45-mg and 75-mg qd groups vs PBO. Povorcitinib has the potential to improve QoL in patients with severe symptoms due to HS.

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Abstract N°: 2803**Baseline Demographic and Disease Characteristics Associated With Achieving HiSCR With Povorcitinib: Secondary Analysis From a Phase 2, Randomized, Placebo-Controlled Clinical Trial**

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Introduction & Objectives:

Povorcitinib is an oral, small-molecule, selective Janus kinase 1 inhibitor in clinical development for the treatment of hidradenitis suppurativa (HS). In a phase 2, dose-ranging study (NCT04476043; EudraCT 2020-001981-13), povorcitinib achieved a significantly greater decrease from baseline in abscess and inflammatory nodule (AN) count, and a numerically higher percentage of patients achieved HS Clinical Response (HiSCR; $\geq 50\%$ decrease from baseline in AN count with no increase in number of abscesses or draining tunnels) at Wk 16 versus placebo (PBO). We performed a secondary analysis from the phase 2 study to assess povorcitinib efficacy (per HiSCR) in patient subgroups defined by select baseline demographic and disease characteristics.

Materials & Methods:

A total of 209 adults with HS (Hurley stage I-III) were randomized (1:1:1:1) to once-daily povorcitinib (15 mg, n=52; 45 mg, n=52; 75 mg, n=53) or PBO (n=52) for 16 wks. Statistical comparisons for HiSCR (key secondary endpoint) at Wk 16 in the intent-to-treat population were tested using logistic regression, which included treatment group and stratification factors (Hurley stage, geographic region). 95% confidence intervals (CIs) were calculated with the Clopper-Pearson exact method. Descriptive analysis was performed for the proportion of HiSCR responders among subgroups defined by baseline demographic and disease characteristics. Missing values were considered nonresponders.

Results:

At Wk 16, a numerically higher percentage of patients in all 3 povorcitinib groups (15 mg, 48.1%; 45 mg, 44.2%; 75 mg, 45.3%) achieved HiSCR vs PBO (28.8%; 15 mg: OR, 2.3 [95% CI 1.0, 5.3] $P < 0.05$; 45 mg: OR, 2.0 [95% CI 0.9, 4.6] $P = 0.0998$; 75 mg: OR, 2.1 [95% CI 0.9, 4.7] $P = 0.0829$).

Among patients treated with povorcitinib 75 mg, HiSCR was achieved by a comparable proportion of patients (approximately 40%–50%) regardless of baseline demographic or disease characteristics, including sex, race, presence/absence of draining tunnels, disease severity based on Hurley stage (I vs II vs III), time since diagnosis (≤ 7 vs > 7 years), and prior biologic exposure (naive vs experienced). Numerically, slightly more men and Black patients had HiSCR responses (95% CI overlapped; **Figure:** povorcitinib 75 mg). Similar findings were observed in the 45 mg dose group, except that patients with a longer time since diagnosis, prior biologic exposure, and Hurley stages II and III had numerically lower HiSCR responses.

Conclusion:

In this subgroup analysis, patients receiving povorcitinib 45 mg or 75 mg achieved HiSCR regardless of differences in demographic or disease characteristics. Because factors including Hurley stage III disease, the presence of draining tunnels, and longer disease duration are generally associated with more severe disease, these results reinforce the effectiveness of JAK1 inhibition with povorcitinib as a potential systemic treatment for HS. These preliminary findings may be influenced by the small number of patients available in these subgroups, and additional analyses with a larger patient population will be needed to confirm these results. Two identically-designed phase 3 trials in patients with moderate-to-severe HS are currently enrolling (NCT05620823, NCT05620836).

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Abstract N°: 2816**Impact of feeling of stigmatization on the lives of adult patients with hidradenitis suppurativa : Data from the All Skins-All Colors-All Dermatoses: the ALL PROJECT**

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Introduction & Objectives:

Hidradenitis suppurativa(HS)is a chronic inflammatory dermatosis with significant physical, social, and emotional burden. Studies have established the importance of feeling of stigmatization[FS] in HS, but there is little information about the consequence of FS on daily life . The objective of this study was to investigate the impact of HS-associated FS on social, professional and family life and to explore the impact of stigma on treatment adherence.

Material and methods

The ALL PROJECT involves 50,552 individuals, representative of the adult populations of 20 countries spread over 5 all five continents. In each of the 20 countries surveyed we conducted a population-based study on representative and extrapolable samples of the general population aged 16 years or more. Among the 50552 individuals, patients who reported HS, confirmed by a physician, were identified

Results

A population of 586 HS respondents was identified, including 302 (51.5%) males. A total of 450 HS respondents reported FS (77.1%), of which 337 (57.5%) felt ostracized or rejected by others, 334(57.0%) felt looked at with disgust, 333 (56.8%) reported that people avoided touching them, and 314 (53.6%) reported that people avoided approaching them because of their HS. 134 HS respondents were considered to have no FS. The FS population was on average younger than the non-FS population (mean age 34.75 ± 10.2 years vs 40.45 ± 14.5 y; $P < 0.0001$). Gender (Men 78.5% vs 75.7%, p 0.90) and BMI (24.65 vs 25.97, p 0.077), visible lesion location (72.7% vs 80.4%, p 0.45) were not predictive factors of FS. Signs/symptoms of HS such as burning sensations [45,40%vs 29,10%, p 0,036371) and skin pain (43,80% vs 23.90% , p 0,003525) were all significantly more frequent in patients with reported FS. There were significant consequences for self-perception, relationships, daily life, sleep, and social and work life in subjects with reported FS. Patients with reported FS were more likely to avoid taking selfies (84.4% vs. 51.5%, P 7.93E-12) and tended to control their appearance whenever they passed in front of a mirror (71.7% vs. 34.3%, P 8.63E-12) due to HS. Poor adherence to therapy was associated with feelings of stigma (78.6% vs. 32.8%, $P < 0.0001$)

Discussion

Our study established that FS was more frequent in young patients with signs/symptoms of HS . This can result in negative attitudes and behaviors towards people who are affected by HS, which can lead to social isolation and exclusion. FS is associated with poor adherence to therapy, which can lead to a vicious cycle of mutually reinforcing negative conditions. Efforts to reduce FS in patients who live with HS can include public education campaigns, increased access to healthcare and support services, and challenging stereotypes and prejudices through advocacy and activism. It is important to promote a message of empathy and understanding toward those affected by disease, rather than fear and rejection.

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Abstract N°: 2825

Referral of obese hidradenitis suppurativa patients to weight management services – a missed opportunity?

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is strongly associated with obesity and other cardiovascular risk factors. HS disease severity correlates with increasing body mass index (BMI), and HS is much more prevalent in obese patients due to undergo bariatric surgery. Weight loss achieved through dietary, pharmacological, or surgical means has been observed to result in improved control of HS. Furthermore, the sole licensed biologic therapy for HS, adalimumab, is less effective in obese patients.

Referral of obese patients with HS to weight management programmes should therefore be a first-line management step. UK guidelines on obesity management advise referral to tier 2 weight management services (community clinics) for those with a BMI ≥ 30 ; and referral to tier 3 (specialist clinics) for those with a BMI ≥ 40 , or BMI ≥ 35 with a significant weight-related co-morbidity. This project aimed to evaluate UK general practitioner (GP) referral patterns to weight management services in patients with HS.

Materials & methods:

Cases of HS were identified retrospectively from the specialist HS clinic at our dermatology centre. Case note review was performed for 50 consecutive patients from September 2022 to March 2023. Information on the patients' age, sex, ethnicity, BMI and HS Physician Global Assessment (HS-PGA) was collected. We scrutinised the health records to identify whether patients had been referred to a weight management program by the time of their referral to the dermatology service.

Results:

The median age of our HS patient cohort was 40 years (range 21-82 years) and male-to-female ratio was 1:1. 33 patients (66.0%) were from ethnic minority backgrounds. 41 patients (82.0%) had an HS-PGA of at least moderate (ranging up to very severe) at the time of referral.

Median BMI was 31.2 (range 17.8-60.2). 19 patients (38.0%) were obese class 1 (BMI 30.0-34.9); 10 patients (20.0%) obese class 2 (BMI 35.0-39.9); 7 patients (14.0%) obese class 3 (BMI ≥ 40.0). BMI category adjustment was performed for ethnic minorities in line with national guidelines. 0 out of 20 eligible patients had been referred by their GP for tier 2 weight management services and 5 out of 16 (31.3%) to tier 3.

Conclusion:

This study demonstrates low referral rates of obese HS patients by GPs to weight management services in the UK. This highlights a missed opportunity to help achieve restoration of a healthy weight, improvement in HS, and reduction of cardiovascular risk. Further efforts are required to educate medical professionals that HS should be considered a weight-related comorbidity and to encourage referrals for weight management in this cohort.

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Abstract N°: 2830

The use of social media by French women suffering from acne

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Introduction & Objectives:

Acne has a meaningful impact on teenagers, young adults and also women. The latest EADV study [EADV burden of skin diseases project team. Prevalence of most common skin diseases in Europe: a population-based study. J Eur Acad Dermatol Venereol. 2022] has highlighted that over 14 million adult women in Europe suffered from acne. Acne may have an impact in the way patients interact with social media (SoMe). We evaluated here how women used SoMe in relation to their skin condition Materials &

Methods:

A online survey was developed in partnership with the French Association of Acne Patients [France 3 A: France Acné Adults Ados] to study the use of SoMe by women suffering from acne and its impact on quality of life. Data collection has set place between Mars 19 and April 27, 2023. Survey was distributed through all SoMe platforms of France3A. Patients were free to participate and no incentive has been given in exchange for participation.

Results:

Out of the 1987 responses received, 1734 completed the survey. 37% were under 25 years old, 49% between 26 and 35 years old and 14% were over 36 years old,

86% have post-acne marks on their skin and almost one third (31.8%) say that these marks last over a year.

73.8% feel self-conscious about their post-acne marks and 64% agree that these marks reinforce the discomfort caused by their acne lesions.

34% say they feel stigmatised because of their acne and acne marks/spots. 81% consider their skin to be unpredictable.

12% reported they had posted at least one selfie within the last 7 days. Out of those 12%, 44% acknowledged using a filter to enhance their selfie before posting it and 49% admitted that acne prevented them from taking a selfie. 9.4% disclosed not having ever taken a selfie with acne.

Conclusion:

Our study highlights the impact of acne on patients' self-image and the way women with acne use SoMe. A high percentage of women report using filters to edit their selfies because of their acne. Furthermore, post-acne marks are common and often persist for over a year, contributing to the discomfort and stigma felt by those affected.

These findings highlight the need to raise awareness and provide appropriate support for adult women

with acne, to promote greater self-acceptance and improved quality of life.

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Abstract N°: 2845**Ablative Fractional Carbon Dioxide Laser Combined with Autologous Platelet-Rich Plasma in the Treatment of Atrophic Acne Scars: A Systematic Review and Meta-Analysis**Yara Aljefri¹, Sahal Jalaludeen G Samarkandy², Awadh Alamri²

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Introduction & Objectives: Atrophic acne scars are the most common cutaneous sequelae of acne vulgaris, representing 80–90% of all acne scars. Ablative fractional carbon dioxide (FCO₂) laser is the gold standard treatment for atrophic scars. Additionally, platelet-rich plasma (PRP) is suggested to accelerate the healing process and collagen synthesis. The aim of this study was to determine the efficacy and safety of PRP combined with Ablative FCO₂ laser in the treatment of moderate to severe atrophic acne scars.

Materials & Methods: Randomized controlled trials (RCTs) that have compared PRP in combination with ablative FCO₂ laser to ablative FCO₂ laser alone with respect to the efficacy and safety measures were included. We have systematically explored Embase, Medline, and CENTRAL databases via Ovid. The outcomes that our systematic review sought to evaluate were clinical improvement, patient satisfaction, and Goodman and Baron's qualitative acne scar score. The dichotomous outcomes were presented as odds ratio (OR) while the continuous outcomes were presented as standardized mean difference (SMD).

Results: Eleven RCTs that represents 313 participants were included. The combined use of laser and PRP showed a statistically significant clinical improvement and patient satisfaction compared to the use of laser alone (OR = 2.56, 95% CI 1.37–4.78 and OR = 3.38, 95% CI 1.80–6.34, respectively). Also, a significant improvement in Goodman and Baron's score was achieved by combining PRP with laser (SMD = 0.40, 95% CI –0.65 to 0.14).

Conclusion: The combined treatment of laser and PRP was highly synergistic, effective, and safe in treating moderate to severe atrophic acne scars.



Abstract N°: 2918**Acne and dysmorphophobia: a new digital era**Imane Ouadi¹, Daflaoui Hanane¹, Zizi Nada², Dikhaye Siham²

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Introduction & Objectives:

Social media (SM) has become an integral part of our daily lives, and the easy access to photo editing applications is redefining the social norms of beauty. This altered appearance can modify the individual perception of a person suffering from chronic skin conditions such as acne and facial scars. Our work aims to evaluate the impact of these digital filters on self-perception of people with acne and facial imperfections.

Materials & Methods:

This is a descriptive cross-sectional study with an anonymous questionnaire consisting of 16 questions designed using Google Forms, shared through social media, and the target population consists of all social media users suffering or having suffered from acne.

Results:

A total of 201 people responded to our questionnaire, the F/M ratio 6.58 with an average age of 24.3 years, 87.4% of the subjects have experienced acne in their lifetime, of which 50.6% was mild, 42.7% was moderate, and 6.7% was severe, 99.4% admitted using SM multiple times a day, and the most visited platforms were: Instagram (85.6%), Facebook (79.8%), YouTube (77.7%), Snapchat (18%), Pinterest (15.7%), and TikTok (15.1%), 67% of respondents share their photos on SM, particularly on Instagram, and 73.2% of these people admit to using digital filters to enhance their appearance. The most edited properties were: **skin imperfections** (73.2%), **eye color** (54.5%), and **teeth whiteness** (33.6%). The most edited skin imperfections were acne lesions and facial scars (66.8%), motivations for these changes is the desire to appear beautiful (69.2%), shame of skin appearance (55.3%), and to follow modern trends (15.4%). Of people suffering from moderate/severe acne, 73.7% admit that their skin is a source of obsession and distress for them, 51.5% admit that it affects their relationships with their partners/friends, and 45% have reported that their skin condition makes them depressed thus the need to regain control of their confidence through social media.

Discussion:

We live in the era of artificial beauty, and social standards of beauty are constantly evolving. The recent emergence of SM has led to the development of apps such as Instagram®, Snapchat®, Facetune® and many others. These free and widely accessible apps can now transform an individual's physical appearance in seconds by filtering, reshaping, or removing undesirable facial features. Some filters smooth out the skin, while others allow for direct removal of skin blemishes such as acne. Few studies have focused on examining the impact of these digital modifications on self-image, although the limited evidence points at body dissatisfaction and loss of self-esteem in these people. Indeed, recent studies have shown that the use of social media and photo retouching is associated with an increased use of cosmetic surgery to improve appearance, and that these retouches lead to greater self-confidence and a decrease in anxiety immediately following posting, compared to the publication of unedited photos.

Conclusion:

Our work shows the increased prevalence of young adults, especially women, using social media to conceal skin imperfections and improve their skin conditions, as well as the negative impact it has on their vision and self-esteem, encouraging thus dermatologists to determine appropriate treatment plans, as well as offering psychological support and expertise when needed.

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Abstract N°: 2972
In vitro spironolactone permeation study from emulsions with alkyl polyglucoside emulsifier

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Introduction & Objectives:

The skin is the largest human organ covering the entire body, composed of layers of cells acting like a barrier that keeps unwanted substances from permeating and entering the body. In local therapy, the release of the active substance from vehicle is the first important step in achieving a local effect of the drug. It should permeate through the skin in the appropriate amount necessary to achieve a local effect, avoiding systemic resorption. Franz diffusion cells are a widely used methodology to evaluate *in vitro* drug permeation. Recently, spironolactone (SP) is increasingly used in dermatology as *off-label* topical acne therapy. This work's main objective was to examine the spironolactone permeation characteristics from emulsions intended for local application using Franz diffusion cells.

Materials & Methods:

We prepared two different emulsion vehicles based on alkyl polyglucoside (APG) emulsifier *Arachidyl glucoside* and *arachidyl behenyl alcohol* (Table 1).

Table 1. Ingredients of tested samples

Ingredient	F1 (%m/m)	F2 (%m/m)
Arachidyl glucoside & arachidyl behenyl alcohol	10	10
Cetostearyl alcohol	2	2
Caprylic/Capric Triglycerides	10	10
Cyclomethicone	10	10
Glycerol	2	2
Spironolactone	5	5
Ethanol 96%	5	5
Glycolic acid		4
Preservative	0.5	0.5
Purified water	ad 100	ad 100

Glycolic acid (GA) in sample F2 was tested as a potential penetration enhancer. *In vitro* release study was performed using Franz diffusion cells (chamber volume 12ml, effective diffusion area 2.01cm²). Ethanol 70%, previously preheated to 32°C, was used as an acceptor medium. Polycarbonate membranes, activated in the same ethanol solution during the 12-hours period, were used in the experiment. The donor chamber was filled with 1g of the samples being investigated and afterwards covered with silicone film. Cells were placed in the water bath where the temperature of 32°C was maintained through the whole experiment. Acceptor phase was under continuous magnetic stirring at 500 rpm. Aliquots of 0.6µl of the acceptor phase were withdrawn at 5 time points (0.5h, 1h, 2h, 4h and 6h). HPLC technique was used for determination of SP content.

Results:

Cumulative SP amount permeated through the polycarbonate membranes as a function of time is shown in Figure

1. APG-based emulsions with 5% of SP have already proved both acceptable skin irritation profile and high potential for skin hydration. The similarity of these emulsion structures with the organization of intercellular lipids of the *stratum corneum* gives them an advantage compared to traditional emulsion systems, especially due to their effect of increasing penetration through the *stratum corneum*, as the main barrier of the skin. Both tested samples showed satisfactory SP permeation profiles. SP permeation from both samples was almost linear, which indicates its uniform release from both emulsions. Percentage of SP permeated through the membrane ranged from 2.4 after 0.5h to 11.49 after 6h for sample F1 and from 3.11 after 0.5h to 12.55 after 6h for sample F2. This indicates that GA can enhance SP permeation from APG-based emulsions.

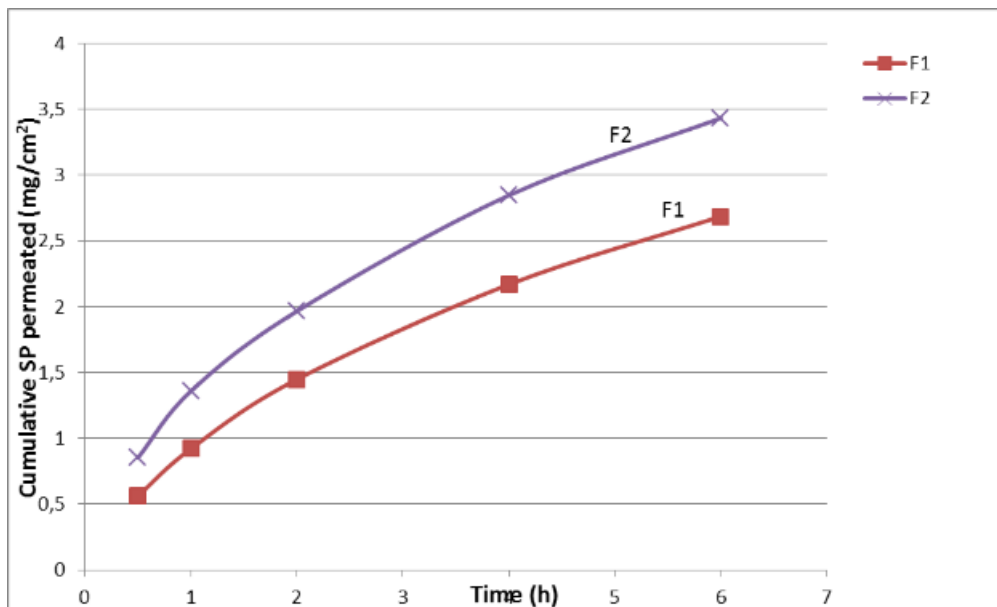


Figure 1. *In vitro* permeation of SP through polycarbonate membranes from investigated samples as a function of time

Conclusion:

SP showed satisfactory permeation profile from APG-based emulsions using Franz diffusion cells. GA proved to be an acceptable penetration enhancer, which opens up space for the investigations of synergistic action of SP and GA on skin. Additional studies on human skin should be performed.



Abstract N°: 3028

Laser Treatment of Acne Vulgaris: Current Evidence and Future Directions

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Laser Treatment of Acne Vulgaris: Current Evidence and Future Directions

Introduction & Objectives:

Acne vulgaris is a widely prevalent dermatological condition that can substantially affect quality of psychological and social life. Though several treatment modalities exist, including topical and systemic therapies, laser treatment has emerged as a preferred and promising alternative. This abstract aims to review the current evidence on laser treatment for acne vulgaris and explore future directions in this field.

Materials & Methods:

A comprehensive literature search was conducted using PubMed, and similar databases focusing on studies published within the last decade. Keywords included “acne vulgaris,” “laser treatment,” “efficacy,” and “safety.” Both randomized controlled trials and observational studies were included, with a focus on studies comparing laser treatment to other modalities or evaluating novel laser technologies.

Results:

Laser and light therapies have become popular options for the treatment of acne vulgaris. Blue light therapy, photodynamic therapy, pulsed dye laser and infrared lasers are the main laser and light options currently used for acne treatment. They work by destroying the acne-causing bacteria *Propionibacterium acnes*, reducing inflammation and improving acne breakouts. While they require multiple treatments and the effects are not always long-lasting, laser and light therapies tend to have minimal side effects and good safety profiles.

The future of laser and light therapies for acne vulgaris look promising and includes at-home devices for blue light and photodynamic therapy which can improve compliance and lower costs, laser toning using fractional CO₂ laser and radiofrequency to improve acne scars and skin texture with minimal downtime, newer photosensitizing agents and light sources to enhance the efficacy of photodynamic therapy with fewer side effects, laser-assisted drug delivery using fractional ablative lasers to penetrate acne medications into the deeper layers of the skin for better results, artificial intelligence tools to investigate and diagnose acne vulgaris and combination therapies using lasers/lights along with standard medical treatments for a comprehensive approach to acne management.

Conclusion:

While more high-quality clinical studies are still needed, laser and light therapies are poised to play an increasing role in the future treatment of acne vulgaris, especially when combined with established medical therapies. With technological advancements, at-home devices and minimally-invasive laser options may make these treatments more accessible and help reduce the psychosocial burden of this common skin condition. Therefore, in summary, laser and light therapies hold promising results for acne but newer technologies and combination therapies may further enhance their effectiveness and role in the future management of acne. However, more controlled clinical studies are still needed to establish optimal treatment guidelines.

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Abstract N°: 3034

Platelet-rich plasma injection versus 1064 nm long-pulsed Neodymium:YAG laser in the treatment of active acne vulgaris in adolescent and post-adolescent patients: a prospective randomized split-face comparative study

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Introduction & Objectives:

Large numbers of local and systemic therapies are available for acne treatment. Common oral or topical retinoids, antibiotics, or keratolytics are used but sometimes are inconvenient, and side effects caused by these conventional therapies prompted a search for effective and safe treatments. This study aimed to evaluate the efficacy of intralesional platelet-rich plasma injection versus 1064 nm long-pulsed Nd:YAG laser in the treatment of moderate inflammatory acne vulgaris in both adolescents and post-adolescent patients.

Materials & Methods:

This split-face comparative study was carried out on thirty patients who suffered from moderate inflammatory and non-inflammatory acne vulgaris. The patients were classified into two groups: group I: adolescent (≤ 25 years) and group II: post-adolescent (> 25 years). Each group received four sessions of intralesional PRP injection on one side of the face and a long-pulsed Nd:YAG (1064 nm) laser on the other side with 2 weeks interval. Evaluation was done before the treatment at baseline and 1 month after the last session by blinded dermatologists using photographs and lesions counting and by patient satisfaction. Side effects were also noted.

Results:

Both groups (adolescents and post-adolescent) showed a high statistically significant improvement of inflammatory as well as non-inflammatory lesions either in PRP percentage of improvement ($58.77\% \pm 14.98$, $47.86\% \pm 18.91$, respectively), or Nd:YAG laser-treated side ($55.47\% \pm 17.53$, $47.48\% \pm 16.08$, respectively) with no significant difference between the two sides. There was no statistically significant difference between the two types of lesions at the laser-treated side while in the PRP-treated side; the inflammatory lesions have a higher improvement with a p-value = 0.026.

In the PRP-treated side, there was statistically significant difference between group I (adolescents) and group II (post-adolescent) in the percentage of improvement of inflammatory lesions after the 4th session; it was higher in group I (adolescents) with P-value = 0.036 but there was no statistically significant difference between two groups regarding the percentage of improvement in noninflammatory lesions. However, in the laser-treated side, there was no statistically significant difference between group I (adolescents) and group II (post-adolescent) regarding percentage of improvement of either inflammatory or noninflammatory lesions. Side effects are non remarkable.

Conclusion:

The intralesional PRP injection and 1064 nm long-pulsed Nd:YAG laser are safe and effective methods for controlling inflammatory as well as non-inflammatory acne vulgaris in both adolescents and post-adolescent patients.

Keywords: Acne, Nd:YAG, PRP

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Abstract N°: 3078**The epidemiology of acne vulgaris in a multi-ethnic adolescent cohort: a cross-sectional study**

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Introduction & Objectives:

Although acne vulgaris (AV) is a prevalent multifactorial inflammatory skin condition, few studies were performed in large multi-ethnic populations. Additionally, association studies have shown inconsistent results. The objective was to study the prevalence and determinants for AV in a multi-ethnic cohort at the start of puberty.

Materials & Methods:

This cross-sectional study is embedded in Generation R, a birth cohort study from Rotterdam, the Netherlands. 3D facial photos taken at the center visit in 2016-2019 were used to grade AV severity (Global Acne Severity scale) and the perceived skin color by two independent physicians. Multiple imputation was performed using chained equations, analyses were stratified by sex and explored through chi square tests and multivariable ordinal logistic regression.

Results:

4561 children (51% girls) were included in the analysis with a median age of 13.5 (IQR 13.3-13.6). The AV prevalence for girls vs. boys was 62% vs. 45% and moderate/severe AV 14% vs. 9% ($P < 0.01$). *Tables 1 and 2* show that higher puberty stages (adjusted ORs: 1.38 (1.20 - 1.59) and 2.16 (1.86 - 2.51) for girls and boys) and darker skin colors V and VI (adjusted ORs: 1.90 (1.17 - 3.08) and 2.43 (1.67 - 3.56)) were predictors for both sexes, being overweight for boys.

Conclusion:

AV prevalence was high at age of 13 and related to puberty status, darker skin color and weight status. Girls have a higher prevalence due to an earlier start of puberty. Future studies are needed to understand the biology between AV in different skin colors.

Table 1. Associations of child characteristics with acne severity category in girls

Characteristic	β (multivariable)	Standard error	Adjusted OR (95% CI)
Tanner (B)	0.21	0.08	1.23 (1.05 - 1.44)*
Tanner (PH)	0.32	0.07	1.38 (1.20 - 1.59)*
Skin color I & II (reference)			
III & IV	0.07	0.14	1.07 (0.82 - 1.41)
V & VI	0.64	0.25	1.90 (1.17 - 3.08)*
Maternal education: low (reference)			
Intermediate	0.23	0.30	1.26 (0.70 - 2.25)
High	-0.001	0.30	1.00 (0.56 - 1.79)
Cole weight status: normal (reference)			
Underweight	-0.48	0.19	0.62 (0.43 - 0.90)*
Overweight	0.26	0.17	1.30 (0.93 - 1.82)
Internalizing problems	0.03	0.07	1.03 (0.90 - 1.17)
Externalizing problems	-0.02	0.07	0.98 (0.86 - 1.12)
Physical exercise: monthly/ never (reference)			
Weekly	0.01	0.16	1.01 (0.73 - 1.39)
(Almost) daily	-0.18	0.18	0.98 (0.58 - 1.19)

The β , standard error and adjusted odds ratio are the results of the multivariable analysis. Analyses are based on the imputed dataset. ORs marked with * are statistically significant.

Table 2. Associations of child characteristics with acne severity category in boys

Characteristic	β (multivariable)	Standard error	Adjusted OR (95% CI)
Tanner (G)	0.25	0.08	1.29 (1.11 - 1.49)*
Tanner (PH)	0.77	0.08	2.16 (1.86 - 2.51)*
Skin color: I & II (reference)			
III & IV	-0.18	0.14	0.84 (0.64 - 1.10)
V & VI	0.89	0.19	2.43 (1.67 - 3.56)*
Maternal education: Low (reference)			
Intermediate	0.14	0.25	1.15 (0.70 - 1.89)
High	0.19	0.26	1.21 (0.73 - 2.00)
Cole weight status: normal (reference)			
Underweight	-0.28	0.20	0.76 (0.52 - 1.11)
Overweight	0.46	0.16	1.58 (1.15 - 2.17)*
Internalizing problems	-0.02	0.07	0.98 (0.86 - 1.12)
Externalizing problems	-0.04	0.07	0.97 (0.84 - 1.10)
Physical exercise: monthly/ never (reference)			
Weekly	-0.14	0.18	0.87 (0.61 - 1.23)
(Almost) daily	-0.40	0.20	0.67 (0.46 - 0.99)*

The β , standard error and adjusted odds ratio are the results of the multivariable analysis. Analyses are based on the imputed. ORs marked with * are statistically significant.



Abstract N°: 3195**Hidradenitis Suppurativa in the face- an atypical location**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic, debilitating, recurrent, and progressive inflammatory disease that primarily affects follicular areas in genetically predisposed individuals. The objective of this study is to report a case of HS with exclusive involvement of the facial region and discuss its clinical presentation, management, and treatment challenges.

Materials & Methods:

A detailed clinical examination was performed on a patient presenting with linear inflammatory plaques and nodules on the bilateral face, extending from the infraorbital regions to the mandible. The lesions exhibited pus discharge openings along their path. The patient was classified as Hurley stage III. Ultrasonography was conducted to assess the extent of the lesion, and guided drainage was performed. The patient was initiated on tetracycline 500 mg twice daily, and further investigations were requested. The plan included starting isotretinoin and adalimumab therapy.

Results:

The patient's clinical presentation and diagnostic workup confirmed the diagnosis of HS with exclusive involvement of the facial region. The ultrasonographic evaluation provided valuable insights into the extent and characteristics of the lesions, aiding in the guided drainage procedure. The initiation of tetracycline and the plan to introduce isotretinoin and adalimumab reflected the multidisciplinary approach to manage the disease.

Conclusion:

While HS is more commonly observed in the axillary and inguinal regions, it can rarely present as an isolated facial manifestation, as seen in this case. Treatment strategies for HS involve a combination of general measures, such as weight control, pruritus management, smoking cessation, friction reduction, and proper hygiene, along with antibiotic therapy, isotretinoin, corticosteroids, and immunobiologics. Surgery is reserved for moderate to severe cases, with wide excision of the affected area offering better outcomes and lower local recurrence rates. However, reconstruction poses a significant challenge, particularly in critical areas like the face.



Abstract N°: 3262**Bimekizumab efficacy and safety in patients with moderate to severe hidradenitis suppurativa: Analysis of pooled data from BE HEARD I and II phase 3, randomised, double-blind, placebo-controlled, multicentre studies**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a debilitating skin disease; treatment options are limited.¹ Bimekizumab (BKZ), a humanised IgG1 monoclonal antibody that selectively inhibits interleukin (IL)17F in addition to IL-17A, has demonstrated clinically meaningful improvements in patients (pts) with HS.² Here, pooled efficacy and safety data are presented to Week (Wk) 48 for the phase 3 BE HEARD I and II studies.^{3,4}

Materials & Methods:

Data were pooled from BE HEARD I and II which included an initial (Wks 0–16) and maintenance treatment period (Wks 16–48). Adult pts with moderate to severe HS were randomised 2:2:2:1 (initial/maintenance) to BKZ 320 mg every 2 wks (Q2W)/Q2W, BKZ Q2W/every 4 wks (Q4W), BKZ Q4W/Q4W or placebo (PBO)/BKZ Q2W. We report the proportions of pts with $\geq 50/75/90/100\%$ HS Clinical Response (HiSCR50/75/90/100), and a safety overview through Wk 48. Modified non-responder imputation reported at Wk 16 and observed case at Wks 16/48.

Results:

In total, 1,014 pts were randomised: BKZ Q2W/Q2W (n=288), BKZ Q2W/Q4W (n=292), BKZ Q4W/Q4W (n=288) and PBO/BKZ Q2W (n=146). Baseline demographics were comparable across treatment arms; mean age: 35.8–37.3 years, female pts: 51.4–60.8% and mean weight: 95.9–99.0 kg. Baseline clinical characteristics were similar; mean abscess and inflammatory nodule count: 14.4–17.7, mean draining tunnel count: 3.3–3.8.

BKZ-treated pts showed higher response rates in the primary endpoint HiSCR50 at Wk 16 vs PBO (PBO/BKZ Q2W 33.4%, Q4W/Q4W 56.1%, Q2W/Q4W 55.9%, Q2W/Q2W 58.0% [mNRI]). Responses improved at Wk 48 for BKZ pts (Q4W/Q4W 79.5%, Q2W/Q4W 80.6%, Q2W/Q2W 76.8%) (**Table**). At Wk 48, response in PBO/BKZ switchers approached that reached by pts on BKZ from baseline (70.5%). A similar trend was seen in the more stringent HiSCR75/90 endpoints through Wk 48 (**Table**). Analysis of the most stringent HiSCR100 endpoint showed numerically higher responses in BKZ pts vs PBO at Wk 16 (PBO/BKZ Q2W 5.6%, Q4W/Q4W 15.8%, Q2W/Q4W 16.6%; Q2W/Q2W 15.6% [mNRI]). BKZ-treated pts had improved responses at Wk 48; PBO/BKZ switchers demonstrated similarly high HiSCR100 rates at Wk 48 (**Table**).

Serious TEAEs were reported in 7.0% Q4W/Q4W, 4.5% Q2W/Q4W and 8.1% Q2W/Q2W pts. One pt died across 48 wks (congestive heart failure, significant cardiovascular history). The most frequently reported TEAEs in 995 pts receiving ≥ 1 dose of BKZ were hidradenitis (18.7%), oral candidiasis (11.2%) and corona virus infection (10.8%). Adjudicated definite or probable inflammatory bowel disease occurred in 0.7% of BKZ pts.

Conclusion:

BKZ treatment resulted in clinically meaningful improvements in HiSCR50 and the more stringent HiSCR75/90/100 endpoints vs PBO at Wk 16. Improvements increased for pts remaining in the study through Wk 48.** BKZ was generally well tolerated with a safety profile that was consistent with previous studies.5** These data, together with confirmatory results from the individual studies, support the efficacy of IL-17F and IL17A blockade in treating moderate to severe HS, and support BKZ as a promising new therapeutic option.

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Table. Proportion of patients achieving HiSCR responses at Weeks 16 and 48 by treatment sequence (mNRI,^a OC^b)

	PBO/BKZ Q2W (n=146)			BKZ Q4W/Q4W (n=288)			BKZ Q2W/Q4W (n=292)			BKZ Q2W/Q2W (n=288)		
	Week 16	Week 16	Week 48	Week 16	Week 16	Week 48	Week 16	Week 16	Week 48	Week 16	Week 16	Week 48
	% [mNRI]	% (n/N) [OC]	% (n/N) [OC]	% [mNRI]	% (n/N) [OC]	% (n/N) [OC]	% [mNRI]	% (n/N) [OC]	% (n/N) [OC]	% [mNRI]	% (n/N) [OC]	% (n/N) [OC]
HiSCR ₅₀	33.4	35.6 (48/135)	70.5 (74/105)	56.1	59.1 (152/257)	79.5 (155/195)	55.9	58.9 (155/263)	80.6 (170/211)	58.0	61.8 (160/259)	76.8 (159/207)
HiSCR ₇₅	17.0	18.5 (25/135)	62.9 (66/105)	34.0	36.2 (93/257)	65.6 (128/195)	39.2	41.4 (109/263)	60.2 (127/211)	39.3	42.5 (110/259)	60.9 (126/207)
HiSCR ₉₀	8.5	9.6 (13/135)	40.0 (42/105)	20.6	21.4 (55/257)	42.1 (82/195)	22.0	22.8 (60/263)	41.7 (88/211)	21.0	21.6 (56/259)	39.6 (82/207)
HiSCR ₁₀₀	5.6	5.9 (8/135)	31.4 (33/105)	15.8	16.3 (42/257)	30.8 (60/195)	16.6	17.1 (45/263)	28.9 (61/211)	15.6	15.4 (40/259)	30.0 (62/207)

Randomised set. [a] mNRI: Patients who take systemic antibiotics as rescue medication for HS as defined by the PI or who discontinue due to AE or lack of efficacy are treated as non responders at all subsequent visits. Other missing data were imputed via multiple imputation. [b] OC: the denominator represents the number of patients with a non-missing lesion count assessment at the given week, and percentages are calculated accordingly. BKZ: bimekizumab; HiSCR: Hidradenitis Suppurativa Clinical Response; HiSCR_{50/75/90/100}: $\geq 50\%$, $\geq 75\%$, $\geq 90\%$ and 100% reduction in the total abscess and inflammatory nodule count with no increase from baseline in abscess or draining tunnel count; HS: hidradenitis suppurativa; mNRI: modified non-responder imputation; OC: observed case; PBO: placebo; Q2W: every two weeks; Q4W: every four weeks.



Abstract N°: 3290**Bimekizumab response maintenance to 48 weeks in patients with moderate to severe hidradenitis suppurativa: Pooled responder analysis from the phase 3, double-blind, placebo-controlled, randomised clinical trials BE HEARD I and II**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic, relapsing and painful inflammatory skin disease associated with significant comorbidities and poor quality of life,¹ thus it is important that treatment efficacy and clinical responses are maintained over time. Bimekizumab (BKZ), a humanised IgG1 monoclonal antibody that selectively inhibits interleukin (IL)-17F in addition to IL-17A, has previously demonstrated efficacy in patients with moderate to severe HS at phase 2.2 Here we present data from the phase 3 BE HEARD I and II studies, reporting maintenance of response through Week (Wk) 48 in adult patients with moderate to severe HS.^{3,4}

Materials & Methods:

Data from the randomised, double-blind, placebo (PBO)-controlled, multicentre trials were pooled. The trials included an initial (Wks 0–16) and a maintenance treatment period (Wks 16–48). Adult patients were randomised 2:2:2:1 (initial/maintenance) to receive BKZ 320 mg every 2 wks (Q2W)/Q2W, BKZ Q2W/every 4 wks (Q4W), BKZ Q4W/Q4W or PBO/BKZ Q2W. Maintenance of response is reported as the percentage of BKZ-treated patients who achieved 50% HS Clinical Response (HiSCR50), or an abscess and inflammatory nodule (AN) count of 0, 1 or 2, at Wk 16 and maintained response through Wk 48. Data are reported for Wk 16 responders through Wk 48 from the groups randomised to receive any BKZ dosing regimen from baseline (Wk 0). Data are reported as observed cases throughout; last observation carried forward data are provided in the **Table**.

Results:

At baseline, 1,014 patients were randomised to PBO/BKZ Q2W (n=146), BKZ Q4W/Q4W (n=288), BKZ Q2W/Q4W (n=292) or BKZ Q2W/Q2W (n=288). Among Wk 16 HiSCR50 responders in the BKZ Q4W/Q4W (n=152), BKZ Q2W/Q4W (n=155) and BKZ Q2W/Q2W (n=160) groups, 89.6% (103/115), 88.5% (116/131) and 88.8% (111/125) maintained response through Wk 48, respectively (**Table**). Among patients with an AN count of 0, 1 or 2 at Wk 16 in the BKZ Q4W/Q4W (n=87), BKZ Q2W/Q4W (n=99) and BKZ Q2W/Q2W (n=104) groups, 86.4% (57/66), 88.0% (73/83) and 82.1% (69/84) maintained response through Wk 48, respectively (**Table**).

Conclusion:

Almost all patients who responded after an initial 16 wks of BKZ treatment maintained HiSCR50 and AN count of 0, 1 or 2 clinical response rates through Wk 48. Maintenance of response was observed across patients who received BKZ from baseline.

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Table. Maintenance of response for HiSCR₅₀ and AN count of 0, 1 or 2 through Week 48 (OC,^a LOCF^b)

	Week 16 HiSCR ₅₀ responders					
	BKZ 320 mg Q4W/Q4W (n=152)		BKZ 320 mg Q2W/Q4W (n=155)		BKZ 320 mg Q2W/Q2W (n=160)	
	OC n/N (%)	LOCF %	OC n/N (%)	LOCF %	OC n/N (%)	LOCF %
Week 32	116/131 (88.5)	88.2	120/141 (85.1)	83.2	121/135 (89.6)	89.4
Week 48	103/115 (89.6)	86.2	116/131 (88.5)	85.8	111/125 (88.8)	88.8
	Week 16 AN count of 0, 1 or 2 maintenance of response					
	BKZ 320 mg Q4W/Q4W (n=87)		BKZ 320 mg Q2W/Q4W (n=99)		BKZ 320 mg Q2W/Q2W (n=104)	
	OC n/N (%)	LOCF %	OC n/N (%)	LOCF %	OC n/N (%)	LOCF %
Week 32	58/75 (77.3)	78.2	75/87 (86.2)	82.8	75/88 (85.2)	85.6
Week 48	57/66 (86.4)	82.8	73/83 (88.0)	82.8	69/84 (82.1)	81.7

Randomised set; [a] OC: the denominator represents the number of patients with a non-missing lesion count assessment at the given week, and percentages are calculated accordingly; [b] The LOCF value is used when a patient has missing data at the visit or discontinues the study prior to the visit. AN: abscess and inflammatory nodule; BKZ: bimekizumab; HiSCR: HS clinical response; HiSCR₅₀: ≥50% reduction in the total abscess and inflammatory nodule count with no increase from baseline in abscess or draining tunnel count; HS: hidradenitis suppurativa; LOCF: last observation carried forward; OC: observed case; Q2W: every 2 weeks; Q4W: every 4 weeks.



Abstract N°: 3294**Bimekizumab safety in patients with moderate to severe hidradenitis suppurativa: Analysis of pooled data from the BE HEARD I and II phase 3, randomised, double-blind, placebo-controlled, multicentre studies**

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Introduction & Objectives:

Bimekizumab (BKZ) is a humanised IgG1 monoclonal antibody that selectively inhibits IL-17F in addition to IL-17A, both of which underlie hidradenitis suppurativa (HS) pathogenesis.¹ Here, pooled safety data are reported for patients (pts) with moderate to severe HS who received up to 48 weeks (wks) of BKZ treatment in the phase 3 BE HEARD I and II trials.^{2,3}

Materials & Methods:

Data were pooled from BE HEARD I and II, which included an initial (ITP; Wks 0–16) and a maintenance treatment period (MTP; Wks 16–48). Adult pts were randomised 2:2:2:1 (ITP/MTP) to receive BKZ 320 mg every 2 wks (Q2W)/Q2W, BKZ Q2W/Q4W, BKZ Q4W/Q4W or placebo (PBO)/BKZ Q2W. Treatment-emergent adverse events (TEAEs) coded using MedDRA v19.0 are reported as raw incidence (proportions) and exposure-adjusted incidence rates (EAIRs; incidence of new cases per 100 pt-years [PY]) in pts who received ≥ 1 dose of BKZ from Wk 0–48.

Results:

Across BE HEARD I and II, 1,007 pts started the ITP; 146 PBO, 285 BKZ Q4W, and 576 BKZ Q2W. 995 pts received ≥ 1 dose BKZ (BKZ Total). 92 pts discontinued in the ITP.

Up to Wk 48, 837 pts (84.1%) had ≥ 1 TEAE. 67 pts (6.7%) who received BKZ discontinued due to TEAEs. The 3 most frequently reported TEAEs were hidradenitis (events related to HS; abscesses, pain, worsening, as determined by investigator), oral candidiasis and coronavirus infection (events related to time of study).

Serious infections occurred in 16 pts (1.6%; 1.9/100 PY). 153 cases of *Candida* infections were reported (15.4%, 20.0/100 PY) and 111 (11.2%, 14.1/100 PY) were oral candidiasis. The vast majority of oral candidiasis cases and hypersensitivity reactions were mild to moderate and did not lead to discontinuation.

EAIRs of hepatic events and elevated liver enzymes (including increased alanine aminotransferase [ALT] and aspartate aminotransferase [AST]) were 5.4 and 4.4/100 PY; no cases were associated with sequelae and the majority of participants were asymptomatic. Transient AST/ALT elevations $> 5\times$ upper limit of normal occurred in 8

pts (0.8%; 1.0/100 PY); the majority were mild or moderate and most had an explanation or confounding factors.

Adjudicated definite or probable IBD occurred in 7 pts (BKZ Total, 0.7%, 0.8/100 PY); 4 led to discontinuation. IBD did not recur in the 8 pts with history of IBD. Incidences of neutropenia, malignancies and adjudicated MACE were low to Wk 48; EAIRs were 0.1, 0.5 and 0.4/100 PY, respectively. EAIR of adjudicated SIB (0.6/100PY) was in line with expectation for the study population, with no events of completed suicide. One pt died across 48 wks (congestive heart failure, significant cardiovascular history).

Conclusion:

BKZ was well tolerated in pts with moderate to severe HS across BE HEARD I and II, with an overall safety profile consistent with prior studies in other indications. 4–6 No new safety signals were observed.

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Abstract N°: 3304**Hidradenitis suppurativa and Crohn disease: an association or a variation**

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Introduction & Objectives: Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease characterized by recurrent nodules, abscesses, and sinus ducts. Like Crohn's disease (CD), chronic and recurrent inflammation in HS eventually leads to fistulas and sinus ducts. A common link between the two diseases was suggested. We report a case of an association of HS and CD that improved after TNF α Inhibitors.

Case report: We report the case of a 65-year-old man with a history of smoking and hidradenitis suppurativa who underwent multiple derroofing surgical procedures and antibiotic courses resulting in transitory remissions. The patient was Hurley stage III with large, abscessed plaques and multiple sinuous fistulous cords leaking pus extending from the right buttock to the lumbar region superiorly and infiltrating the entire perineal region inferiorly, associated with a cribriform retractile scar.

The standard biological workup found anemia with hypoferritinemia, and elevated CRP. The patient refused any further gastrointestinal examination. Associated CD was suspected due to the perineal location of the lesions, although the patient never complained of any digestive or articular symptoms.

A course of adalimumab was introduced at 160 mg for the first injection then 80 mg every 2 weeks. The evolution was characterized by a spectacular regression of the inflammatory plaques which decreased in size after 10 weeks.

Discussion: HS is an inflammatory condition of the sebaceous follicle affecting the axilla, groin, and anogenital areas. Its incidence ranges from 0.03 to 4%, with a higher rate in people with CD.

The association between HS and CD was first reported by Ostlere et al. in the early 1990s. Since then, several cases indicating similar pathologic features between HS and CD have been reported. Even though the pathogenesis of both the diseases remain unclear, smoking was related to a high prevalence in a study carried by Garg et al.

Furthermore, a common genetic susceptibility for the two diseases were suggested by Gower-Rousseau et al. by reporting cases of HS occurring in two first-degree relatives of patients with CD. However, these genetic associations warrant further exploration. In our context, a molecular study was not feasible.

The immune-mediated theory supported by anti-TNF α efficacy was proposed to explain the association between both diseases. In fact, patients with HS and CD symptoms are significantly relieved by treatment with anti-TNF α agents, such as adalimumab.

Conclusion: Both HS and CD can affect a patient's quality of life and daily activities. Early diagnosis and timely comprehensive treatment are critical to improve the quality of life of those patients with CD-related HS. Physicians should be aware of this link to avoid delays in diagnosis and to ensure appropriate treatment and follow-up.

Abstract N°: 3338**The effectiveness of preparations based on 7% and 5% colostrum in the topical treatment of acne lesions - a pilot study.**

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The effectiveness of preparations based on 7% and 5% colostrum in the topical treatment of acne lesions - a pilot study.**Introduction & Objectives:**

The current state of knowledge indicates the potential of bovine colostrum as a raw material in preparations applied topically to treat dermatological lesions. Especially inflammatory dermatoses in the course of seborrheic skin diseases, including acne lesions, may benefit from transdermal therapy with a colostrum preparation, which would be an effective and safe alternative to traditional medical methods. Taking up an innovative approach these days would contribute to the development of a modern, effective, but also safe therapy with a colostrum preparation for patients with skin diseases.

The aim of the study was to evaluate the effectiveness of the preparations based on 7% and 5% colostrum in the topical treatment of inflammatory lesions and seborrhea in a 24-year-old female patient in the course of acne.

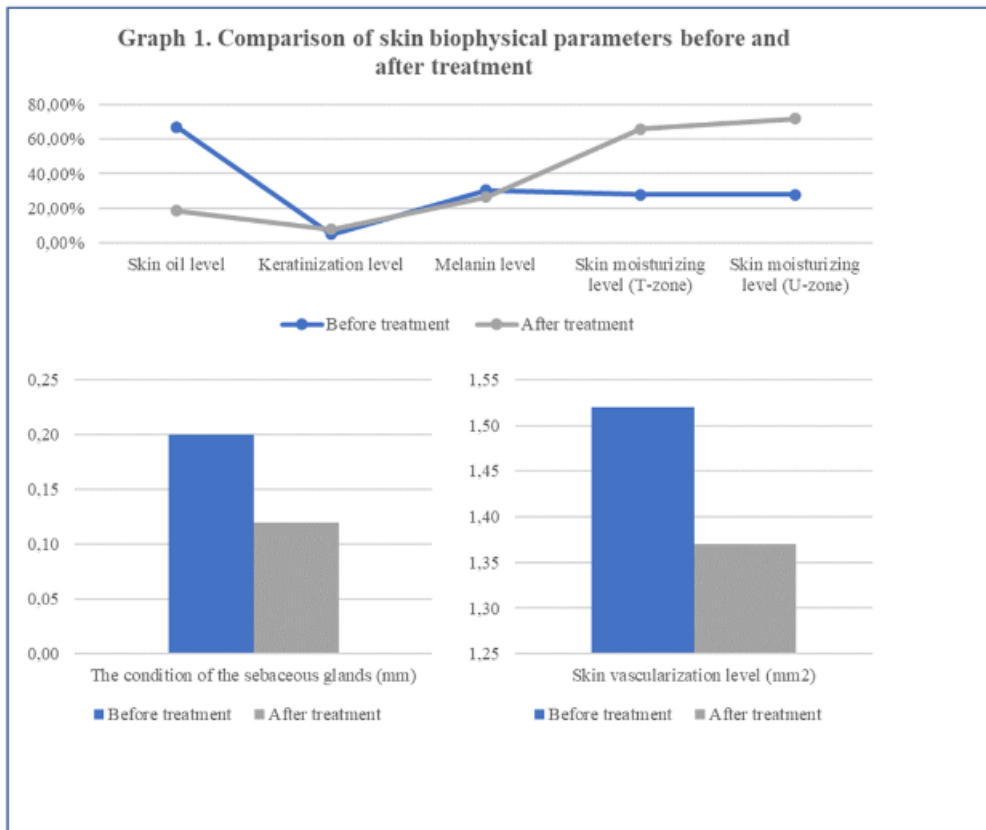
Materials & Methods:

In the winter-spring period of 2023 a case of a 24-year-old female patient was examined. Her medical history stated that the female patient did not report any abnormalities in her health, did not take any medications, her blood laboratory parameters were normal and she led a healthy lifestyle (regular diet and physical activity). The physical examination showed symptoms of single inflammatory lesions located on her face. The skin diagnostic examination was performed with a device for the analysis of skin biophysical parameters, which showed seborrhea, enlarged pores of the sebaceous glands and low skin hydration .

The experimental study consisted of a local transdermal therapy with professional hydrogel based on 7% colostrum, once every 30 days. The patient was recommended to use a cream preparation with 5% colostrum every morning and evening. The study lasted 5 months.

Results:

The pilot study showed the effectiveness of transdermal therapy with a preparations based on 7% and 5% colostrum. What was observed in the physical examination were: improvement in the skin health, rapid tissue regeneration and healing of inflammatory lesions. Biophysical parameters after the treatment showed a significant improvement in the skin condition (Graphs 1). It was observed that during 10 days of applying topical colostrum, the acne lesions disappear faster than before the therapy. The patient did not feel irritation during the therapy and did not experience any side effects after the treatment.



Conclusion:

This preliminary pilot study suggests that the implementation of an innovative, effective, but safe treatment with a colostrum preparation for external application in a specialist dermatological practice can contribute to a significant improvement in the health condition and reduction of symptoms in patients with acne lesions. The results of this study also give a chance for the probability of effective topical treatment with a colostrum preparation in other inflammatory dermatological lesions.



Abstract N°: 3373**Diagnostic delay in hidradenitis suppurativa: still an unsolved problem**Inês Aparício Martins¹, Beatriz Figueira Vilela¹, Joana Cabete¹¹Centro Hospitalar Universitário de Lisboa Central, Dermatovenereology, Lisboa, Portugal**Introduction & Objectives:**

Hidradenitis suppurativa (HS) is a chronic inflammatory dermatosis of the hair follicle, often underdiagnosed and associated with an average diagnostic delay of 7 to 10 years. A later diagnosis leads to significant morbidity, not only due to the development of local sequelae and the association with systemic complications, but also because of the reduced response to medical treatment. The aim of this study was to assess and analyze the time required for HS diagnosis. In addition, possible factors associated with diagnostic delay were investigated.

Materials & Methods:

A retrospective observational study was conducted based on the analysis of clinical records from HS patients followed at tertiary hospital, with HS diagnosis between January 2006 (year of Dessau definition) and December 2022.

Results:

A total of 285 patients were included. The mean diagnostic delay was 10.14 years and there was no difference in time to diagnosis over the period considered. A diagnostic delay of more than 5 years was significantly associated with an earlier onset of symptoms, as well as with the location of the dermatosis in breast and thighs and the presence of cardiovascular and psychiatric comorbidities. In addition, smoking (active or previous) and BMI ≥ 25 kg/m² were also associated with a longer delay in diagnosis. On the other hand, a personal history of acne and a greater disease severity (measured by iHS4) were associated with an earlier HS diagnosis.

Conclusion:

In the last decade, we have observed a growing interest of the medical-scientific community in HS. This study reveals the lack of improvement in the diagnostic delay** and confirms its association with systemic comorbidities. The persistent systemic inflammation along with the psychosocial impact of HS can explain the association of cardiovascular and psychiatric comorbidities with longer disease evolution. Considering the potentially debilitating effect of this inflammatory dermatosis, it will be important to understand what motivates this persistent diagnostic delay, in order improve the healthcare provided to HS patients.

Abstract N°: 3420**Effectiveness of bimekizumab for the treatment of hidradenitis suppurativa in real-world clinical practice**

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Introduction & Objectives:

Bimekizumab is the first and only dual selective inhibitor of IL-17 A and IL-17 F. Bimekizumab has recently been approved for the treatment of moderate to severe plaque psoriasis and has completed phase 3 clinical development in hidradenitis suppurativa. In phase 3 clinical trials, bimekizumab achieved statistically significant and clinically meaningful improvements over placebo in signs and symptoms of hidradenitis suppurativa at week 16, as measured by HiSCR50 and HiSCR75, with a favorable safety profile. Due to the recent commercialization of bimekizumab, the evidence of the drug in real-world clinical practice is limited and its effectiveness in hidradenitis suppurativa has not been established yet. The objective of this study is to evaluate the effectiveness and safety of bimekizumab for the treatment of hidradenitis suppurativa in our routine clinical practice.

Materials & Methods:

Retrospective single-site study including patients with hidradenitis suppurativa treated with bimekizumab. Patients were followed as per current clinical practice. Hidradenitis suppurativa activity scores, including HiSCR (Hidradenitis Suppurativa Clinical Response) and IHS4 (International Hidradenitis Suppurativa Severity Score System), were assessed at baseline and at week 16. Improvements in patients' quality of life were evaluated according to DLQI (Dermatology Life Quality Index) score. Safety information was reported.

Results:

Our study included 4 patients with hidradenitis suppurativa treated with bimekizumab in routine clinical practice conditions. All patients were Hurley stage II/III and had failed to multiple lines of biological treatment. All patients showed rapid and sustained improvements, with significant reduction in the number of nodules, abscesses, draining fistulas, and suppuration. Bimekizumab was well tolerated, and no remarkable adverse events were identified. Clinically meaningful improvements were observed in all our patients regardless of the patient profile and location of the lesions. Patients treated with bimekizumab also referred substantial improvements in health-related quality of life.

Conclusion:

Bimekizumab is effective in the treatment of hidradenitis suppurativa in real-world setting, with no new safety alerts identified. Its novel mechanism of action results in rapid and clinically meaningful improvements that translate into better outcomes for patients. The deep levels of clinical response reported with bimekizumab in clinical trials and are reproduced in our routine clinical practice.

Abstract N°: 3484

Safety and Efficacy of LY3041658, a Novel Septa-Specific Monoclonal Antibody to CXCR1 and CXCR2 Ligands, in a Phase 2 Study in Hidradenitis Suppurativa

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Introduction & Objectives:

CXCR1/CXCR2 are chemokine receptors involved in neutrophil migration to sites of inflammation. LY3041658 (LY) is a humanized monoclonal antibody that binds to an epitope shared by CXCR1/CXCR2's seven human ligands. LY inhibits neutrophil chemotaxis but not effector functions *in vitro*.

We present results from a Phase 2 study (NCT04493502) in adults with moderate-to-severe hidradenitis suppurativa (HS).

Materials & Methods:

Patients (n=67) were randomized 2:1 to receive LY 600 mg or placebo (PBO) intravenous every 2 weeks (W) for 16W, and then all patients received LY 600 mg every 2W for additional 20W. The primary efficacy endpoint was the percentage of patients with Hidradenitis Suppurativa Clinical Response (HiSCR50) at W16. A prespecified analysis augmented by patient-matched PBO data from historical Phase 3 HS studies was implemented on the primary endpoint.

Results:

The W16 HiSCR50s were 65.6% (LY), 32.3% (augmented PBO), and 41.4% (non-augmented PBO). The Bayesian posterior probability of at least 30% difference between LY and augmented PBO was 61.9%. The percentage reduction from baseline in total abscess and inflammatory nodule count at W16 was 52.1% (LY) and 14.5% (PBO) (p=0.14). Of the patients randomized to LY that achieved HiSCR50 at W16, 81.8% maintained HiSCR50 at W36. Most treatment-emergent adverse events (TEAEs) were mild or moderate in the first 16W: 53.3% (LY) and 40.9% (PBO). Infections were the most common TEAE category: 13.3% (LY) and 18.2% (PBO).

Conclusion:

Overall, neutralizing seven distinct CXCR1/CXCR2 ligands with a septa-specific monoclonal antibody is a promising therapeutic strategy for HS and potentially other neutrophil-predominant disorders.

Previously presented at American Academy of Dermatology - 81st Annual Meeting 2023

Abstract N°: 3512**IHS4 outcomes with bimekizumab in patients with moderate to severe hidradenitis suppurativa: Pooled results from the BE HEARD I and II phase 3 trials**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) severity can be dynamically assessed using the International Hidradenitis Suppurativa Severity Score System (IHS4), a validated clinician-rated tool that includes the number of inflammatory nodules, abscesses and draining tunnels.¹ Treatment with bimekizumab (BKZ), a humanised IgG1 monoclonal antibody that selectively inhibits IL-17F in addition to IL-17A, has previously led to clinical improvements in IHS4 at phase 2.² In this post hoc analysis, improvements in HS disease severity, as measured by IHS4, are reported for patients (pts) with moderate to severe HS who received up to 48 weeks (wks) of BKZ treatment pooled across the phase 3 BE HEARD I and II trials.^{3,4}

Materials & Methods:

Pooled data from the randomised, double-blind, placebo (PBO)-controlled, multicentre BE HEARD I and II trials included an initial (Wks 0–16) and maintenance treatment period (Wks 16–48). Adult pts were randomised 2:2:2:1 (initial/maintenance) to receive BKZ 320 mg every 2 wks (Q2W)/Q2W, BKZ Q2W/Q4W, BKZ Q4W/Q4W or PBO/BKZ Q2W. IHS4 scores are reported by category through Wk 48, in addition to change from baseline (CfB) in IHS4; mild HS was defined as a score of ≤ 3 , moderate HS as 4–10 and severe HS ≥ 11.1 . Missing data were imputed using multiple imputation.

Results:

At baseline, 1,014 pts were randomised to PBO/BKZ Q2W (n=146), BKZ Q4W/Q4W (n=288), BKZ Q2W/Q4W (n=292) or BKZ Q2W/Q2W (n=288). Mean baseline IHS4 scores ranged from 30.6 (PBO/BKZ Q2W) to 36.0 (BKZ Q2W/Q4W). According to IHS4, one pt (0.3%, BKZ Q4W/Q4W) had mild HS and 11.6–16.3% had moderate HS across BKZ dose regimens at baseline, vs 83.7–88.4% with severe HS (**Figure**).

Over time, the proportion of pts with mild or moderate HS, as defined by IHS4, increased when treated with BKZ, with a corresponding decrease in the proportion of pts with severe HS (**Figure**). At Wk 16, higher proportions of BKZ-treated pts had mild HS vs PBO-treated pts: 24.6–27.2% vs 15.3%. Similar trends were observed for pts with

moderate HS: 25.8–28.0% (BKZ) vs 17.1% (PBO). Pts treated with BKZ to Wk 16 also saw numerically greater improvements vs PBO from baseline in IHS4 scores: –16.8 (BKZ Q4W/Q4W), –17.4 (BKZ Q2W/Q4W) and –17.0 (BKZ Q2W/Q2W) versus –6.0 (PBO).

Improvements in IHS4 categories were sustained over time across BKZ groups: at Wk 48, 37.3–40.1% had mild HS and 23.8–25.3% had moderate HS, compared with 34.7–39.0% with severe HS (Figure). Similarly, pts saw further improvements in IHS4 scores with BKZ treatment over time; at Wk 48, IHS4 scores reduced across BKZ groups, with the greatest CfB seen in the group that received BKZ Q2W/Q4W: –21.5 (PBO/BKZ Q2W), –22.5 (BKZ Q4W/Q4W), –23.8 (BKZ Q2W/Q4W) and –22.3 (BKZ Q2W/Q2W).

Conclusion:

Over 48 wks of BKZ treatment, the majority of pts with severe HS at baseline shifted to mild or moderate disease, as defined by the clinician-rated IHS4 tool. Pts who initially received PBO saw improvements in HS severity after switching to BKZ at Wk 16. These data suggest that blocking IL-17F in addition to IL-17A was efficacious in treating moderate to severe HS and support BKZ as a promising new therapeutic option in development.

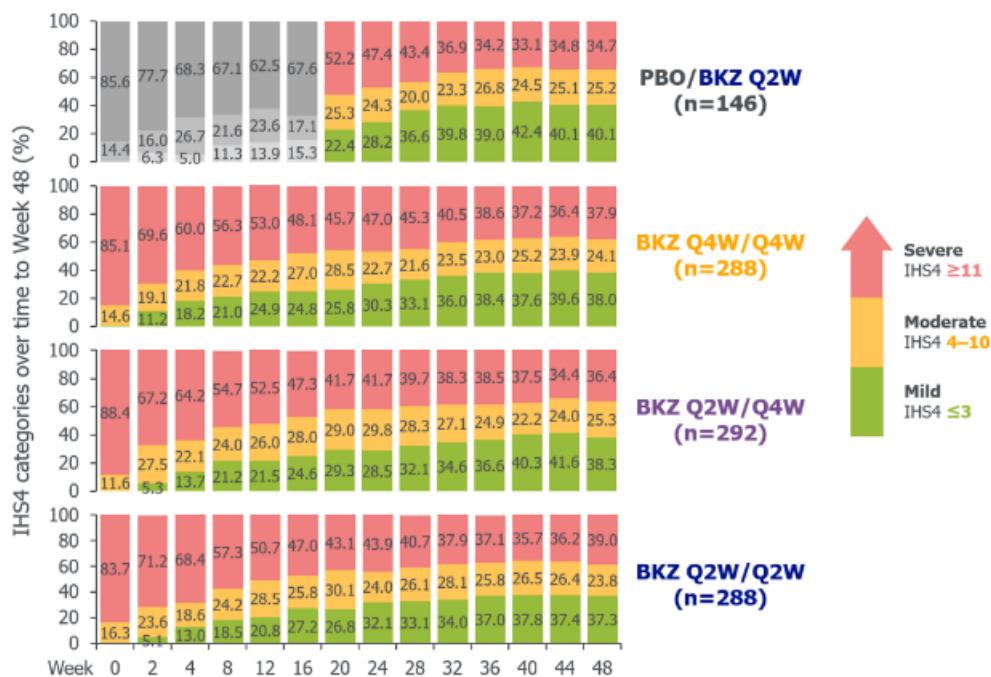
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Funding

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Figure. IHS4 categories to Week 48 by treatment group (MI)^a



Randomised set. [a] Note that these values have been rounded and so may not add to 100%. MI: Intermittent missing data were imputed using multiple imputation with the Markov Chain Monte Carlo method followed by monotone regression for monotone missing data. Participants who experienced an intercurrent event were treated as missing following the intercurrent event. Patients who took systemic antibiotics as rescue medication for HS as defined by the principal investigator or who discontinued due to adverse event or lack of efficacy were treated as missing at all subsequent visits. Treatment switch after the initial treatment period for the PBO/BKZ 320mg Q2W and BKZ 320mg Q2W/Q4W groups started at Week 16. BKZ: bimekizumab; HS: hidradenitis suppurativa; IHS4: International Hidradenitis Suppurativa Severity Score System; MI: multiple imputation; PBO: placebo; Q2W: every 2 weeks; Q4W: every 4 weeks.



Abstract N°: 3576**A Case-control Study Exploring the Association Between Cosmetic Use and Acne Risk: Implications for Prevention and Clinical Practice**Kitman Choi¹, Hsingmei Liu¹, Yingying Zhu², Sha Lu²¹Sun Yat-sen Memorial Hospital, Department of Dermatology and Venereology, Guangzhou, ²Sun Yat-sen Memorial Hospital, Clinical Research Design Division, Clinical Research Center, Guangzhou**Introduction & Objectives:**

According to epidemiological surveys, cosmetics are considered to be one of the risk factors for acne, especially for young women. Some studies named acne that caused by cosmetics contain comedogenicity ingredients as "Acne Cosmetica". Some studies also found a dose-exposure relationship between cosmetics and acne, with a dose-dependent negative association between overall cosmetic exposure and postpubertal acne, and some individual cosmetic categories being risk factors for postpubertal acne. Our study aimed to examine the association between cosmetics and acne occurrence from three perspectives: the type of cosmetic exposure, the cumulative dose of cosmetics, and the use of cosmetics containing comedogenicity ingredients.

Materials & Methods:

In this case-control study, 151 females (81 acne patients and 70 controls) who used cosmetics were recruited from dermatology outpatient departments of Sun Yat-sen Memorial Hospital from October 2022 to April 2023. The demographic information, type of cosmetics, dosage, and product name were collected through a self-administered questionnaire, and the product's ingredient list was consulted by product name to assess the product's containing comedogenicity ingredients. Further, the demographic information and the related cosmetic data were compared between the two groups, by using the nonparametric test for continuous variables or χ^2 test for categorical variables. Univariate and multivariate logistic regression analyses were conducted to evaluate the relation between the types of cosmetics, the cumulative dose or the use of cosmetics containing comedogenicity ingredients and the risk of acne separately.

Results:

66.9% of participants were over the age of 25, with 35.1% in the patient group and 31.8% in the control group. Significant differences were observed between the two groups in terms of occupation, father's acne history, mother's acne history, and milk consumption. We discovered that the use of facial cleanser ($P=0.04$), foundation ($P=0.03$), and powders ($P=0.01$) were risk factors for acne, while the effect of each cosmetic type on acne was facial cleanser (3.59) > powders (2.86) > foundation (2.13) in that order. After correction of age, occupation, father acne history, mother acne history, and milk consumption, only the use of powders significantly increased the risk of acne [OR:3.47; 95%CI:1.58-7.59, $P=0.02$]. In addition, moisturizers were found to be the independent risk factors for acne after controlling the other risk factors, and the higher the dose of the product used lead to a higher risk of acne occurrence [OR:1.03; 95%CI:1.01-1.05, $P=0.03$]. Moreover, the use of facial cleanser containing comedogenicity ingredients was found to be an independent risk factor for acne [OR:2.49; 95%CI:1.23-4.90, $P=0.01$], stearic acid, myristic acid, and glyceryl stearate SE were the most prevalent comedogenicity ingredients.

Conclusion:

This study suggests that the use of certain types of cosmetics may increase the risk of acne, in relation to the dosage of cosmetics used and comedogenicity ingredients. Therefore, we suggest that patients should be careful

to choose appropriate products, avoid cosmetics containing comedogenicity ingredients, and control the amount of cosmetics used. Further research is needed to better understand the mechanisms underlying the relationship between cosmetics and acne, to develop effective preventive strategies for acne.

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Abstract N°: 3668

Influence of Skin Subjective Symptoms on Sleep Quality in Patients with hidradenitis suppurativa: Data from the All Skins-All Colors-All Dermatoses: the ALL PROJECT

Bruno Halioua^{*1}, Jonathan Taieb², Yaron Ben Hayoun³, Catherine Baissac⁴, Marketa Saint Aroman⁴, Marie France Bru⁵, Helene Raynal⁶, Charles Taieb³, Richard Marie-Aleth⁷

¹Dermatologist, ²aphp hotel dieu, ³EMMA, ⁴Pierre Fabre, ⁵AFRH, ⁶Solidarite Verneuil, ⁷APHM Marseille

Introduction & Objectives:

Previous studies showed more sleep disturbance (SD) in patients with hidradenitis suppurativa (HS). During HS, unpleasant subjective symptoms [USS], such as itch, pain and others (tingling, burning, or tightness) have a negative influence on sleep quality. This study aims to evaluate the prevalence of SD in CD patients and to identify the influence of itch, pain and other unpleasant sensations on SD.

Materials & Methods:

The ALL PROJECT involves 50,552 individuals, representative of the adult populations of 20 countries spread over 5 all five continents [China, USA, Brazil, India, Australia, France, Italy, Canada; Denmark; Germany; Israel; Kenya; Mexico; Poland; Portugal; Senegal; South Africa; South Korea; Spain; UAE], which together accounts for over 50% of the world's population. In each of the 20 countries surveyed we conducted a population-based study on representative and extrapolable samples of the general population aged 16 years or more.

Patients with HS, confirmed by a physician, were identified among the 50552 individuals who responded to an online questionnaire. Since the study used anonymised data and did not involve any clinical examination, institutional review board approvals were not required. The questionnaire gathered information about the patients' demographic and socio-demographic profiles. Patients were considered to be those who reported sleep disturbance if they reported that they felt difficulty in falling asleep because of their CD. A comparison of SD and patients without SD (non-SD) was used to evaluate predictors of SD : socio-demographic and clinical parameters and specifically on professional life. Qualitative variables are expressed as frequencies and percentages. Bivariate analyses involving categorical or qualitative variables were carried out with chi-square statistics. Quantitative variables were compared using the Student's test. The presence of a relationship between quantitative features was tested using Pearson's correlation coefficient for parameters consistent with a normal distribution and Spearman correlation coefficient in cases of non-compliance with a normal distribution. A p-value of 0.05 was considered to indicate a statistically significant difference.

Results:

A population of 586 HS respondents was selected, including 302 (51.5%) males and 284(48.5%) females respectively (mean age 36.05 +/-1158). min 16-82 years). A total of 378(64.5%) respondents reported SD due to CD. The mean age of SD population was not different than the non-SD population (mean age 36.17 ± 11.00 years vs. 35.84 ± 12.59years; P > 0.7). Gender Males 63,6% vs Females 65.5%. 0.91) and BMI >or =25 (51.0% vs 45.7%, p 0.73) were not predictor of SD . 208 HS (35.5%) respondents were considered to have no SD.

Signs/symptoms such intermediate sensations (prickles, burning sensations, tingling) (20.0% vs 7.5%,

p=0.34) skin pain(14.5% vs 7.5%, p : 0,004) and pruritus (57.8%vs 7.5%% p 4,6E-36) were predictive factors of SD.

Conclusion:

Our study establishes the prevalence important of SD (64.5 %) in respondents with HS. Patients with subjective symptoms suffer more from SD, suggesting that they are aggravating factors, but are likely not the only reason for SD in HS Patients. We found that during HS, intermediate sensations also contribute to SD. These findings suggest the importance of early detection and management of SD in patients with HS . It is important to include questions about SD in the examinations of CD patients.

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Abstract N°: 3808**Isotretinoin and the risk of psychiatric disturbances - A global retrospective cohort study**Khalaf Kridin¹¹Galilee Medical Center, Unit of Dermatology, Nahariya, Israel**Introduction & Objectives:**

Isotretinoin-related risk of depression and suicidal behavior is a topic of inconclusiveness. A crucial knowledge gap exists in defining the association of isotretinoin with other psychiatric comorbidities. We aimed to evaluate the risk of psychiatric outcomes among patients with acne treated with isotretinoin versus oral antibiotics.

Materials & Methods:

A global population-based retrospective cohort study enrolled two groups of patients with acne managed by isotretinoin (n=75,708) and oral antibiotics (n=75,708). Patients were compared regarding the risk of 9 psychiatric outcomes.

Results:

Relative to those treated with oral antibiotics, patients prescribed isotretinoin experienced lower risk of depression (hazard ratio[HR], 0.90; 95% confidence interval[CI], 0.87-0.93; P<0.001), but comparable risk of major depressive disorder (HR, 0.97; 95% CI, 0.92-1.03; P=0.318). The risk of suicidal attempts was comparable between groups (HR, 0.97; 95% CI, 0.85-1.11; P=0.663), despite the elevated risk of suicidal ideation in those under isotretinoin (HR, 1.41; 95% CI, 1.32-1.50; P<0.001). Patients under isotretinoin had a lower risk of post-traumatic stress disorder (HR, 0.75; 95% CI, 0.68-0.82; P<0.001), anxiety (HR, 0.84; 95% CI, 0.82-0.87; P<0.001), bipolar disorder (HR, 0.65; 95% CI, 0.59-0.72; P<0.001), schizophrenia (HR, 0.60; 95% CI, 0.48-0.76; P<0.001), and adjustment disorder (HR, 0.82; 95% CI, 0.77-0.87; P<0.001).

Conclusion:

Isotretinoin confers a lower risk of six psychiatric comorbidities and a comparable risk of suicidal attempts.



Abstract N°: 3839**assessing the efficacy and safety of clay mask in oily skin: a comprehensive study**Xianghua Zhang¹, Xiaofeng He²¹L'Oreal [China] Co.,Ltd., China, ²L'Oreal China R & D Center, China**Introduction & Objectives:**

Oily skin, characterized by overactive sebaceous glands, can lead to a variety of dermatological concerns including enlarged pores, acne, and uneven skin texture. Traditional skincare products often fail to address these issues comprehensively. The recent development of skincare formulations incorporating natural clays and thermal spring water promises a more effective approach. These ingredients, such as kaolin and bentonite clay, have shown potential in absorbing excess oil, deeply cleansing, and soothing skin, while thermal spring water can enhance skin hydration. In light of these promising developments, this study aims to assess the efficacy and safety of a novel formulation combining these ingredients in managing oily skin.

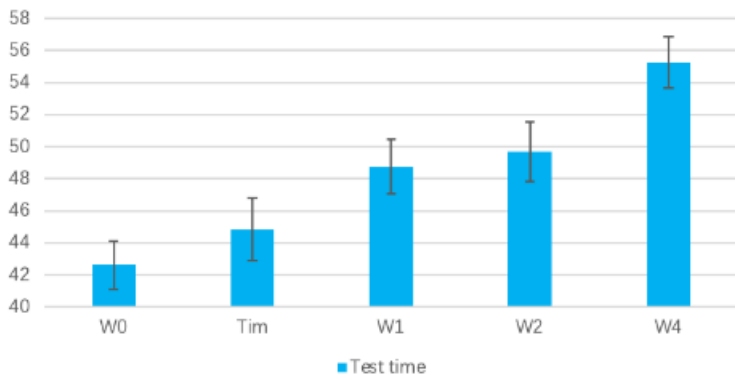
Materials & Methods:

This study assessed a novel clay mask's efficacy and safety in a cohort of 65 participants aged 18-45 years, presenting with combination or oily skin, and at least 50% reporting sensitive skin. Subjects with baseline sebum levels ≥ 100 $\mu\text{g}/\text{cm}^2$ and open and closed comedones on the face or nose were included. Parameters including sebum levels, TEWL, stratum corneum hydration, pore size, skin tone evenness, porphyrin area, and acne count were evaluated at baseline and post-application intervals. The product was initially applied at the research center, with subsequent biweekly applications at home. Data was collected in a controlled environment, and statistical analyses were performed at a significance level of $\alpha=0.05$.

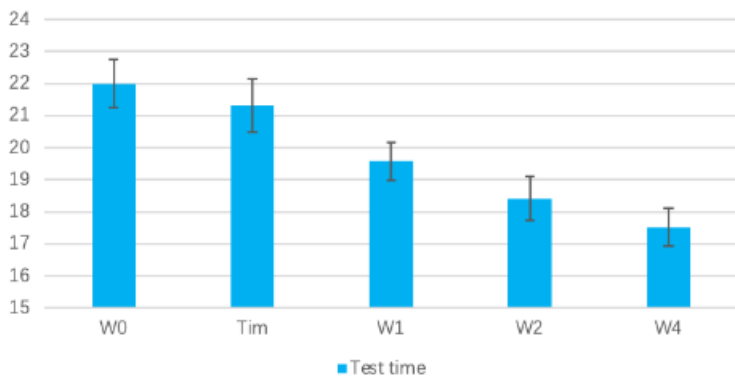
Results:

The study encompassed 75 participants, of which 60 successfully conducted the testing. Systematic experimentation was conducted to explore the efficacy of the clay mask product. Tolerance evaluations, divided into objective and subjective assessments, revealed insignificant changes in facial symptoms like erythema and edema after product application ($P>0.05$). However, the product significantly reduced dryness ($P<0.001$). For subjective discomfort, no notable changes in burning and prickling scores were found, but scores for itching and tightness decreased substantially ($P<0.001$). Moreover, a targeted evaluation involving 40 participants revealed marked improvements post-product usage. Initial applications led to substantial reductions in Transepidermal Water Loss (TEWL) and sebum levels ($P<0.001$), indicating immediate skin barrier enhancement and rebalance of skin sebum. One week of usage fostered significant stratum corneum hydration ($P<0.001$) and acne reduction ($P<0.001$). After two and four weeks, consistent improvements in hydration, TEWL reduction, sebum regulation, skin tone evenness, and acne management improvement were noted ($P<0.001$). The data are shown in Figure 1.

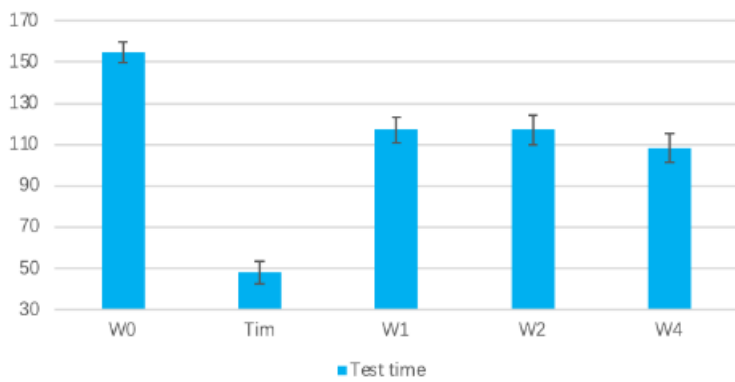
Skin hydration



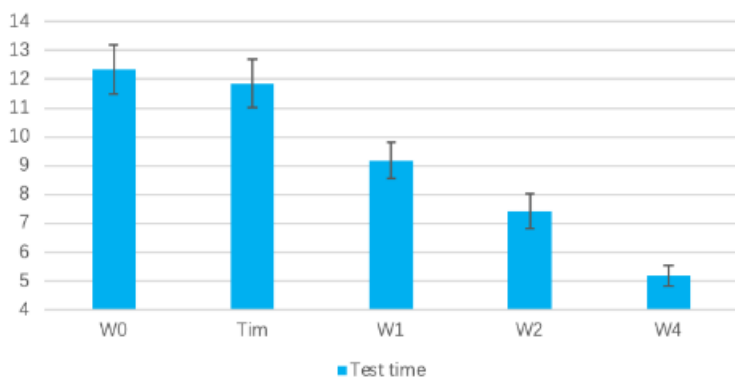
TEWL



Sebum content



Acne number



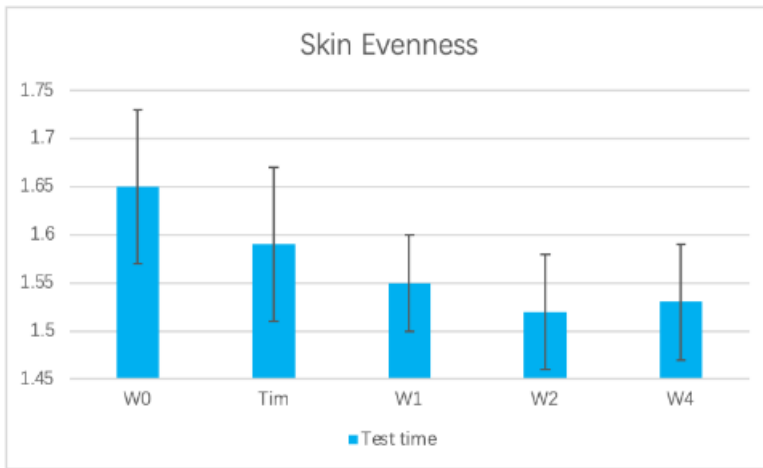


Figure 1 Differences in data before, immediately after, 1 week after, 2 weeks after and 4 weeks after usage

Conclusion:

In conclusion, the study underscores the efficacy of a new clay mask product. Significant improvements were observed in skin barrier function, oil control, hydration, skin tone evenness, and acne management, with excellent tolerance.



Abstract N°: 3947

Among posts, pages, and patients: unveiling Hidradenitis Suppurativa in Brazil using social media netnography between 2019 and 2022

Ericles Bellei¹, Beatriz Eng¹, Danilo Barros², Gleison Vieira Duarte³, Rafael Fatima¹, Renata Ferreira Magalhães⁴, Carla Tozato¹, Felipe Thies¹

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Among posts, pages, and patients: unveiling Hidradenitis Suppurativa in Brazil using social media netnography between 2019 and 2022 # Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease that imposes physical and psychological challenges on patients. However, research on HS in Brazil has predominantly focused on clinical aspects, neglecting patients' experiences. To bridge this gap, this study adopts netnography, a digital research method that analyses social media interactions, to explore the lived experiences of Brazilian patients with HS. The study aims to investigate various aspects, including emotional well-being, the impact of HS on daily life, and the patients' healthcare journey, therefore advancing knowledge about HS in Brazil. # **Materials & Methods:** A retrospective search was conducted across various social media platforms to capture online discussions and patient interactions from January 2019 to December 2022. Data collection strategies involved identifying relevant HS keywords, individuals (patients or health professionals), and organizations (medical associations, patient advocacy groups, clinics) as sources of valuable content. Specific methodologies were tailored to each social network platform, including Instagram, YouTube, Facebook, Twitter, and TikTok. Qualitative clustering and semantic techniques were used to select meaningful narratives, remove duplicates/irrelevant material. All data were sourced from publicly accessible platforms and anonymized prior to the analysis. # **Results:** In total, 4,429 qualified narratives (posts, replies, and comments) were extracted. Publications showed a progressive increase over years: 568 narratives in 2019, 1,035 in 2020, 1,589 in 2021, and 1,236 in 2022, reflecting a growing activity online. Most narratives originated from patients (92.4%), followed by caregivers (7.3%), or both (0.3%). HS typically manifests after puberty, impacting individuals in their second and third decades of life. The disease can persist for years, significantly affecting professional lives, social relationships, and mental well-being, including feelings of pessimism and suicidal ideation. Reports frequently feature negative emojis alongside discussions about the quality of life. Embarrassment, shame, frustration, and sadness are commonly expressed emotions. Common concerns revolve around treatment aspects, symptoms, diagnosis, and identifying the appropriate healthcare professional to consult. Reports (Fig. 1) also highlight challenges in obtaining a diagnosis, accessing suitable treatment, negative experiences with health professionals, and a lack of information about the disease.

Abstract N°: 3966**The effectiveness of fractional carbondioxyde laser and microneedle radiofrequency on acne scars**Filiz Canpolat^{*1}, Erol Koc², Selda Pelin Karta³¹ankara etlik city hospital , dermatology, Türkiye,²ankara dr erol koc dermatology clinic , Türkiye,³ankara etlik city hospital , Türkiye

Introduction & Objectives: Acne is one of the most frequent inflammatory chronic dermatoses, requiring a large amount of care and treatment by the dermatologists. Treatment for acne scars with traditional ablative 10.600-nm CO₂ or 2.940-nm Er:YAG lasers may be effective. Our aim in this study was to examine the effect of laser on acne scars and to investigate whether its effect on atrophic acne scars is more effective than other types of acne scars.

Materials & Methods: Individuals older than 18 years of age, younger than 40 years of age, with acne scars, who applied for treatment and did not have any additional disease were included in the study. Patients with acne scars for more than one year and who were not received any recent treatment for acne scar were included in the study. The device for laser treatment was The FCL part of the FCL + FmRF laser system utilized a wavelength of 10 600 nm, single repetition time of 0.2-2 seconds, and pulse time of 20-5000 μ s. The patients were evaluated in two groups as atrophic and hyperpigmented acne scars. Response to treatment was evaluated by dividing the atrophic ones into ice-pick, box-car and rolling subtypes. These patients were also compared as two groups according to clinical scoring and patient satisfaction. A linear model used for treatment effect and adjustment for analysing the effect of laser on patients' score.

Results: Forty one patients (23 f, 18 m) were included in the study. The mean age of the patients was 34 (26-45) years. The dominant scar types were boxcar, rolled, mix and icepick. Before treatment mean score was 65.6 ± 12 (95% CI, 61.7-69.4), after treatment it was 49.3 ± 12 (95% CI, 45.4-53.2), $p < 0.01$. At the beginning of the treatment patients divided into two groups according to scar type, Group 1 (n=23) was atrophic scar type, Group 2 (n=18) was erythematous scar type. Before treatment Group 1 has a mean score of 66 ± 12 , and Group 2 has 66 ± 12 ($p = 0.60$). After treatment Group 1 has 45 ± 12 , median: 50 (40-60), Group 2 has 54 ± 10 , median: 50 (50-60) ($p = 0.019$). Treatment effect on scores Group 1 vs Group 2 was, coefficient 10.37 (95% CI, 5.5-15.2), standart error 2.46, z : 4.21, $p < 0.01$. The mean ECCA scores gradually decreased at after treatment. The decrease in mean ECCA scores was statistically significant all over but especially in atrophic group. The over all median satisfaction score was 7 (2-10), for each group, Group 1 and 2, satisfaction scores were 7 (3-10) and 6 (2-9) respectively.

Conclusion: In this study, it was demonstrated that FCL and FRFL, when used together, are effective on acne scars, have low side effects, and are tolerable and satisfactory. In conclusion, in our study, carbon dioxide laser and needle radiofrequency were found to be more effective in atrophic acne scars than in other types.



Abstract N°: 3977**Novel topical acne agents: in vitro, ex vivo and clinical studies**Sebastian Podlipnik¹¹Hospital Clínic de Barcelona, Barcelona, Spain**Introduction & Objectives:**

Acne vulgaris is a skin condition affecting approximately 85% of young adults. It is affected by androgens and their receptors and takes place mainly in the pilosebaceous unit, where inflammation and obstruction occur. Due to hyperseborrhea and hyperkeratinization, the levels of fatty acids and necrotic keratinocytes increase, which favors the proliferation of *C. acnes* phylotype IA1. This study consisted in testing the in vitro and ex vivo efficacy of a novel combination of coencapsulated active ingredients targeting acne processes and evaluating the clinical safety and efficacy of a topical formula containing these ingredients for acne management.

Materials & Methods:

Human skin sebocytes or human epidermal keratinocytes were incubated with the different stimulators and the compounds. Inflammation and hormonal effects were evaluated by qPCR, sebum production was evaluated by Bodipy staining, autophagy and FOXO1 levels were evaluated by fluorescence microscopy, hyperkeratinization was evaluated by live cell imaging. Ex vivo biodistribution was analyzed by fluorescence microscopy by fluorophore labeling of transethosomes. The clinical treatment consisted of 3 clinical sessions every 15 days and a daily home treatment. Patients' skin was firstly degreased and then a 2 ml of pre-peel solution applied for 5 minutes. A second 2 ml layer on acne lesions for another 5 minutes was applied. The skin's pH was rebalanced by a neutralizer. Then a topical mask with the tested active ingredients was applied by a spatula evenly over the face. After 10 minutes, a neutralizer was applied and the mask removed. When patients recovered their eudermic state (after 24-48h), they began a night daily home treatment with a cream with the tested active ingredients during 3 months. Evaluation methods were reflex photography, VISIA and sebumeter.

Results:

The combination of compounds reduced the expression of COX-2, IL-6 and IL-8 in LPS-treated sebocytes and the sebum production in linoleic acid + testosterone-treated sebocytes. The combination increased the amount of autophagosomes and FOXO1 levels in sebocytes. Hyperkeratinization was reduced as proved by the increased keratinocyte differentiation induced by the compounds. Increased expression of LXRA, SREBP and SRD5A3 in testosterone-treated sebocytes was also inhibited by the compounds. A penetration-promoting effect of fluorescently labeled transethosomes was observed ex vivo on human skin, with accumulation in pilosebaceous units compared to the control without nanoparticles. Patients treated with these topical active ingredients showed an improvement in acne lesions after 3 months.

Conclusion:

We propose a novel combination of compounds that can effectively modulate the main processes involved in acne pathogenesis and can help improve acne lesions.



Abstract N°: 4007**IL-17-expressing mast cell: a newly discovered player in hidradenitis suppurativa**Chia-Bao Chu^{*1, 2}, Chao-Chun Yang^{1, 3}, Shaw-Jenq Tsai^{2, 4}

¹Department of Dermatology, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Tainan, Taiwan, ²Institute of Basic Medical Sciences, College of Medicine, National Cheng Kung University, Tainan, Taiwan, ³International Center for Wound Repair and Regeneration, National Cheng Kung University, Tainan, Taiwan, ⁴Department of Physiology, College of Medicine, National Cheng Kung University, Tainan, Taiwan

Introduction & Objectives:

Hidradenitis suppurativa (HS) is an inflammatory skin disease, but the pathological insights remain unclear. We aim to identify the proinflammatory cytokines and the cells expressing such cytokines in HS and evaluate their potential as diagnostic and therapeutic targets.

Materials & Methods:

The four microarrays and RNA-Seq datasets with both lesional and non-lesional skin tissue samples were analyzed for the critical players in HS. A total of 73 skin specimens from our university hospital were collected from patients with HS, psoriasis, and control subjects. The immunohistochemical and immunofluorescent stains were employed to detect potential proinflammatory cytokines. Double immunofluorescence staining was utilized to find the specific cell types expressing prominent cytokines and compare their respective densities in normal skin, psoriasis skin, and different stages of HS based on the Hurley classification.

Results:

Transcriptome analysis identified interleukine-17 (IL-17)-mediated signaling as the key pathway in HS. Immunohistochemical and immunofluorescent staining showed that the majority of IL-17-expressing cells in the skin of HS were mast cells. The densities of mast cells and IL-17-expressing mast cells were significantly higher in HS compared to normal skin ($P < 0.001$), with a marked increase in advanced Hurley stages. A threshold value of 24 IL-17-expressing mast cells/mm² offered more than 90% specificity and sensitivity for distinguishing HS lesions from normal skin. In psoriasis, the density of mast cells and IL-17-expressing mast cells was higher than in normal skin but was significantly lower than that in HS samples. More critically, the density of IL-17-positive mast cells was significantly reduced in the skin samples derived from patients who received anti-IL-17 biologics treatment.

Conclusion:

The density of mast cells expressing IL-17 can be used as a marker for a diagnosis, severity assessment, and prognosis of HS.

Abstract N°: 4039**Characterizing Hidradenitis Suppurativa in Israeli Arabs: Analysis of Two Cohorts**

Jen A. Barak Levitt¹, Shira Barmatz², Shira Fisch-Gilad², Yossef H. Taieb², Adam Dalal³, Khashayar Afshari⁴, Nazgol Haddadi⁴, Dana Tzur Bitan⁵, Arnon Dov Cohen⁶, Daniel Mimouni², Emilia Hodak², Shany Sherman^{*2}

¹Afula medical Center, ²Rabin Medical Center, ³Sheba Medical Center, ⁴UMASS Chan Med School, ⁵Ariel University, ⁶Clalit Health System

Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease involving apocrine-gland-bearing regions. There is an under-representation of non-Caucasians in epidemiologic studies of HS. The characteristics of HS in Israeli Arabs have not yet been studied. We aimed to investigate the demographic and clinical profile of HS in the Israeli Arab population.

Materials & Methods:

A retrospective analysis was conducted in two cohorts of patients with HS in Israel, derived from the database of a large health management organization (N=4191, 639 Arabs; population-based) and a major tertiary medical center (N=372, 49 Arabs). Demographic and clinical data were compared between ethnic groups.

Results:

Arab patients had a fivefold higher prevalence of HS than Jews, with 639 (0.5%) versus 3552 (0.1%) patients, respectively. Arab patients were younger (35.3 vs 40.5 years, $P < .001$) and mostly male (52% vs 35.7%, $P < .001$), with lower rates of comorbidities, including smoking (40.8% vs 55.7%, $P < .001$), hyperlipidemia, and depression, and a higher rate of dissecting cellulitis (10.2% vs 1.9%, $P = .008$). HS was more severe in Arabs, albeit of shorter duration, with mainly axillary involvement (79.6% vs 57.9%, $P = .004$). Treatment with hormones was more common in Jews, and with biologic agents, in Arabs.

Conclusion:

The findings suggest a different phenotype of HS in Arabs, warranting further study.



Abstract N°: 4049**Cold plasma as an effective treatment for acne vulgaris: A case series**

Fahimeh Abdollahimajd¹, Reem Diab¹, Mohammad Reza Pourani¹, Hamideh Moravvej¹

¹Shahid Beheshti University of Medical Sciences, Skin Research Center, Tehran, Iran

Cold plasma as an effective treatment for acne vulgaris: A case series

Introduction & Objectives: Acne vulgaris as a prevalent dermatologic disease has a considerable psychosocial effect on the population. Several treatments have been indicated for acne with noticeable adverse events. Plasma as one of the developing therapeutical modality is employed in different inflammatory conditions with minimum side effects.

Materials & Methods: This is a case series study for the evaluation of the efficacy of plasma therapy in acne vulgaris. Patients regarding inclusion criteria were enrolled in the study at the dermatology clinic of our institute, from 2021 to 2022. Plasma was applied for patients once weekly for 8 consecutive weeks.

Results: A total of 15 eligible patients including 12 women and three men with a mean age of 26.60 ± 6.20 were included. All patients experienced mild-moderated acne with notable improvement after plasma therapy sessions. The mean of GAGS and IGA scoring were 14.73 ± 6.19 and 2.67 ± 0.82 at baseline session and 4.80 ± 3.97 and 0.87 ± 0.83 after application of cold plasma, respectively. The decrease in GAGS ($P < 0.001$) and IGA ($P < 0.001$) was significant. Also, the quality of life of acne patients assessed with CADL scoring reduced significantly after a complete course of therapy ($P < 0.001$).

Conclusion: Recently, cold atmospheric plasma showed remarkable results in the treatment of inflammatory dermatoses. Some investigations reported the beneficial effects of plasma for the treatment of acne patients. In this study, our findings recommend applying cold plasma as an effective adjunctive therapy for the treatment of inflammatory lesions in acne patients. However, for confirmation of this result, further investigations with a higher sample size are still required.



Abstract N°: 4056**Hidradenitis Suppurativa and blood groups are not associated in a large national cohort study of 52,774 Danish blood donors**

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Introduction & Objectives:

Hidradenitis Suppurativa (HS) is a chronic inflammatory skin disorder. Previous data from other fields of medicine suggest that blood types may be associated with inflammatory disease. In particular, the prevalence of rheumatic disease, vasculitis, lupus erythematosus and spondyloarthritis have been associated with specific blood groups. The objective of this study is to investigate the association between blood groups and prevalence of HS in a cross-sectional study of a cohort of blood donors in Denmark.

Materials & Methods:

This study is part of the Danish Blood Donor Study (DBDS), a nationwide, prospective cohort and biobank (DBDS.dk). At inclusion, a total of 52,774 blood donors have filled out a DBDS questionnaire including HS screening questions used to identify cases of HS in addition to questions on height, weight, and smoking. Data on blood groups (ABO and Rhesus system) were obtained from electronic blood bank records. Logistic regression with HS as the outcome were performed to assess its association with blood groups when adjusting for age, sex, body mass index (BMI), and smoking, all known to influence the risk of developing HS. Blood group O was chosen as the reference for our blood group analysis.

Results:

We identified 1,004 participants with HS (See table 1). After adjusting for confounders, the logistic regression revealed that the risk of having HS was not related to a specific blood group (A, AB, B or Rh+/-) (Table 2).

Conclusion:

This study did not find an association with the presence of HS and blood group. One potential explanation may be that it is disease severity and/or an outcome of a specific disease and not the disease itself that is associated with blood type. However, future studies investigating the severity of HS and blood groups are warranted, as associations between the severity/outcome of an inflammatory disease and blood group have previously been shown.

Table 1: Demographics of cohort

	HS (n=1,004)	Controls (n=51,771)
Median age (IQR), n=52,775	35.5 (26.7 – 45.8)	40.5 (28.4 – 51.3)
Sex, n=52,775 (%)		
Males	389 (38.7)	26,754 (51.7)
Females	615 (61.3)	25,017 (48.3)
Median Body Mass Index (IQR), n=52,626	26.5 (23.7 – 30.5)	25.0 (22.8 – 27.8)
Smokers, n=52,645 (%)	210 (21.0)	4,659 (9.0)

HS: Hidradenitis Suppurativa, CI: confidence interval, IQR: Interquartile range, n = number

Table 2: Association between presence of Hidradenitis Suppurativa and blood group

	HS (n=1,004)	Controls (n=51,771)	Odds ratio (95% CI)	p-value
Type of blood groups n=51,369 (%)				
O	429 (44.4)	23,061 (45.8)	Ref	
A	396 (41.0)	20,140 (40.0)	1.08 (0.94 – 1.24)	0.28
AB	46 (4.8)	2,157 (4.3)	1.13 (0.83 – 1.54)	0.40
B	96 (9.9)	5,044 (10.0)	1.05 (0.83 – 1.31)	0.68
Rhesus blood types, n=51,280 (%)				
Negative	229 (22.8)	10,945 (21.8)	Ref	
Positive	736 (73.3)	39,370 (76.0)	0.90 (0.78 – 1.05)	0.192

HS: Hidradenitis Suppurativa, CI: confidence interval, n = number



Abstract N°: 4078**Erbium-glass laser monotherapy in treatment of inflammatory acne vulgaris in adolescents**

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Introduction & Objectives:

Acne vulgaris is a chronic inflammatory skin condition strongly affecting patients' quality of life. Prominent lesions in acne vulgaris may put a serious burden on patients, especially in grades 3 and 4 according to the Investigator Global Assessment Scale. Treatment of acne vulgaris requires time, compliance, and patience of the treated individuals. Erbium-glass laser is an underappreciated modality to achieve prompt remission of inflammatory acne. The aim of this study was to evaluate efficacy of erbium-glass laser in the management of papulopustular acne vulgaris in young females previously not treated with any facial laser procedures.

Materials & Methods:

Three laser treatment-naïve adolescent females (age range: 15 - 21) with grade 2 and 3 acne vulgaris received 1540-nm erbium-glass laser protocol of 3 sessions in 4-week intervals with increasing energy parameters (13.2 - 16.8 J, stamp mode). One patient received an extra session in a 2-week interval at the beginning of the treatment due to high severity of the skin lesions. The patients were not receiving any other medication within one month preceding the first laser procedure and during the treatment protocol. Standardised photographic documentation was created before each session and one month upon completion of the treatment. Assessment was performed based on photographic changes in the number and severity of inflammatory lesions (pustules, papules, erythema) and comedones. Both the patients and the medical professional were asked to estimate the satisfaction with the treatment outcomes.

Results:

In all cases, visible improvement of the skin was observed. Decrease in the number of papulopustular lesions was reported in all patients in comparison to the baseline. Reduced erythema was noted in haemoglobin-focused photographic parameters. Intensity of hyperpigmentation alternated between sessions in melanin-focused photographic parameters. Overall treatment outcomes were preserved during post-protocol follow-up despite absence of any further treatment. The patients experienced facial redness, tenderness, and mild oedema that lasted up to a week after each procedure. No other adverse events were reported.

Conclusion:

Erbium-glass laser monotherapy was found effective and well-tolerated in treatment of grade 2 and 3 inflammatory acne vulgaris in young female patients. Due to the shrinkage of sebaceous glands as a result of skin resurfacing, a significant reduction in comedones and papules was observed. Therefore, erbium-glass laser shows promising outcomes and may contribute to long-term remission of acne vulgaris.

Abstract N°: 4107**New possibilities for acne treatment: from peelings to microneedling**Foteini Bageorgou¹¹For Better Skin, Athens, Greece**Introduction & Objectives:**

Acne is a complex skin condition that can have different stages and severity levels, and can both localised at the face and body. *C.acnes* plays a key role as it can enhance the overall inflammation process. Acne can be triggered by several factors, such as genetics, hormonal imbalances, stress, diet, and skincare habits and may vary between gender.

Materials & Methods:

The most effective active monosubstances are glycolic acid, an alpha-hydroxy acid which exfoliates the skin and promotes collagen production, lactic acid, another alpha-hydroxy suitable for sensitive skin, mandelic acid, an alpha-hydroxy acid with antibacterial properties that decrease the population of *C.acnes* bacteria in the skin and salicylic acid, a beta-hydroxy acid which also possesses antimicrobial and antifungal properties. There are some new active ingredients that can be used in peeling formulations like retinal and chlorogenic acid. We performed in vitro studies to evaluate their potential activity. Human skin cells were incubated for 24h with the retinoid for wound healing assay or qPCR assay. They were also incubated for 24h with the hydroxycinnamic acid for gene expression quantification by qPCR assay. For acne sequelae TCA (trichloroacetic acid) can help to improve the appearance of acne scars. Clinical cases with a peeling formulation based on mainly 30% salicylic acid and the retinal and chlorogenic acid complex were also performed.

To evaluate the potential of microneedling for acne scars treatment, a clinical study was performed with 7 volunteers from both sexes, 17-54 years old, and rolling or rectangular post-acne scars. Six sessions were performed every 15 days and a final control at 15 days. At each session, 5 ml a solution containing polynucleotides, organic silicon, *Chlorella vulgaris* extract and darutoside was applied on the scars on each side of the face, that were vehiculated through microneedling, at 1 mm and at 1.5 mm in depth, according to the area. The evaluation methods were photographic register, with normal camera and VISIA Facial Analyser, ultrasound measurements, GAIS scale evaluated by the principal investigator and patient and research satisfaction survey.

Results:

The retinoid compound showed regenerative effects in the wound healing assay and induced the expression of genes associated to extracellular matrix (CTGF, TIMP2) and cell proliferation and migration (KLF5). The hydroxycinnamic acid compound induced the expression of genes associated to extracellular matrix (TIMP2). Positive clinical cases were obtained with the new proposed peeling formulation. Regarding the microneedling study, very evident results were obtained regarding the size and appearance of scars. The ultrasound data evidenced an average¹ reduction of scar width of 50.43% and tissue filling of the scar lesion after 45 days.

Conclusion:

Chemical peels may be used to help manage mild-moderate active acne to remove dead skin cells and unclog pores. Microneedling with the studied solution has been proved to be a safe and effective option for scars. The treatment for acne depends on the stage of acne and the type of acne lesions present. It is also important to

perform a proper diagnosis to exclude other similar pathologies like keratosis pilaris.

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Abstract N°: 4112**Acne awareness among healthcare providers and medical students-a post-hoc analysis**

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Introduction & Objectives:

The knowledge level of acne patients regarding the pathophysiology and management of the condition has an important impact on treatment success, with negative consequences for those less knowledgeable.

Our post hoc analysis aims to evaluate the knowledge level regarding acne pathophysiology in healthcare providers (HCPs) compared to 3rd to 5th year medical students.

Materials & Methods:

We consider data from two previous web-based studies on acne management delivered to HCPs and medical students in the 3rd to 5th years of study. We compare the accuracy of their answers (i.e., count of correct answers) concerning ten factors involved in acne pathogenesis.

Results:

We analyzed complete answers regarding acne pathogenesis from 214 participants (119 HCPs and 95 medical students; male: female ratio 1:8). Overall, answer accuracy was 69.90%. Answer accuracy for HCPs was 7.64 (+1.58), with a median of 8 correct answers, whereas for students, it was 6.18 (+1.05), with a median of 6 correct answers. The differences between the two groups were statistically significant (Wilcoxon rank sum test $W=8756$, p -value $<.001$).

Answers with the highest accuracies addressed the pro-acne effect of excess sebum - 205 cases (94.86%), hormones - 186 (86.91%), and bacteria - 184 (85.98%). Answers with the lowest overall accuracy concerned the role of abnormal keratinization in acne, where answers were accurate in only 77 (35.98%) cases, fungi - 110 (51.40%), allergies - 144 (67.29%), sexual activity - 146 (68.22%) and viruses - 146 (68.22%). Regarding the influence of inflammation, 164 (76.64%) accurate answers were recorded, whereas 166 (77.57%) correct answers were observed for the role of mechanical pressure/friction on acne development.

Answers from students compared to HCPs were more accurate on 6 factors considering the role of inflammation ($\chi^2(1)=28$, $p<.001$), bacteria ($\chi^2(1)=16$, $p<.001$), mechanical pressure ($\chi^2(1)=16$, $p<.001$), hormones ($\chi^2(1)=15$, $p<.001$), the involvement of impaired keratinization in acne ($\chi^2(1)=14$, $p<.001$), and excess sebum ($\chi^2(1)=5.9$, $p=.02$).

In contrast, answers from HCPs were more accurate for items considering the role fungi ($\chi^2(1)=108$, $p<.001$), viruses ($\chi^2(1)=112$, $p<.001$), sexual activity ($\chi^2(1)=88$, $p<.001$), and allergies ($\chi^2(1)=91$, $p<.001$).

Conclusion:

Healthcare providers from medical fields other than dermatology and medical students are highly educated populations. The results from our study show that guideline-aligned acne information represents a specific topic

and that certain aspects are unclear even to those with extensive medical knowledge. Most acne patients are lay people, more vulnerable to filtering out unclear or inaccurate acne content. Our findings suggest the need for increased educational efforts centered on acne pathophysiology and management.

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Abstract N°: 4136**Effectiveness and Safety of a dermocosmetic cream containing Salicylic Acid, Lipohydroxy Acid, Niacinamide, Aqua-Posae-Filiformis, Procerad and Zinc-PCA as an adjuvant treatment for Mild and Moderate Acne in Indonesia**

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Introduction & Objectives: Acne is a chronic inflammatory condition in which dermocosmetics (DC) can be used as an adjuvant treatment to standard therapy with additive benefits in terms of efficacy or tolerability.

The aim of this study was to evaluate the efficacy and tolerability of a DC cream containing Salicylic Acid, Niacinamide, *Aqua-Posae*, Procerad and Zinc in adjunct to adapalene in Indonesian patients with mild to moderate acne.

Materials & Methods: This multicenter, randomized, evaluator-blind, parallel-group study was conducted in five hospitals in Indonesia from May to December 2022. Subjects with mild and moderate acne, aged 15 to 50 years, were randomized into three groups. All subject received 0.1% adapalene cream at night: Group1 had 0.1% adapalene cream only, Group2: 0.1% adapalene cream every other night and DC every morning, and Group3: 0.1% adapalene cream every night and DC every morning. Subjects were evaluated on day 28 and 56. Evaluations included GEA scale and lesion count (IAEM scale), sebum levels, patient's quality of life (QoL) using CADi and Acne QoL questionnaires. Patient's satisfaction and tolerability were evaluated by investigator and patient (score 1-4).

Results: 293 subjects were included, distributed evenly among three groups. All subjects were Asian, the majority of them were female (60%), phototypes IV (79.5%), aged >25yo (55.3%), Javanese (54%), with a higher education (54%). After D56, all 3 groups showed significant improvements in terms of GEA scale, lesion count and QOL. There was a significant difference in group C showing a higher reduction of GEA compared to group A (p=0.038). There were significant differences in the investigator's tolerance score among the three groups (p 0.001), with group A (adapalene alone) having a higher score (less tolerance) than both groups B and C on D28 and D56. For the patient's tolerance score, no difference was seen between groups B and C, with a majority scored 1-2 (92-94%). Study showed significant difference in investigator's evaluation of patient's satisfaction among three groups (p<0.001) with groups B and C having higher score, mostly scoring 4-5, than group A both on day 28 and day 56. For patient's evaluation of satisfaction, study showed no significant difference between group B and C, majority of both scored 4-5. In group B, there was significant increase in subjects scoring 4-5 between D28 and D56.

Conclusion: The usefulness of an active dermocosmetic as an adjunct to drugs has already been reported in the

management of acne. This is the first time a randomized controlled clinical study is conducted combining a multitargeted dermocosmetic cream with adapalene in mild to moderate acne. This study showed a significant improvement of acne over time in the 3 groups with a superior efficacy for the association of DC and adapalene QD in GEA scale, as well as a superior tolerability and satisfaction for the 2 regimens combining the DC and adapalene compared to adapalene alone.

Keywords : Effectiveness, Safety, Combination Cream, Adjuvant Therapy, Mild and Moderate Acne Vulgaris

C1 - Internal use

C1 - Internal use

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Abstract N°: 4144**Secukinumab and hidradenitis suppurativa: safety profile in a patient with heart failure and dialytic disease**Juliana Yumi Massuda Serrano^{*1}, Thais Buffo¹, Ariany Denofre¹, Renata Ferreira Magalhães¹¹State University of Campinas, Dermatology, Campinas, Brazil**Introduction & Objectives**

Hidradenitis suppurativa (HS) is a complex disease, with well-defined risk factors and patients with several comorbidities, including obesity, diabetes, hypertension and smoking. As well as favoring worsening of the dermatosis, such conditions also promote a greater risk of cardiovascular disease in patients, including myocardial ischemic events that can culminate with heart failure. Currently, we have several treatment modalities for HS, including physical modalities such as laser, surgery, topical treatments, intralesional infiltrations of corticosteroids and even systemic medications such as antibiotics. It is known that adalimumab can be used to treat this dermatosis, but there are patients with formal contraindications such as those with demyelinating diseases and severe congestive heart failure. There are already publications with the use of secukinumab in patients with anti-TNF therapeutic failure, but the studies are controlled in patients with fewer comorbidities than those we routinely see in our daily practice.

Materials & Methods

We report here a case of a patient with severe Hurley III hidradenitis suppurativa and involvement of several areas such as cervical, axillary, inguinal, gluteal, scrotum and scalp, with arterial hypertension, type I diabetes, obesity, dyslipidemia, dialytic chronic renal failure and previous episodes of acute myocardial infarction that led to congestive heart failure class III.

He had already used antibiotic therapy and sessions of drainage of the lesions but he maintained intense disease activity.

He started with inflammatory rhythm pain in the sacroiliac region for 8 years and MRI confirmed ankylosing spondylitis sacroiliitis and, due to previous studies with secukinumab for hidradenitis suppurativa, it was released by his health insurance for use at a dose of 300 mg weekly in the first five weeks and, afterwards, 300 mg every 28 days.

Results:

The patient evolved with an excellent response after week 8 of treatment, with an initial IHS4 of 31 which became 18 and, after, week 16 reached 10. In parallel, he lost 20 kg in the period due to the possibility of more adequate walking after healing of gluteal, inguinal and axillary lesions. There was an improvement in the levels of glycated hemoglobin, total cholesterol and fractions and triglycerides during the treatment period.

Regarding the DLQI, it dropped from levels of 30 at week 0, to 8 at week 8 and 2 at week 16.

The reduction in dressings and care for the lesions led to less use of antibiotics by the nephrologist who feared dialysis sessions with intensely exudative lesions. Additionally, the patient's wife, his sole caregiver, reported an intense improvement in her quality of life.

Conclusions

Similar to what has already been reported in pivotal studies and case reports published to date, secukinumab appears to be an effective drug in the treatment of hidradenitis suppurativa. Its safety is already well-established in patients with psoriasis, psoriatic arthritis and ankylosing spondylitis, and the reproducibility in patients with several comorbidities is reported here, including some severe ones such as class III heart failure and dialytic renal failure. Considering the impact of the disease on the quality of life not only of the patient, but also of the family members, it is necessary to seek new treatments for hidradenitis suppurativa, considering the scenario that patients have several other health conditions that must be taken into account.

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Abstract N°: 4157**An Unusual Case of Imatinib Induced Hidradenitis Suppurativa**Wajeeha Khan¹, Ashima Lowe¹¹Singleton and Neath Post Talbot hospital, Dermatology, Swansea, United Kingdom**Introduction & Objectives:**

Hidradenitis suppurativa (HS) is an inflammatory disease of the pilosebaceous unit with a chronic intermittent course. It's association with obesity, smoking, family history and other inflammatory conditions is well known however, drug induced HS cases are extremely rare. We report a case of Imatinib induced HS.

Materials & Methods:**Results:**

A 62-year-old lady presented with 10-year history of recurrent episodes of painful nodules, abscesses and sinus tracts in both axilla, mons pubis and inguinal folds. The patient was a non-smoker, had a normal body mass index and denied any personal or family history of HS. Her past medical history included chronic lymphocytic leukaemia managed with Imatinib for the last 11 years. Patient denied use of any other medications. The patient reported developing boils and abscesses in both axillae few months after starting Imatinib. This later progressed to involve the groin area. The patient used topical antiseptics and Clindamycin which helped control her symptoms for a few months. On examination, she had classical findings of HS with sinus tracts, scarring and active nodules in axillae and inguinal folds. The remainder of the examination was normal. The chronology of onset of HS in relation to commencement of Imatinib, in a 62-year-old post-menopausal woman with no other convincing risk factors or triggers, raised a strong possibility of drug-associated aetiology.

Conclusion:

Drug-induced HS is rare and only one case of neutrophilic eccrine hidradenitis suppurativa associated with Imatinib use has been reported in literature.** Frew et al 1 in 2018 presented 48 cases of drug induced HS with none concerning Imatinib use but did report 2 cases of Vemurafinib induced HS with an incubation period of 10-18 months. Vemurafinib, like Imatinib is also a tyrosine kinase inhibitor however, they differ in their molecular mechanism of action. It is well established that hidradenitis suppurativa tissue transcriptome is associated with alterations in innate immunity², and the literature review also highlighted that all medications implicated in HS aetiology modulate aspects of the innate immune system. We believe Imatinib, a tyrosine kinase inhibitor, induced HS in this patient however it's mechanism leading to HS activation remains unclear.



Abstract N°: 4176**Investigating the frequency of chronic inflammatory intestinal disorders in hidradenitis suppurativa**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) patients often experience gastrointestinal symptoms with possible chronic inflammatory intestinal disorders (CIID) in the background. The frequency of CIID in HS has not been investigated. The pilot study was set to determine the occurrence of CIID in HS and characterise this population. Besides, the feasibility of fecal calprotectin (FC) test and anti-*Saccharomyces cerevisiae* antibody (ASCA) levels was investigated.

Materials & Methods:

Newly diagnosed and untreated HS patients (n=74) arrived in the Department of Dermatology, University of Debrecen were referred to a gastroenterologist for FC followed by colonoscopy. C-reactive protein (CRP), white blood cell count, nucleotide-binding-oligomerisation-domain-containing-protein-2 (NOD2) polymorphism, and ASCA levels were measured. Patients were divided into HS-only and HS+CIID groups, based on the absence or presence of CIID. Laboratory and clinical parameters were compared in these groups.

Results:

The CIID frequency in HS was 28.4% (n=21/74), based on colonoscopy and histology. Significantly more patients had severe disease in the HS+CIID group compared with the HS-only group, and BMI was significantly lower in the HS+CIID group (28.20±5.58 vs. 32.74±6.45, p=0.006). FC positivity occurred significantly more (90.48% vs. 3.77%, p<0.001), and ASCA IgG levels were significantly elevated (22.08±23.07 vs 8.41±10.94 U/mL, p=0.001) in HS+CIID patients compared with HS-only patients. FC test identified HS+CIID patients with high specificity and sensitivity.

Conclusion:

In conclusion, a high frequency of CIID was detected in the examined HS population. The non-invasive FC test has high sensitivity and specificity for diagnosing CIID in HS patients. Concomitant CIID and HS may indicate the need to start early biological treatment.



Abstract N°: 4200**Punch elevation in atrophic scars showing unsatisfactory results after previous laser treatment and evaluation of efficacy with 3D image analysis**Hyungrye Noh¹, Heeyeon Kim¹, Joonho Shim¹, Se Jin Oh¹, Jihye Park¹, Dongyoun Lee¹, Jong Hee Lee¹¹Samsung Medical Center, Department of Dermatology, Seoul, Korea, Rep. of South**Introduction & Objectives:**

There are various treatments for recovering the volume of depression in atrophic scars. Recently, laser therapy has been a useful treatment option for atrophic scars. However, it has side effects such as post inflammatory hyperpigmentation or post inflammatory erythema. Furthermore, even after multiple sessions, laser therapy may not achieve desirable outcomes for some types of atrophic scars.

This study aims to evaluate the efficacy and safety of punch elevation on atrophic scars that did not achieve satisfactory outcomes after previous multiple laser treatment sessions.

Materials & Methods:

Punch elevation was conducted on 7 patients with some atrophic scars on the face (M: F 3:4, aged from 20 to 38 years old), and fractional CO₂ laser was also applied on the rest of atrophic scars at the same time. The improvement of volume restoration in atrophic scars was assessed by the investigator's evaluation and 3D image analysis which demonstrated the total volume of depression before and 1 month after the procedure.

Results:

After 1 month, median volume (IQR) of depression improved from 4.39 (2.23-9.90) mm³ to 1.97 (1.46-7.50) mm³, and there was a statistically significant difference between before and 1 month after punch elevation ($p = 0.018$). The lesions showed improvement up to a maximum of 7 months. No serious adverse events were noticed during the follow up period. All patients were pleased with the results.

Conclusion:

We objectively evaluated the efficacy of punch elevation. When atrophic scars are resistant to laser therapy or other treatments, punch elevation offers a safe and beneficial treatment option.



Abstract N°: 4213

A remarkable 132-year history and up-to date clinical implication of *Cutibacterium acnes* and the sibling species

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Introduction & Objectives: ** More than 130 years have passed since *Cutibacterium acnes* (previously, *Propionibacterium acnes*), the most predominant bacterial species on the human skin, was discovered in acne pus in Germany by Prof. Paul Unna in 1891. Since then, observational knowledge has accumulated, but its pathogenicity on acne and other diseases is still not fully elucidated. The name changes of the species make researchers difficult to follow its history. This work aims to accurately follow the name changes of *C. acnes* and other *Cutibacterium* species and describe the history of these species, with special emphasis on following the hypotheses related to their unique pathogenesis to overview where are we now in *Cutibacterium* microbiology and to foresee the future.

Materials & Methods:

We thoroughly collected research items on *C. acnes* and the five sibling species (*Cutibacterium avidum*, *Cutibacterium granulosum*, *Cutibacterium modestum*, *Cutibacterium namnetense*, *Cutibacterium porci*), including early-1900s research articles, starting from 1900 Gilchrist et al. proposal of species "*Bacillus acnes*" (*C. acnes*) and 1908 proposal of "*Bacillus granuleux*" (*C. granulosum*), to the latest articles and summarized the history of the species. Then we extracted disease hypotheses on these species. For the newly described species whose hypotheses have not been shown yet, we extracted the information about what organ these were isolated. This work is partly based on the review article by the authors published in 2021.

Results:

C. acnes has three previous names, *Bacillus acnes* 1900, *Corynebacterium acnes* 1918, and *Propionibacterium acnes* 1946. The name changes were caused by the trends of bacterial taxonomy. When we carefully follow the original articles under these names, the long debates become apparent. Pathogenicity-related "friend or foe"-like debate started in 1911 after the isolation from the normal skin.

The quantitative analysis in 1950s showed the colony-forming unit of *C. acnes* increases in adolescent. Then the understanding of acne as a unique bacteria-related disease, with the observation that the cell number being only within several-fold in the lesions compared with comedones, gradually developed. The report of relationship between the resistance of the isolate from acne patients and the clinical effectiveness of the antibiotics in 1980s was the final step to prove its pathogenicity. Other species have their own habitats and have been isolated from the human skin, bone, and reproductive organs, except *C. porci*, which has only been isolated from swine feces.

Conclusion:

We are in the midst of growing understanding of acne, a unique bacteria-related disease, and other *Cutibacterium*-related diseases. The growth of the knowledge is not fast but steady.



Abstract N°: 4246

Efficacy of superoxidized solution in the treatment of inflammatory acne: preliminary results of a randomized clinical trial.

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Introduction & Objectives: Adverse effects of topical retinoids alone or in combination with antibiotics can cause the discontinuation of the treatment. Superoxidized solutions are electrochemically processed aqueous solutions manufactured from pure water and sodium chloride. The efficacy and tolerance of superoxidized solutions for the treatment of inflammatory acne were demonstrated in a clinical trial. Investigators compared the improvement in acne lesions in three groups of treatment: super oxidized solution (SOS), benzoyl peroxide (BP) and placebo. No difference was found between the SOS and BP when comparing the percentage of improvement. The aim of this study was to compare the efficacy of a SOS for the treatment of acne compared to the combination of retinoid and BP.

Materials & Methods: This was a parallel randomised controlled trial to assess the efficacy of a SOS. Adults with mild and moderate inflammatory acne were recruited in a dermatological centre. Participants with a hormonal cause of acne were excluded. The primary outcome was the reduction in the number of acne lesions. Sixty participants were randomly allocated to group 1 of SOS applied 2 times per day and group 2 of the combination of adapalene 0.1% and BP 2.5% once per day (at night). Both interventions were applied on the face and trunk during 12 weeks. Independent sample t tests were calculated to assess the changes in count of lesions between groups and Friedman test was used to compare the main outcomes at 4, 8 and 12 weeks in each group.

Results: Both groups of intervention were similar at baseline according to demographics and clinical characteristics. (Table 1). Four participants 1 in the group of SOS and 3 in the adapalene + BP discontinued the intervention due to adverse effects (local erythema and pain) after 2 to 3 weeks of intervention. The count of acne lesions decreased from baseline to 12 weeks in each group ($p < 0.05$). The median count of facial acne lesions at 12 weeks for group 1 vs. 2 were: 5 vs. 7 for open comedones, 6.5 vs. 5 for closed comedones, 5 vs. 4.5 for papules and 2 vs. 1.5 for pustules, without an statistically significant difference ($p > 0.05$).

Table 1. Baseline characteristics of the participants per group.

Characteristic	Group 1 (SOS) n=30 p50 (p25,p75)	Group 2 (Adapalene + BP) n=30 p50 (p25,p75)	p
Sex % (n)			
Female	56.7 (17)	56.7 (17)	1.0
Male	43.3 (13)	43.3 (13)	
Age in years	19.5 (18.75,21.25)	19 (18,22)	0.892
Facial acne lesions (count)			
Open comedones	13 (9.75, 16.25)	10.5 (6.75, 14.5)	0.175
Closed comedones	12 (7, 19)	11.5 (7.75, 21.25)	0.824
Papules	11 (7.75, 17.25)	8.5 (5.75, 14)	0.293
Pustules	4 (3,6)	4.5 (2.75, 10.25)	0.400
Trunk acne lesions (count)			
Open comedones	0 (0,2)	0 (0, 1.25)	0.886
Closed comedones	0 (0, 3.75)	0 (0, 4.25)	0.886
Papules	5 (2, 10.75)	5 (1, 13.75)	0.870
Pustules	1 (0,5)	0 (0, 4.25)	0.648
Quality of life (DLQI) score	3.5 (1.75, 6)	4 (2, 6)	0.704

Conclusion: In terms of reduction in the number of acne lesions, SOS has a similar effect than the one reached by the combination of adapalene + BP for the treatment of moderate facial acne. More participants in the retinoid group discontinued the intervention due to adverse effects. More studies with larger sample sizes are needed to assess the effect of SOS in non-inflammatory acne lesions. SOS could be considered an option to include in the treatment of mild and moderate acne.



Abstract N°: 4396**Unilateral acneiform eruption after Todd palsy**

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Introduction & Objectives:

Unilateral acne after facial palsy has been reported and its mechanism is still unknown. We aim to present a case of case of unilateral acneiform eruption after Todd's palsy.

Materials & Methods:

We report a case of a 68-year-old patient admitted on the emergency room with a history of labial commissure deviation associated with left unilateral weakness of the limbs after an episode of seizure. Computed tomographic (CT) did not show significant alterations, and brain magnetic resonance imaging (MRI) showed increased T2 signal, consistent with the seizure, concluding the diagnosis of Todd Paresis. He had a history of alcoholism and did not use continuous medications and had not used any after the convulsion. At the time of the hospital admission, the patient presented papules and pustules on the face *ipsilateral* to the palsy. The lesions were not follicular and serologies for infections were negative. The diagnosis made was a unilateral acneiform eruption with spontaneous improvement of the condition 5 days after.

Results:

Unilateral acne is a rare condition, and has been associated with facial palsy since 1944, and until now, there are few cases reported. Other conditions such as rosacea, seborrheic dermatitis and demodicosis have also been described after facial paresis. It has been confirmed that a facial nerve lesion may influence the rate of sebum excretion. The sebum excretion rate of paretic side was 1.87 times higher compared to normal side in an experimental study and a literature review showed that acne and skin changes were significant on the side of facial paralysis in 16,67% of the patients. However, the mechanism in which the lesions appear and why there are located on the paralyzed side is still uncertain. Some cases attributed the appearance of the acne due to steroid therapy and vitamin ingestion, however, in our case there was no use of medication before the onset of the condition. Also, the hypothesis that the patient scratch more the paralyzed side has been postulated. In our case there were no signs of manipulation of the lesions, contradicting this theory as well. Other possible mechanism is the lack of muscular movement causing an outflow of sebum, and possibly decreases the local skin temperature. Also, the damage of nerve fibers triggering the neuropeptides secretion and activating the immune system causing an inflammatory disease was described as hypothesis** in a previous study, which reported the appearance of rosacea at the site of previous herpes zoster.

Conclusion:

Although we do not know the exact mechanism, we conclude that the paralysis itself can be the cause of an acneiform eruption since in our case there was no use of corticosteroids or other drugs. As far as we know, this is the first case of unilateral acneiform eruption after Todd's palsy.

Abstract N°: 4407**Gastrointestinal symptoms in patients with acne, an assessment of the gut-skin axis**

David Castillo Molina^{*1}, Jesus Daniel Fierro Lozada¹, Angie Marcela Arboleda-Roca¹, Juan Sebastian Puentes-Ochoa¹, Ana María Thorné-Vélez¹, Maegan Klyn²

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Introduction & Objectives:

Acne, a complex inflammatory skin disease, is believed to be significantly influenced by the microbiome. Recent studies in acne have shown changes in the intestinal microbiota such as a decrease in actinobacteria and a slight increase in proteobacteria. The clinical suspicion of intestinal dysbiosis can arise when there are changes in bowel patterns, excessive flatulence, abdominal discomfort, and/or swelling in the abdominal region. Considering the idea that the gut microbiome is altered in patients with acne, the aim of our study is to describe the frequency of dysbiosis-related gastrointestinal symptoms (GIS) in a population from Bogota, Colombia.

Materials & Methods:

A retrospective cross-sectional observational study was performed from June 2020 to December 2022. The variables were obtained from the clinical records of patients diagnosed with acne who attended a dermatologic center in Bogota, Colombia. Univariate statistical analysis was performed by calculating measures of central tendency and dispersion for quantitative variables. Categorical variables were presented with absolute frequencies and proportions. Standard deviation estimates with a $p < 0.05$ were used. Microsoft Excel and STATA were used for data collection and analysis, respectively.

Results:

Of 619 patients, 405 (65.53%) were female. The mean age was 21.6 years. The age group with the highest presentation of GIS was 12 - 24 years with 416 patients (56.31%). GIS were present in 383 patients, 61.97% (SD 0.58 - 0.66), of which 129 patients (20.87%) had one symptom, 111 patients (17.96%) had two symptoms, with abdominal pain being the most frequent with 233 cases (37.70%; SD 0.34 - 0.42), followed by alterations in bowel habit present in 225 patients (36.41; SD 0.33 - 0.40), abdominal distension in 220 patients 35.6% (SD 0.32 - 0.39), flatulence in 218 patients 35.28% (SD 0.32-0.39), and dyspepsia in 170 patients 27.51% (SD 0.24-0.31). Regarding comorbidities, 112 (18.09%) patients had a diagnosed gastrointestinal disease, and the most common was gastritis at 17.96%.

Conclusion:

We found that women were more frequently affected by acne and gastrointestinal disorders. As dysbiosis is linked to poor eating habits, and given that the majority of patients in the sample were in the 12 to 24-year age range, future prospective studies should evaluate the impact of diet from early years of life and the risk of developing gastrointestinal disorders and inflammatory dermatoses such as acne. Additionally, it was evident that gastrointestinal symptoms suggestive of dysbiosis were frequent, therefore, interdisciplinary management should be considered as part of acne treatment. Approximately one out of 5 patients had some gastrointestinal comorbidity, however, we believe these values could be higher, likely due to underdiagnosis. We believe that it is necessary to carry out prospective studies that document whether the onset of symptoms precedes the gastrointestinal and/or skin disease.

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Abstract N°: 4482

Microneedling with Topical Insulin versus Microneedling with Placebo in the Treatment of Postacne Atrophic Scars

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Introduction & Objectives:

Acne scars treatment is difficult and challenging because of the variety in morphology and the limited ability of the available treatment options to improve the scars. Microneedling is a minimally invasive technique that causes micro-injuries to the dermis that induce collagen synthesis. MN is often combined with a growth factor promotor for enhanced efficacy. Transdermal insulin delivery is of interest in the field of wound repair, particularly owing to its low cost relative to other growth factors. Topical insulin is under investigation for treatment of atrophic acne scars. For the optimal results, a tailored plan for each patient should be created specifically.

Objective: To compare the efficacy and safety of combined Microneedling with topical insulin versus Microneedling with placebo (topical saline) in the treatment of atrophic acne scars.

Materials & Methods:

Twenty-one patients with bilateral atrophic acne scars were randomized and subjected to a split-face treatment. Microneedling using derma pen was done on both sides of the face, followed by application of insulin on one side of the face and saline (placebo) on the other side. Each patient received 4 sessions with 3 weeks interval and followed up after one month of the last session. Evaluation of response was done baseline and after 1 month of sessions using GSGS of Goodman & Baron and Lipper & Perez scores, patient reported acne scar improvement using a four-point scale, patient satisfaction and FASQoL.

Results:

Both therapeutic modalities yielded statistically significant improvement of atrophic acne Using topical insulin showed better improvement however, there was no significant difference neither between final GSGS in between both sides nor the final Lipper & Perez score in between both sides. Regarding Patient reported scar improvement and patient's satisfaction grades there was a significant improvement after both treatment modalities with insignificant differences in between both sides. Also there was a statistically significant improvement in the FASQoL of the patients after treatment. Correlations were done between improvement and different variables such as gender, age, duration of scars, skin phototype, sun exposure and family history. The only significant correlation was between duration of scars and FASQoL, denoting that patients with longer duration of scars perceive the impact of therapy more than the counterpart with shorter duration.

Conclusion:

Using topical insulin combined with microneedling may have a value in improving atrophic acne scars but not statistically significant in comparison to microneedling monotherapy, this needs further evaluation and investigation using different delivery systems, insulin formulations and assessment modalities.

Abstract N°: 4487

Hidradenitis suppurative: Is there really a place for antibiotics?

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Introduction & Objectives:

Hidradenitis suppurative (HS) is a chronic inflammatory skin disease characterized by recurrent inflammatory lesions leading to fistulization and scarring.

Current treatment options are limited. Antibiotics have been the go-to treatment for HS, but the efficacy and safety of this approach remain controversial.

The aim of our work is to evaluate the efficacy of antibiotics in the treatment of hidradenitis suppurative and factors of non-response.

Materials & Methods:

We conducted a retrospective cross-sectional study between 2011 and 2023 for a period of 12 years. We included all patients followed for hidradenitis suppurative in our department. Patients who have been lost to follow-up were excluded.

Results:

Among fifty-seven patients followed for a hidradenitis suppurative, fifty-one patients were included. Thirty-five patients were male (70%), and the median age was 43 years [10-76]. The median duration of the disease was 11.82 years [6-37]. Patients had on average two affected areas [1-7], with a predominance of intergluteal cleft (64%), 28 patients (54.9%) had a Hurley stage III. Fourteen patients received two antibiotics (28%), 14 received one (28%), 12 patients received three (24%) and 10 patients received more than three antibiotics (20%). Doxycycline was the most commonly used molecule (58%), followed by metronidazole (48%), ciprofloxacin (48%), cotrimoxazole (32%), ceftriaxone (28%), gentamicin (16%), and the combination of amoxicillin and clavulanic acid (6%). In association, 7 patients benefited from surgical treatment and 9 patients from laser hair removal. All patients benefited from smoking cessation. Thirty-three patients (66%) were non-compliant and were taking antibiotics randomly and at varying posology. Antibiotic use lasted on average 2 years with a standard deviation of 0.5. In terms of outcome, 52% of patients were stationary, 30% were aggravated and 18% were in remission. The statistically significant factors of poor response to antibiotics were the use of metronidazole ($p=0.046$, OR=3.36), gentamicin ($p=0.058$, OR=1.78), and poor compliance ($p=0.048$, OR=1.014). The association between smoking and obesity was not significant in our study.

Conclusion:

Although hidradenitis suppurative is not infectious, antibiotics are widely used regardless of the Hurley stage.

Cyclins are the most frequently used. Gentamicin has been used in a few studies without evidence of efficacy. Metronidazole has been shown to be effective in hidradenitis suppurative but it is most often used in combination with other antibiotics and in Hurley stages I-II.

Antibiotics are used on a long-term basis due to poor compliance of patients, refusal of surgical treatment which

is often disabling, and lack of reimbursed therapeutic alternatives. This can lead to serious side effects and the development of antibiotic resistance hence the importance of combining them with other therapeutic modalities such as biotherapy, surgery, and laser to improve management and avoid adverse effects. Smoking cessation and adopting a healthy lifestyle are essentials.

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Abstract N°: 4554**Cardiovascular risk stratification in Hidradenitis Suppurativa: Systemic immune-inflammation index and neutrophil-lymphocyte ratio. A cross-sectional study.**

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Introduction & Objectives:

Hidradenitis Suppurativa (HS) is a chronic inflammatory disease of the hair follicle that has previously been associated with a higher cardiovascular risk (CVR). Although different methods have been described for CVR stratification in HS, there is little evidence about the role of hemogram indexes in CVR in HS. Given its potential convenience, the aim of this study is to assess the role of hemogram indexes systemic immune-inflammation index (SII) and neutrophil-lymphocyte ratio (NLR) in CVR stratification for HS patients.

Materials & Methods:

A cross-sectional study was performed to assess the role of SII and NLR in CVR stratification in patients suffering from severe HS who were candidates to biologic therapy. SII, NLR, carotid intima-media thickness and other clinical and biochemical CVR factors were assessed before the start of the treatment.

Results:

Fifty patients with severe HS were included. Male:female ratio was 3:2, and mean IHS4 score was 21.6. After multivariate analysis, SII correlated with higher values of systolic blood pressure, metabolic syndrome and higher risk of insulin resistance ($p < 0.05$). NLR was associated with insulin resistance ($p < 0.05$). These associations were independent of age, sex, body mass index, severity of the disease and tobacco consumption.

Conclusion:

The implementation of SII and NLR in daily practice may be of benefit for identifying HS patients at higher risk of high blood pressure, insulin resistance or metabolic syndrome. Since these indexes are simple to calculate, they could be used as a screening tool in HS specific units.



Abstract N°: 4566**Acne scars, a family issue in a Latin American population?**

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Introduction & Objectives:

Acne vulgaris (AV) is a multifactorial chronic inflammatory disease, which is associated with genetic, hormonal and emotional factors. The development of scars is associated with the delay in the treatment, the degree of inflammation, and subtype, duration and severity of AV. Family acne history as a risk factor for the development of acne scars (AS) is still controversial, particularly among the occidental population. AS are a very common sequelae in these patients, being atrophic scars the most frequent AS subtype, followed by hypertrophic and keloid scars. Additionally the most common atrophic scars are ice pick, followed by boxcar and rolling. Treatment often requires a multimodal and early approach with combination therapies. In this investigation, we seek to determine the frequency of personal and family scarring history with scarring acne presentation.

Materials & Methods:

We performed a cross-sectional study from April 2022 to April 2023, in a dermatological center of Bogotá-Colombia. Patients with a diagnosis of AV were included; consent was requested from the parents/guardians of the minor patients included. Data was collected from medical records regarding sex, age, family history of AS and scar subtype. Data was gathered with Microsoft Excel and analyzed with Epi Info. Absolute and relative frequencies were estimated.

Results:

We analyzed 454 patients, 296 were women (65.19%). Mean age was 19.56 years. More than half of the sample had AS (52.64% n=239). The most frequent sequelae was hyperpigmentation with 68.94% (n=313) of the patients, followed by icepick scars in 22.91% (n=104), rolling with 13.44% (n=61), boxcar with 10.57% (n=48) and hypertrophic/keloid with 5.73% (n=26). Almost half of our patients with AS had a family history of AS (45.15%, n=177), being the father the most frequent relative among this category with 36.00% (n=81), followed closely by the mother with 34.22% (n=77) and siblings with 29.77% (n=67). Family history of AS and the development of AS had an OR of 2,01 with IC (1,12-3,6). On the other hand only 21.33% (n=48) of patients with no AS had a family history of AS. Regarding the type of scar among the patients with family history of AS, the most frequent scar subtype was icepick with 20.00% of the sample (n=93), followed by boxcar with 12.77% (n=58) and rolling with 9.47% (n=43).

Conclusion:

Scarring is a common complication among AV patients in our population. As previously reported in the literature, icepick scars were the most common subtype presented in our study. We found a significant association between family history of AS and the presence of AS in our Latin American population. There is still controversy regarding the family history of AS as a risk factor for its development, particularly in the western population. Studies with a bigger sample should be performed to inquire about early treatment and strict follow-up in patients with positive AS family history.

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Abstract N°: 4577

Biotechnology from Germany: The hidradenitis suppurativa 3D-SeboSkinModel

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Introduction & Objectives: Dysregulated epithelial differentiation, leading to occlusion of the hair follicle, and chronic inflammation with a perifollicular lympho-histiocytic infiltrate are the pivotal pathogenetic events in hidradenitis suppurativa (HS). However, knowledge of the exact HS pathogenesis requires further experimental research. Despite the rapid development in HS research and a large number of ongoing clinical trials, the lack of definitive outcome measures and of confirmative preclinical studies have led to the discontinuation of some treatment evaluation studies. HS is a solely human disease and therefore, the search for preclinical human models has been given priority. The 3D-SeboSkin model, a co-culture of human skin explants with human SZ95 sebocytes as feeder layer, has shown to prevent the rapid degeneration of human skin in culture.

Materials & Methods: The 3D-SeboSkin technology was applied to maintain explants of involved and uninvolved skin of HS patients ex vivo for 3 days. Detection of differential expression of previously detected HS biomarkers was performed by immunohistochemistry in a group of female patients (n=9) and has been validated for HS preclinical studies.

Results: The application of the 3D-SeboSkin model preserved the structural integrity of lesional and perilesional HS skin ex vivo. The HS 3D-SeboSkin setting maintained the differential expression and pattern of several HS biomarkers (S100A9, KRT16, SERPINB3, HBD2) in epidermal and dermal tissue and the appendages. In a further step, HS-involved skin explants of female and male patients (n=12) have been introduced in the HS 3D-SeboSkin model to characterize cellular and molecular effects of adalimumab, an approved tumor necrosis factor- α inhibitor. Cytokine production and secretion, autophagy-related proteins and the NF κ B pathway proteins were assessed. Adalimumab was shown to target inflammatory cells present in HS lesions, inducing a prominent anti-inflammatory response (Fig. 1), and contribute to tissue regeneration through a wound healing mechanism. The compound failed to modify abnormal epithelial cell differentiation present in the HS lesions.

Conclusion: We have validated HS 3DSeboSkin as a reproducible, human model, which is appropriate for preclinical lesional and perilesional HS skin studies ex vivo. Using the HS 3D-SeboSkin model in ex vivo studies prior to clinical trials could increase the success rate of therapeutic candidates and minimize HS drug development costs.

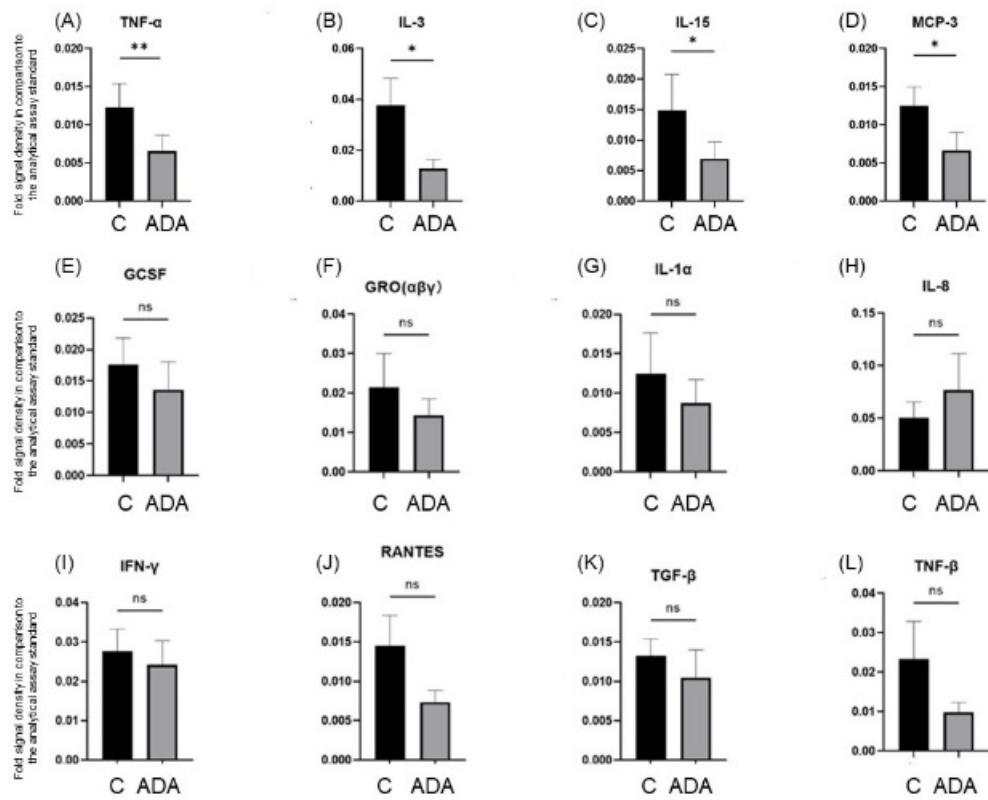


Fig. 1. Comparative expression of levels of TNF- α (A), IL-3 (B), IL-15 (C), MCP-3 (D), GCSF (E), GRO ($\alpha\beta\gamma$) (F), IL-1 α (G), IL-8 (H), IFN- γ (I), RANTES (J), TGF- β (K), and TNF- β (L) in HS lesional skin of the control group (C) and the adalimumab-treated group (ADA) maintained for 3 days in the HS 3D-SeboSkin model. Comparisons were performed against the analytical assay standard. ** = $p < 0.01$, * = $p < 0.05$, ns = not significant.



Abstract N°: 4724

The Impact of Psychological Stress on Acne

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Introduction & Objectives:

Acne vulgaris is a very common skin disorder in adolescents, but also adults, affecting more than 85% of individuals.

The high incidence of acne vulgaris is related to multiple exposure factors that contribute to the pathogenesis of acne, such as diet, pollutants, lifestyle, and psychosocial factors, including psychological stress.

Our study aims to investigate the impact of psychological stress on acne exacerbation independently of, or in conjunction with, other lifestyle factors in medical students.

Materials & Methods:

A prospective cohort study, on a sample of volunteer medical students, realized in two periods: a high stress and a low stress

Acne vulgaris severity and stress degree were assessed in all participants during both periods to evaluate the correlation between stress level and acne severity.

Results:

We have collected 80 patients, with a sex ratio M/F of 0.56, and a mean age of 21.54 years. 20 patients had a psychiatric history of depression, anxiety or OCD.

78.75% of our patients reported the onset of acne during adolescence. 50% reported an acne flare-up following stress, while 65% reported an aggravation of preexisting lesions.

Subjects had a higher mean score of acne severity and mean perceived stress scale score during examination periods.

The correlation between acne and stress was statistically significant, before and after adjustment for meal and sleep quality, with a $p < 0.001$.

We also found a statistically significant correlation between perceived stress worsening and clinical acne exacerbation between the two periods.

Conclusion:

There is increasing evidence that psychological stress is an important factor in the pathogenesis of acne and should be actively managed as part of a comprehensive and holistic treatment plan.

Despite this significant association, few studies have objectively investigated the correlation between acne severity and perceived stress in students in two distinct periods, our study being the third of its kind.

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Abstract N°: 4731

Knowledge, prevalence of acne and its impact on the quality of life among high school students in the city of Agadir, Morocco

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Introduction & Objectives:

Because of its conspicuous nature, acne is a source of dissatisfaction among adolescents who tend to be more susceptible to mood disorders. Its psychological impact can affect self-esteem, quality of life and school performance, thus requiring increased vigilance when dealing with this age group.

Materials & Methods:

We conducted a cross-sectional study with descriptive and analytical aims using an anonymous questionnaire among high school students in the city of Agadir, Morocco. The aim was to evaluate the prevalence and knowledge of acne in this population, and to evaluate the psychological impact of this pathology on the quality of life and school performance. The statistical analysis was carried out using SPSS software. Associations for which the p-value was less than 0.05 were considered statistically significant.

Results:

A total of 327 responses were collected. The sex ratio M/F was 0.31/1. 45.6% of the participants were over 17 years old. Of the high school students included, 50.5% were in senior year. A total of 96% of the students had no previous medical history. Concerning knowledge about acne, only 41.3% of the participants were actually aware of this pathology, among whom 61.8% assumed it was genetic and 58.1% said it was due to hormonal imbalance, while 5.5% claimed having no idea about what acne is. In total, 64.5% considered acne as a condition that regresses with medication and 16.8% believed that it regresses on its own over time without treatment. 0.6% of participants said that it is incurable.

Regarding the prevalence of acne in our study, 82.9% of the participants responded that they had acne mainly located on the face (97.9%), followed by the back and shoulders (40.4%). Among high school students with acne, 77.9% consulted a doctor while 30.5% looked for solutions on social media.

Acne sufferers exposed to stress, sun and unbalanced diet seemed to have a greater chance of developing moderate to severe acne ($p < 0.001$). Regarding treatment, 27% of the participants were taking a combination of oral, topical, cosmetic and natural home remedies, of which 19.9% reported minimal improvement in their acne and only 6.8% reported a clear improvement ($p < 0.01$), compared to 16.9% who were not taking oral treatment, of which 11.1% reported minimal improvement and 5.7% a clear improvement ($p < 0.01$). In terms of psychosocial impact, females appeared to be more affected ($p < 0.001$); self-esteem and social relationships were more affected in participants with moderate to severe acne than in those with mild acne ($p < 0.001$). High school students with severe acne had greater negative academic impact ($p < 0.001$) and were more likely to experience anxiety and depression ($p < 0.001$).

Conclusion:

Acne is common in our high school students and is as common as is reported in other parts of the world. Its psychosocial impact on adolescents demands a proper investigation in order to improve their self-esteem, quality

of life and school performance. Thus, educational campaigns targeting this age group and primary care providers need to be mounted to address the issues raised by our study.

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Abstract N°: 4958**Differential Single Cell RNA Sequencing Analysis of Lesional Skin Tissue in Hidradenitis Suppurativa: Comparing Anti-TNF Biologics-Treated and Non-Treated Patients**Wei-Wen Yu*¹, Joy Barrett², Meng-Ju Lin², Ernest Chui², Juliana Remark², Catherine Lu²¹Kaohsiung Veterans General Hospital, Department of Dermatology, Kaohsiung, Taiwan, ²New York University Grossman School of Medicine, The Hansjörg Wyss Department of Plastic Surgery, New York, United States**Introduction & Objectives:**

Hidradenitis Suppurativa (HS) is a chronic inflammatory skin disease characterized by painful nodules, abscesses, and sinus tracts primarily affecting the apocrine gland-bearing areas of the body. The pathogenesis of HS is poorly understood, and effective treatment options are limited. While TNF-targeting antibodies have shown promise as biologic therapies for HS, the induced cellular and molecular changes in HS patients have not been extensively studied. Our objective was to use single cell RNA sequencing (scRNA-seq) to compare the cellular profiles of lesional skin tissue between HS patients who received anti-TNF biologics and those who did not, aiming to uncover associated cellular alterations and gain insights into therapeutic mechanisms.

Materials & Methods:

A total of eight lesional skin samples were included in this study, comprising four samples from HS patients who underwent anti-TNF biologics and four samples from HS patients who did not receive biologic treatment. Single-cell RNA sequencing was performed to comprehensively analyze the gene expression profiles at the single-cell level. In four lesional samples, the transcriptomes were further analyzed for B-cell receptor (BCR) sequences. The subsequent data analysis included differential gene expression analysis, functional annotation, and characterization of the BCR repertoires.

Results:

By employing scRNA-seq, we made several noteworthy observations in the lesional skin tissue of HS patients who underwent anti-TNF biologics therapy. We identified an expansion of T-regulatory (T-reg) cells and a reduction in *IL17A* expression within the T-cells. The examination of B-cells revealed a significant decrease in the number of small and medium-sized BCR clones in the lesional skin tissue of biologics-treated patients. Our analysis also unveiled the induction of *IL10* expression in myeloid cells. Additionally, we observed a down regulation of the *CXCL13* in fibroblasts derived from biologics-treated patients.

Conclusion:

Our scRNA-seq analysis of lesional skin tissue in HS patients revealed distinct cellular alterations associated with anti-TNF treatment. We observed an expansion of T-reg cells, which potentially contribute to the suppression of Th17 cells, a key player in HS pathogenesis. The observed decrease in BCR clonal diversity indicates a specific impact on clonal expansion and the production of selective antibodies. The induction of *IL10* expression in myeloid cells signifies the immunomodulatory effect of biologics therapy. The down regulation of *CXCL13* in lesional fibroblasts of biologics-treated patients indicates a modulation of fibroblast activity, potentially reducing immune cell recruitment and inflammation. Collectively, our findings provide valuable insights into the cellular changes associated with biologics treatment in HS, highlighting potential therapeutic targets and mechanisms underlying disease pathology. Further investigations are warranted to validate and expand upon these observations, potentially leading to improved treatment strategies for HS patients.

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Abstract N°: 4992**Effects of secukinumab on HiSCR 75, HiSCR 90 and HiSCR 100 endpoints in patients with moderate to severe hidradenitis suppurativa: A post hoc analysis of the SUNSHINE and SUNRISE phase 3 trials**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic inflammatory skin condition characterised by deep and painful nodules, abscesses and tunnels.¹ Secukinumab (SEC), a fully human, monoclonal antibody that selectively inhibits interleukin-17A, has previously demonstrated sustained efficacy with a favourable safety profile in patients with moderate to severe HS.² The HS clinical response (HiSCR), defined as a $\geq 50\%$ decrease in abscess and inflammatory nodule [AN] count with no increase in the number of abscesses and/or draining tunnels, is frequently used as the primary endpoint in HS clinical trials.^{2,3} However, the HiSCR has demonstrated high placebo (PBO) response rates;^{4,5} to minimise these rates, high-impact efficacy endpoints have been proposed. Herein, the treatment effects of SEC on high-impact efficacy endpoints in patients with moderate to severe HS from the SUNSHINE and SUNRISE trials are reported.

Materials & Methods:

SUNSHINE (NCT03713619) and SUNRISE (NCT03713632) are identical multicentre, phase 3 clinical trials of SEC in patients with moderate to severe HS. Patients were randomised to receive s.c. SEC 300 mg every 2 (SECQ2W) or 4 weeks (SECQ4W), or PBO in a 1:1:1 ratio between week 0 and 16. Patients receiving PBO were switched to SECQ2W or SECQ4W, while patients receiving SECQ2W or SECQ4W remained on the same treatment from weeks 16 to 52. The high-impact efficacy endpoints included HiSCR 75, HiSCR 90, and HiSCR 100, representing a $\geq 75\%$, $\geq 90\%$, and 100% decrease in AN count, respectively, with no increase in the number of abscesses and/or draining tunnels versus baseline. Data from week 0 to 16 are based on imputed data, and data from week 16 to 52 are based on observed data. Sustainability of response was assessed by investigating the proportion of patients who achieved a HiSCR 75/90/100 response at week 16, and at week 52 in patients with available response data, based on observed data at both timepoints.

Results:

Overall, 1084 patients were enrolled in SUNSHINE and SUNRISE; mean (standard deviation) age was 36.2 (11.5) years, and 56.3% were female. At week 16, a numerically greater proportion of patients treated with SEC achieved HiSCR 75 versus PBO in SUNSHINE (26.4% [SECQ2W]; 22.6% [SECQ4W]; 16.5% [PBO]) and SUNRISE (23.2% [SECQ2W]; 30.6% [SECQ4W]; 13.5% [PBO]). Similarly, at week 16, a numerically greater proportion of patients treated with SEC achieved HiSCR 90 and HiSCR 100 versus PBO in SUNSHINE (HiSCR90: 14.3% [SECQ2W]; 13.5% [SECQ4W]; 7.1% [PBO]; HiSCR 100: 12.0% [SECQ2W]; 10.4% [SECQ4W]; 4.8% [PBO]) and SUNRISE (HiSCR90: 11.6% [SECQ2W]; 16.0% [SECQ4W]; 5.8% [PBO]; HiSCR100: 7.5% [SECQ2W]; 8.1% [SECQ4W]; 4.6% [PBO]). Response rates for high-impact efficacy endpoints seen at week 16 were sustained, with a trend for improvement, to week 52 in both SEC arms (**Table 1**). The majority of patients achieving high-impact efficacy endpoint responses at week 16 maintained this response at week 52 (**Figure 1**).

Conclusion:

SEC treatment provided better HiSCR 75, HiSCR 90, and HiSCR 100 versus PBO at week 16; these responses were sustained with a trend for improvement to week 52, highlighting the long-term benefits of SEC treatment in patients with moderate to severe HS.

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Figure 1: Proportion of patients (%) in the secukinumab arms of the SUNSHINE and SUNRISE trials achieving (A) HiSCR 75, (B) HiSCR 90 and (C) HiSCR 100 at both week 16 and week 52 based on observed data at both visits.
 HiSCR, hidradenitis suppurativa clinical response; n, number of responders at week 16; Q2W, every 2 weeks; Q4W, every 4 weeks; SEC, secukinumab 300mg.

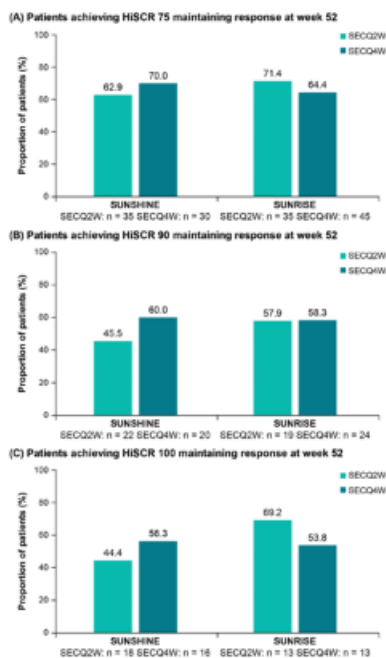


Table 1: Patient response rates in the SUNSHINE and SUNRISE trials for HiSCR 75, HiSCR 90 and HiSCR 100 at week 16 and week 52

Patients achieving <u>HiSCR 75</u> at week 16 (%)				Patients achieving <u>HiSCR 75</u> at week 52 (%)			
	SECQ2W	SECQ4W	PBO	SECQ2W	SECQ4W	PBO- SECQ2W	PBO- SECQ4W
SUNSHINE	26.4	22.6	16.5	41.9	37.5	37.9	36.6
SUNRISE	23.2	30.6	13.5	43.8	43.3	46.9	32.3
Patients achieving <u>HiSCR 90</u> at week 16 (%)				Patients achieving <u>HiSCR 90</u> at week 52 (%)			
	SECQ2W	SECQ4W	PBO	SECQ2W	SECQ4W	PBO- SECQ2W	PBO- SECQ4W
SUNSHINE	14.3	13.5	7.1	24.8	25.0	20.7	16.9
SUNRISE	11.6	16.0	5.8	26.3	26.8	25.0	15.4
Patients achieving <u>HiSCR 100</u> at week 16 (%)				Patients achieving <u>HiSCR 100</u> at week 52 (%)			
	SECQ2W	SECQ4W	PBO	SECQ2W	SECQ4W	PBO- SECQ2W	PBO- SECQ4W
SUNSHINE	12.0	10.4	4.8	17.1	18.0	17.2	12.7
SUNRISE	7.5	8.1	4.6	18.2	19.7	20.3	9.2

HiSCR, hidradenitis suppurativa clinical response; PBO, placebo; Q2W, every 2 weeks; Q4W, every 4 weeks; SEC, secukinumab 300mg.

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Abstract N°: 5020**The safety and efficacy of concurrent isotretinoin and erbium: YAG laser regimen for adolescent acne scars**Gozde Simsek*¹, Aysenur Botsali¹, Melike Kececi¹¹Gülhane Eğitim ve Araştırma Hastanesi, Dermatology and Venereology, Ankara, Türkiye**The safety and efficacy of concurrent isotretinoin and erbium: YAG laser regimen for adolescent acne scars****Introduction & Objectives:**

The concerns about the safety of laser procedures in patients receiving isotretinoin have largely disappeared within the last decade. Furthermore, recent studies suggested combining fractional ablative lasers with isotretinoin might potentiate the therapeutic effects for acne scars.

This study evaluated the safety and efficacy of 2.940-nm Erbium: YAG laser treatment for atrophic acne scars in adolescent patients receiving isotretinoin treatment.

Materials & Methods:

The authors retrospectively reviewed the records of 8 patients (M/F: 4/4) aged 16-23 years undergoing erbium: YAG laser treatment with isotretinoin between November 2022 and May 2023.

Three dermatologists assessed the baseline features of acne scars and treatment results based on standardized photographs captured before treatment and at follow-up appointments extracted from the clinical photographic archive along with Goodman Baron's Global Qualitative Scar Grading in medical records. Patient satisfaction scores were recorded on a 5-point Likert satisfaction scale. Patient-reported side effects were also noted.

Results:

The patients received either daily low-dose (0.2-0.3 mg/day) (n=5) or intermittent (2 days/week) (n=3) isotretinoin treatment. The median number of laser sessions was 5.5 (3-6). At the 3rd month control, six patients showed excellent (n=3) to very good (n=3) improvement compared to their baseline scores. Goodman Baron's Global Qualitative Scar Grading was similar for the remaining two cases. Three patients were very satisfied, and five were satisfied with their treatment. Three patients received injectable platelet-rich fibrin (i-PRF) after the laser sessions and reported the shortening of erythema compared to their sessions without i-PRF. The patients didn't experience a deterioration in scar appearance nor prolonged erythema and postinflammatory hyperpigmentation during the follow-up period.

Conclusion:

The combination therapy of low-dose isotretinoin and Erbium: YAG 2.940 nm laser was considered safe and effective for treating acne scars. The implementation of i-PRF in this treatment led to better patient comfort.



Abstract N°: 5082**Evaluation of risk of formation of atrophic acne scars during acne treatment with trifarotene 50µg/g cream versus vehicle cream: Results from a phase 4, randomised, double-blind, split-face, vehicle-controlled clinical study (START)**

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Introduction & Objectives: Facial atrophic acne scarring is a sequela of acne and effective treatment requires an understanding of appropriate treatments for acne scars. Efficacy of topical retinoids for treatment of primary acne lesions is well documented; however, evidence in alleviating atrophic acne scars is limited. This study assessed the effect of trifarotene 50µg/g cream in subjects with facial acne and atrophic acne scars (NCT04856904).

Materials & Methods: In this phase 4, multicentre, double-blind study, subjects (age: 17-34 years, N=121) with moderate-to-severe facial acne (Investigator's Global Assessment [IGA] score 3 or 4, ≥ 20 inflammatory lesions and ≥ 10 atrophic acne scars on each side of face) were treated with either trifarotene 50µg/g or vehicle cream once daily for 24 weeks in a randomised split-face manner. Additional skin-care regimen (gentle skin cleanser, oil-absorbing moisturiser with sun protection factor [SPF]30 and moisturiser lotion) was advised. The primary endpoint was absolute change from baseline in atrophic acne scar count at Week (W) 24. Other endpoints included absolute change in the total atrophic acne scar count at W20; Scar Global assessment (SGA) and IGA success rates (score 1: 'almost clear' or 0: 'clear' and ≥ 2 -grade improvement from baseline), total lesion count, inflammatory lesion count at W24.

Results: The primary and all other endpoints were met. At W24, a significantly greater reduction in the mean absolute change from baseline in the total atrophic scar count was noted in the trifarotene- vs vehicle-treated area (-5.9 vs -2.7; $p < 0.0001$) with significant reduction noted as early as W2 (-1.5 vs -0.7; $p = 0.0072$) and progressive improvement through W20 (-5.0 vs -2.5; $p < 0.0001$). The SGA success rate was higher in the trifarotene- than vehicle-treated area at W12 (14.9% vs 5.0%), which progressively improved through W24 (31.3% vs 8.1%). At W24, trifarotene had a significantly higher ($p < 0.0001$) IGA success rate (63.6% vs 31.3%) and mean percent change in the total (70% vs 45%) and inflammatory (76% vs 48%) lesion count than vehicle. Overall, a higher proportion of subjects were 'very satisfied' and would 'consider the treatment again' with trifarotene (91.9%) than vehicle (82.8%). The incidence of treatment-emergent adverse events was 5.8% (trifarotene) and 2.5% (vehicle); most common ($> 1\%$) was skin tightness (1.7% vs 0.8%) and all events were mild-to-moderate in severity.

Conclusion: Trifarotene was effective and well tolerated in treating facial acne and reducing atrophic acne scars.

Abstract N°: 5102**Patient experiences in hidradenitis suppurativa: Conceptual model and review of patient-reported outcome measures**

Ella Brookes¹, Laurence Lucats², Marieke Krol³, Samantha Wratten³, Nuzhat Afroz³, Benoit Arnould²

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Introduction & Objectives: Symptoms of hidradenitis suppurativa (HS) negatively affect patients' health-related quality of life. The aim of this review was to identify symptoms and their impacts experienced by patients with HS, develop a conceptual model (CM) and evaluate available patient-reported outcome (PRO) measures for appropriateness for inclusion in HS clinical studies.

Materials & Methods: A landscape assessment was conducted in 2021 and a targeted top-up review was performed in March 2022 using targeted literature reviews (TLRs) to characterize the patient experience of HS and to identify through database searches PROs used in recent HS clinical trials and associated label claims of HS products. Results from the TLR informed the development of a preliminary CM of HS. Concepts from the CM were mapped to selected PROs and appropriateness of selected PROs for HS populations was evaluated via a gap analysis.

Results: 28 symptoms and 73 health-related quality of life (HRQoL) impacts of HS were identified from 13 qualitative studies. The most frequently reported symptoms were pain, flares, fatigue and disrupted sleep, itchy skin, bad smells/odors and ruptured boils/drainage and scarring. The most frequently reported impacts were difficulty sitting/walking/climbing stairs, social withdrawal, depression, isolation/loneliness, anxiousness and fear of rejection, self-esteem/self-worth, difficulty playing sports/exercising and work/school attendance. The impacts of HS were grouped into nine categories: 'psychosocial/psychological functioning', 'social/family functioning', 'physical functioning', 'body image/self-care/clothing', 'ADL/leisure activities', 'sexual functioning and intimate relationships', 'work/school functioning', 'cognition', and 'role function' (i.e., childcare). Of the 123 Clinical Outcome Assessments (COA) identified, five PROs were selected for in-depth review of measurement properties and gap analysis based on being disease specific, having evidence of use in regulatory label claims, or as HS clinical trial endpoints. PROs assessing solely pain were not selected due to lack of consistency in their use within HS clinical trials and limited availability of published evidence. The HS Symptom Diary (HSSD) covered eight of the most commonly reported HS symptoms, the four other PROs; HS Quality of Life (HiSQoL), Dermatology Life Quality Index, (DLQI), HS Burden of Disease (HSBOD) and Hidradenitis Suppurativa Quality of Life-24 (HSQoL-24) had limited coverage of symptoms but in contrast to HSSD also covered QoL impacts. The HSSD and HiSQoL had sufficient evidence for content validity, however gaps were identified in the DLQI, HSBOD and HSQoL-24. Published evidence of the psychometric properties of all five PROs ranged from weak to medium, requiring further evidence.

Conclusion: Based on the CM and PRO review, the HSSD and HiSQoL appear appropriate in assessing the patient experience of HS, however there are still some gaps in conceptual coverage, particularly with respect to skin pain and HS impact on HRQoL. Further work is needed to develop PROs that will capture the wide range of symptoms and impacts experienced by HS patients and better understand the burden of disease and to guide the development of new treatment options.



Abstract N°: 5114**Decoding Sebocyte Marker Genes in Human Skin: Insights from Spatial Transcriptomics Profiling of Sebaceous Glands**Nicholas Holzschek¹, Annika Simmering¹, Judith Seidel¹¹Beiersdorf AG, R&D Discovery, Hamburg, Germany**Introduction & Objectives:**

Sebocytes, specialized epithelial cells that produce and secrete sebum, play a critical role in skin homeostasis, and their dysregulation is associated with several dermatological conditions, including acne and oily skin. Despite their importance, the molecular underpinnings governing sebocyte function and regulation remain poorly understood.

Materials & Methods:

In this study, we generated spatial transcriptomics datasets from human facial skin samples using the 10X Genomics Visium technology. The transcriptomic data was then bioinformatically processed, tissue spots clustered according to expression profiles and subsequently annotated. Differential gene expression and pathway analyses were performed to identify in situ gene expression profiles of sebaceous glands.

Results:

Comprehensive analysis of the spatial sequencing data unveiled distinct transcriptional signatures linked to diverse skin layers and cell types, encompassing several intact sebaceous glands, representing some of the first in situ gene expression profiles of functional sebaceous glands in facial human skin tissue ever collected. This enabled us to map their transcriptional programs and identify several novel sebocyte marker genes, enhancing our ability to characterize these cells in their natural environment.

Conclusion:

Our data serves as a foundation for future research aimed at understanding and treating sebocyte-related skin disorders, including acne and oily skin, through the development of targeted therapeutic strategies.



Abstract N°: 5131**Syndromic HS: a clinical and therapeutical challenge.**

Ilaria Scandagli¹, Elia Rosi¹, Gianmarco Silvi¹, Prisca Guerra¹, Giulia Nunziati¹, Antonella DI Cesare¹, Francesca Prignano¹

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Syndromic HS: a clinical and therapeutical challenge.

Hidradenitis suppurativa (HS) is a chronic inflammatory disease typically involving major skin folds characterised by multifactorial pathogenesis. Clinically is characterised by recurrent, deep-seated, painful, subcutaneous nodules, sinus tracts, and hypertrophic scarring in the apocrine gland-bearing areas such as the axillae, buttocks, as well as the genital and perineal areas. It can also rarely present in association with other diseases as complex clinical syndromes, causing additional diagnostic and therapeutic challenges. Syndromic HS has been classified among auto-inflammatory diseases. The hallmark of auto-inflammatory diseases is recurrent sterile inflammation with an absence of autoantibody titers or antigen-specific T lymphocytes. Dysregulation of innate immunity is responsible for their development. Syndromic HS is typically characterised by a severe disease course in which individuals experience atypical skin involvement, signs of systemic inflammation, and resistance to conventional treatments. It is reported that a variety of diseases/clinical signs are associated with syndromic HS, such as pyoderma gangrenosum, HS, acne conglobata, acne fulminans, palmoplantar pustulosis, and inflammatory bowel disease (IBD). Spondyloarthropathy, arthritis, synovitis, osteoarthritis, hyperostosis, and ocular symptoms may all be associated with syndromic HS. The combination of previously mentioned diseases/clinical signs led to the description of HS-related autoinflammatory syndromes, the most common being: pyoderma gangrenosum-acne-suppurative hidradenitis (PASH), pyogenic arthritis-pyoderma gangrenosum-acne-suppurative hidradenitis (PAPASH). Additionally, synovitis-acne-pustulosis-hyperostosis-osteitis (SAPHO) syndrome comprises cutaneous and articular symptoms, although pustulosis is listed in the acronym as the main cutaneous symptom. Treatment of syndromic HS is difficult and should be individualised. Three cases of syndromic HS will be presented: The case of a 54-year-old woman with PASH syndrome, Crohn's disease, and psoriasis, resistant to various medical treatments; the case of monozygotic twin 15-year-old boys affected by SAPHO syndrome and a case of PASH and Crohn disease in a 33-year-old woman.



Abstract N°: 5140**Efficacy and safety of trifarotene cream 50µg/g for the treatment of acne-induced post-inflammatory hyperpigmentation in subjects with Fitzpatrick Skin Types I-VI: Results from a phase IV trial (LEAP)**

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Introduction & Objectives: Post-inflammatory hyperpigmentation (PIH) is a common pigmentary sequela of the inflammatory processes of acne vulgaris. Trifarotene, a retinoic acid receptor- γ selective agonist, has superior depigmenting properties to other retinoids approved for the treatment of acne. The efficacy and safety of trifarotene 50µg/g cream were evaluated in moderate acne vulgaris and acne-induced PIH (NCT05089708).

Materials & Methods: In this phase IV multicentre, double-blinded, parallel group study, subjects (aged: 13-35 years) with Fitzpatrick Skin Types I-VI (approx. 70% Fitzpatrick Type IV-VI) and moderate acne vulgaris were randomised (1:1) to once-daily trifarotene 50µg/g ($N=60$) or a vehicle ($N=63$) cream for 24 weeks and were instructed to use an adjunctive skin care regimen (gentle skin cleanser, moisturiser lotion and oil-absorbing moisturiser with sun protection factor [SPF]30). PIH was assessed using the PIH overall disease severity (ODS) score, post-acne hyperpigmentation index (PAHPI), size of PIH lesions and photography. Acne was assessed using acne lesion counts and Investigator's Global Assessment (IGA) of acne on a 5-point scale (0: clear to 4: severe). IGA success was defined as a score of 0 (clear) or 1 (almost clear) and a ≥ 2 -grade reduction in IGA. Safety was monitored via adverse events (AEs) and tolerability assessments.

Results: A statistically significantly higher improvement from baseline in PIH ODS score was achieved with trifarotene than with vehicle (-1.6 vs -1.1 ; $p=0.03$) at W12; however, the absolute change in PIH ODS score was comparable between the groups at W24. Numerically, more reduction from baseline in the PAHPI total facial score was noted with trifarotene (-18.9%) than with vehicle (-11.3%) at W24. The mean decrease in average size of PIH lesions was greater with trifarotene than with vehicle at W12 (-2.19% vs -1.40%) and W16 (-4.44% vs -3.97%). At W12, total acne lesion count was markedly reduced with trifarotene (-64.1%) compared with vehicle (-46.7% ; $p<0.001$) and progressively improved through W24 (-72.0 vs -62.8 , $p<0.05$). A significantly higher proportion of subjects experienced IGA success with trifarotene than with vehicle at W12 (38% vs 20.8% , $p<0.05$) and likewise improved through W24 (61.1% vs 39.4% , $p<0.05$). Photographs at W12 and W24 showed a visually apparent improvement from baseline in hyperpigmentation across all skin types in the groups. The incidence of treatment-emergent AEs (TEAEs) was higher in the vehicle (30.2%) than trifarotene group (16.7%).

Conclusion: Trifarotene and vehicle were comparable in improving PIH ODS at W24 and a significant rapid improvement in PIH ODS was observed at W12. PAHPI total facial score and IGA success, respectively, demonstrated numerically and significant advantages for trifarotene treatment. Trifarotene was well-tolerated with a lower incidence of TEAEs compared with the vehicle group across all skin types throughout the study.

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Abstract N°: 5289

Bimekizumab efficacy by prior biologic treatment in patients with moderate to severe hidradenitis suppurativa: 48-week pooled data from the randomised, double-blind, placebo-controlled, multicentre BE HEARD I and II phase 3 trials

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Introduction

Prior biologic use may influence or be predictive of response to subsequent biologics in inflammatory conditions,¹ but there is a lack of knowledge regarding this influence in hidradenitis suppurativa (HS) specifically.

Bimekizumab (BKZ) is a humanised IgG1 monoclonal antibody that inhibits interleukin (IL)-17F in addition to IL-17A, proinflammatory cytokines elevated in HS lesional tissue.² We present efficacy of BKZ by prior biologic treatment.

Materials & Methods

These data were pooled, post hoc analyses from the BE HEARD I and II trials,^{3,4} which included initial (Weeks 0–16) and maintenance (Weeks 16–48) treatment periods. Adult patients with moderate to severe HS were randomised 2:2:2:1 (initial/maintenance) to receive BKZ 320 mg every 2 weeks (Q2W)/Q2W, BKZ Q2W/every 4 weeks (Q4W), BKZ Q4W/Q4W or placebo (PBO)/BKZ Q2W.

Here, we report proportions of patients achieving a 50/75/90% HS Clinical Response (HiSCR50/75/90) for individuals who received prior biologic treatment for any indication vs those who were biologic-naïve across initial randomisation groups at Weeks 16 and 48. Data are reported using observed case (OC), with modified non-responder imputation (mNRI) also reported (**Table 1 and 2**).

Results

1,014 patients (BE HEARD I, n=505; BE HEARD II, n=509) were randomised to BKZ Q4W/Q4W (n=288), BKZ Q2W/Q4W (n=292), BKZ Q2W/Q2W (n=288), and PBO/BKZ Q2W (n=146); 18.8% (n=191) of patients had previously received biologic therapy, 81.2% (n=823) were biologic-naïve. Patients who had received prior biologic therapy were majority female (55.5%) with a mean age of 38.2 years, and weighed on average 97.9 kg. Baseline characteristics were consistent within the biologic-naïve group, in which 57.1% of patients were female, with a mean age of 36.3 years, and average weight of 97.1 kg.

At Week 16, among patients with a history of biologic treatment, 53.5% on BKZ Q4W, 56.5% on BKZ Q2W and

28.6% on PBO treatment regimens achieved HiSCR50. In biologic-naïve patients responses with BKZ were higher vs PBO at 60.3%, 61.4% and 37.4% for BKZ Q4W, BKZ Q2W and PBO, respectively (**Table 1**). At Week 48, levels of HiSCR50 response were consistently higher across subgroups vs Week 16 (**Table 2**). For patients with prior biologic use, 80.6% on BKZ Q4W/Q4W, 76.3% on BKZ Q2W/Q4W, 71.4% on BKZ Q2W/Q2W, and 60.9% on PBO/BKZ Q2W treatment regimens were HiSCR50 responders at Week 48. Biologic-naïve patients achieved high levels of HiSCR50 at rates of 79.3%, 81.5%, 78.5%, and 73.2% (**Table 2**).

Similar trends were seen for HiSCR75/90 across both subgroups (**Table 1 and 2**).

Conclusion

BKZ demonstrated high efficacy in the achievement and maintenance of HiSCR50/75/90 clinical responses to Week 48 regardless of prior biologic use. Patients who switched from PBO to BKZ at Week 16 saw substantial and sustained increases in HiSCR responses across prior biologic subgroups at Week 48.

References

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Funding

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Table 1. Proportion of patients achieving HiSCR responses among prior biologic use subgroups at Week 16 (OC,^a mNRI^b)

		HiSCR ₅₀			HiSCR ₇₅			HiSCR ₉₀		
		PBO	BKZ Q4W	BKZ Q2W Total ^c	PBO	BKZ Q4W	BKZ Q2W Total ^c	PBO	BKZ Q4W	BKZ Q2W Total ^c
Prior biologic use ^d (n=191)	OC % (n/Nsub)	28.6 (8/28)	53.5 (23/43)	56.5 (61/108)	14.3 (4/28)	34.9 (15/43)	38.9 (42/108)	3.6 (1/28)	18.6 (8/43)	20.4 (22/108)
	mNRI %	27.6 (n=29)	49.1 (n=47)	52.8 (n=115)	13.8 (n=29)	31.3 (n=47)	36.0 (n=115)	3.4 (n=29)	15.7 (n=47)	19.3 (n=115)
No prior biologic use (n=823)	OC % (n/Nsub)	37.4 (40/107)	60.3 (129/214)	61.4 (254/414)	19.6 (21/107)	36.4 (78/214)	42.8 (177/414)	11.2 (12/107)	22.0 (47/214)	22.7 (94/414)
	mNRI %	34.5 (n=117)	57.3 (n=241)	57.9 (n=465)	17.8 (n=117)	34.4 (n=241)	40.0 (n=465)	9.7 (n=117)	21.5 (n=241)	21.9 (n=465)

Randomised set: patients are summarised according to randomised treatment as allocated at trial baseline (N=1,014). [a] OC: Nsub represents the number of patients with a non-missing lesion count assessment at the given week, and percentages are calculated accordingly (i.e. where data recorded after an intercurrent event are included as recorded); [b] mNRI: Patients who take systemic antibiotics as rescue medication for HS as defined by the PI or who discontinued due to AE or lack of efficacy are treated as non-responders at all subsequent visits. Other missing data were imputed via multiple imputation; [c] Data were pooled for all patients who received ≥ 1 BKZ 320 mg Q2W dose to Week 16 (BKZ 320 mg Q2W Total); [d] All prior biologic treatments received by patients were for HS; two patients initially included in the 'prior biologic use' subgroup were switched to the 'no prior biologic use' subgroup, as they had not received true biologic therapy. AE: adverse event; BKZ: bimekizumab; HiSCR: Hidradenitis Suppurativa Clinical Response; HiSCR_{50/75/90}: $\geq 50/75/90\%$ reduction in the total abscess and inflammatory nodule count with no increase from baseline in abscess or draining tunnel count; HS: hidradenitis suppurativa; mNRI: modified non-responder imputation; OC: observed case; PI: principal investigator; PBO: placebo; Q2W: every 2 weeks; Q4W: every 4 weeks.

Table 2. Proportion of patients achieving HiSCR responses among prior biologic use subgroups at Week 48 (OC^a)

	HiSCR ₅₀				HiSCR ₇₅				HiSCR ₉₀			
	PBO/ BKZ Q2W	BKZ Q4W/ Q4W	BKZ Q2W/ Q4W	BKZ Q2W/ Q2W	PBO/ BKZ Q2W	BKZ Q4W/ Q4W	BKZ Q2W/ Q4W	BKZ Q2W/ Q2W	PBO/ BKZ Q2W	BKZ Q4W/ Q4W	BKZ Q2W/ Q4W	BKZ Q2W/ Q2W
Prior biologic use ^b (n=191) % (n/Nsub)	60.9 (14/23)	80.6 (25/31)	76.3 (29/38)	71.4 (35/49)	52.2 (12/23)	64.5 (20/31)	50.0 (19/38)	51.0 (25/49)	34.8 (8/23)	45.2 (14/31)	26.3 (10/38)	28.6 (14/49)
No prior biologic use (n=823) % (n/Nsub)	73.2 (60/82)	79.3 (130/164)	81.5 (141/173)	78.5 (124/158)	65.9 (54/82)	65.9 (108/164)	62.4 (108/173)	63.9 (101/158)	41.5 (34/82)	41.5 (68/164)	45.1 (78/173)	43.0 (68/158)

Randomised set: patients are summarised according to randomised treatment as allocated at trial baseline (N=1,014). [a] OC: Nsub represents the number of patients with a non-missing lesion count assessment at the given week, and percentages are calculated accordingly (i.e. where data recorded after an intercurrent event are included as recorded); [b] All prior biologic treatments received by patients were for HS; two patients initially included in the 'prior biologic use' subgroup were switched to the 'no prior biologic use' subgroup, as they had not received true biologic therapy. BKZ: bimekizumab; HiSCR: Hidradenitis Suppurativa Clinical Response; HiSCR_{50/75/90}: $\geq 50/75/90\%$ reduction in the total abscess and inflammatory nodule count with no increase from baseline in abscess or draining tunnel count; HS: hidradenitis suppurativa; PBO: placebo; OC: observed case; Q2W: every 2 weeks; Q4W: every 4 weeks.



Abstract N°: 5308**strategy to adopt in order to manage flares during adalimumab therapy in patients affected by hidradenitis suppurativa: focus on the impact of adalimumab in antibiotics prescriptions**

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Introduction & Objectives:

We conducted a one-year prospective study involving the enrollment of 58 patients with HS. Through a retrospective analysis of data on the same patients, with reference to the year prior to the initiation of the anti-TNF α drug Adalimumab, we aimed to show how the advent of this biologic therapy changes the number of days of antibiotic therapy, the number of flares up per year and their duration in days, as well as the quality of life.

Materials & Methods:

Quality of life was assessed using the DLQI. Patient-perceived pain was quantified through the VAS scale. Disease severity was assessed clinically using the IHS4 clinical score. The collected data were processed using Graph-Pad Prism software (GraphPad Inc., La Jolla, CA, USA). Parameters were calculated for each variable (number of days of antibiotic therapy given, number of annual flare-ups, duration of flare-ups, IHS4, VAS, DLQI) using mean \pm standard deviation. The paired t- test was used to compare the data collected before starting adalimumab and after 1 year of therapy. The same test was used to compare data from the year before starting adalimumab treatment.

Results:

Listed below are the results obtained from the analysis of the variables studied in the sample, consisting of 58 patients (27 males and 31 females, mean age 32.58 years) with HS. The patients received the same Adalimumab therapy for one year: induction phase: 160 mg (4x40 mg or 2x80 mg) at T0, 80 mg (2x40 mg or 80 mg) after 2 weeks and then 40 mg after another 2 weeks; maintenance phase: 40 mg/week. First, we evaluated the number of days of antibiotic therapy that patients performed during treatment with Adalimumab. At T1, after 12 months of treatment, patients had performed an average of 21.48 \pm 20.47 days of antibiotic therapy. From the recorded data, it was found that in 58% of the cases the oral antibiotic combination of Clindamycin (600 mg/day) and Rifampin (600 mg/day) was prescribed, in 30% of the cases there was the use of Limecyclyne 300 mg, and in the remaining 12% there was the use of Doxycycline 100 mg for 2 times/day. Regarding disease flares up, we analyzed two variables, namely the number of flares up and their duration in days. We obtained 2.32 \pm 2.62 annual flares up at T1 and their duration averaged 3.90 \pm 1.34 days. Regarding IHS4 score, at T1 we found a mean score of 6.10 \pm 3.66 (moderate grade HS). Prior to the start of Adalimumab therapy (T0), we found that patients had an average IHS4 score of 12.88 \pm 4.05 (severe grade HS). Thus, we obtained a statistically significant reduction in IHS4 score at T1 (P<0.0001). Regarding DLQI (DERMATOLOGY LIFE QUALITY INDEX, we found an average score of 7.16 \pm 4.42 at T1 (disease mildly or moderately affects patient's quality of life) while before starting treatment the average score was 16.84 \pm 4.73 (disease greatly or extremely affects patient's quality of life).

Conclusion:

Currently, HS represents an ongoing therapeutic challenge for the dermatologist who is often faced with complex patients with multiple comorbidities who do not respond to currently available therapies. In conclusion, our study

showed that adalimumab therapy dramatically reduced the number of antibiotic therapy prescriptions while reducing the number and duration of flare-ups. Further studies are needed to confirm our results.

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Abstract N°: 5323**Real-life Adalimumab drug survival und happy drug survival in Hidradenitis suppurativa patients**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic debilitating skin disease significantly impairing patients' quality of life (QoL). The TNF-alpha inhibitor Adalimumab (ADA) was the first drug to be approved for HS therapy. Both, drug survival analyses and QoL measures are important instruments for evaluation of HS treatment efficacy, especially in real-life settings. In the present study we used a concept termed 'happy drug survival', which has successfully been used in psoriasis, but not in HS, combining QoL measures and drug survival.

Materials & Methods:

This monocentric retrospective study includes data of 56 patients, who were treated with ADA 40mg weekly at the HS outpatient clinic, Clinic Landstrasse between January 2017 and July 2021. Patients with a therapy duration of less than 6 months were excluded from further analyses. Dermatology Life Quality Index (DLQI) was used to assess QoL impairment. Unhappy patients were defined as patients with DLQI > 10 (severe impairment), happy patients had a DLQI ≤ 10 (moderate impairment), while very happy patients had a DLQI score lower than 5 (slight impairment). Statistics included descriptive analyses, Chi-square-tests and Kaplan Meier survival curves.

Results:

Patients in this study had an average age of 40 years. 42.9% had Hurley grade II and 57.1% Hurley III HS. 53.6% were males. Median follow-up in the study cohort was 22 months. Drug survival rates for ADA were 55.4% after 12 months and 35.7% after 24 months. Patients with Hurley grade II had significantly higher drug survival rates than Hurley III patients ($p=.015$, Fig. 1a). Sex ($p=.76$), add-on therapies ($p=.99$), comorbidities ($p=.19$), BMI>30 ($p=.72$), and QoL improvement ($p=.12$, Fig. 1b) had no influence on drug survival rates. Loss of efficacy was a major reason for discontinuation (39.3%, Table 1).** Median DLQI score at therapy initiation was 17.0 (SD 8.1), highlighting the profound impact of HS on QoL. Under ADA therapy, 54% of all patients experienced a QoL improvement. Mean DLQI change after an overall follow-up of 22 months was -6.5 (SD 6) for patients on drug vs. 0 (SD 7) for patients, who discontinued therapy. Nonetheless, in 51.9% of patients therapy was discontinued, regardless of QoL improvement. The happy drug survival rate was 22% after a median follow-up of 14 months. 43.8% of these patients were very happy. Hurley III patients were significantly more often unhappy than Hurley II patients (Fig. 2).

Conclusion:

In this cohort, most ADA treatments were given for a duration of 1 to 2 years. Two years after initiation only one third of patients was still on therapy. Loss of efficacy stands a major reason for discontinuation. Every second patient experienced QoL improvement under ADA therapy. Still, half of them discontinued therapy. The happy drug survival rate was low. Results of this study underline, that further treatment options are needed to improve HS patient care.

Table 1:

Treatment characteristics

Age at therapy start (years), average (SD)		40.2 (11.6)
Therapeutic delay (years), median (SD)		4.5 (7.1)
Treatment duration (months), median (SD)		14 (SD 19.1)
Dosage, n (%)	40mg weekly	45 (80.4)
	40mg every 2 nd week	10 (17.9)
	80mg weekly	1 (1.8)
Add-on therapies	total	23 (41.1)
	Antibiotics long-term	12 (21.4)
	Surgery	6 (10.7)
Discontinuation cause, n (%)	No effect	3 (5.4)
	Loss of efficacy	22 (39.3)
	Adverse events	8 (14.3)
	Remission	1 (1.8)
Time to loss of efficacy, n (%)	Combination	6 (10.7)
	< 12 months	11 (19.6)
	12-18 months	4 (7.1)
	18-24 months	4 (7.1)
Adverse events (AE)	> 24 months	4 (7.1)
	Total	28 (50.0)
	Fatigue	8 (14.3)
	Myalgia	6 (10.7)
	Alopecia	5 (8.9)
Exanthema, Infections, GIT conditions, Wound healing disorder (each)		3 (5.4)

Figures:

Fig. 1:

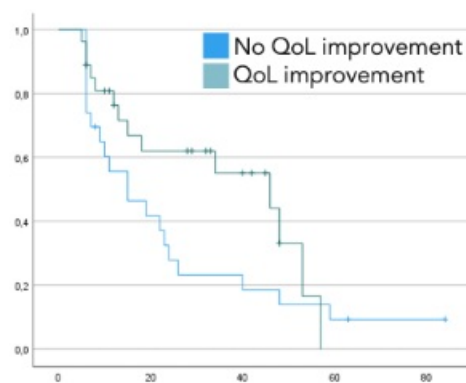
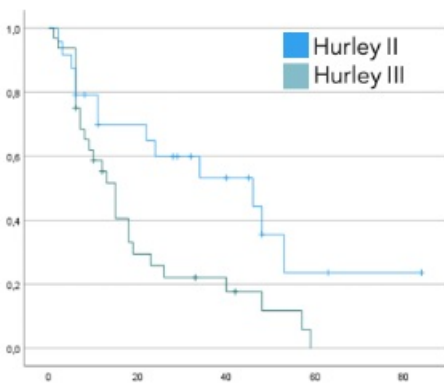
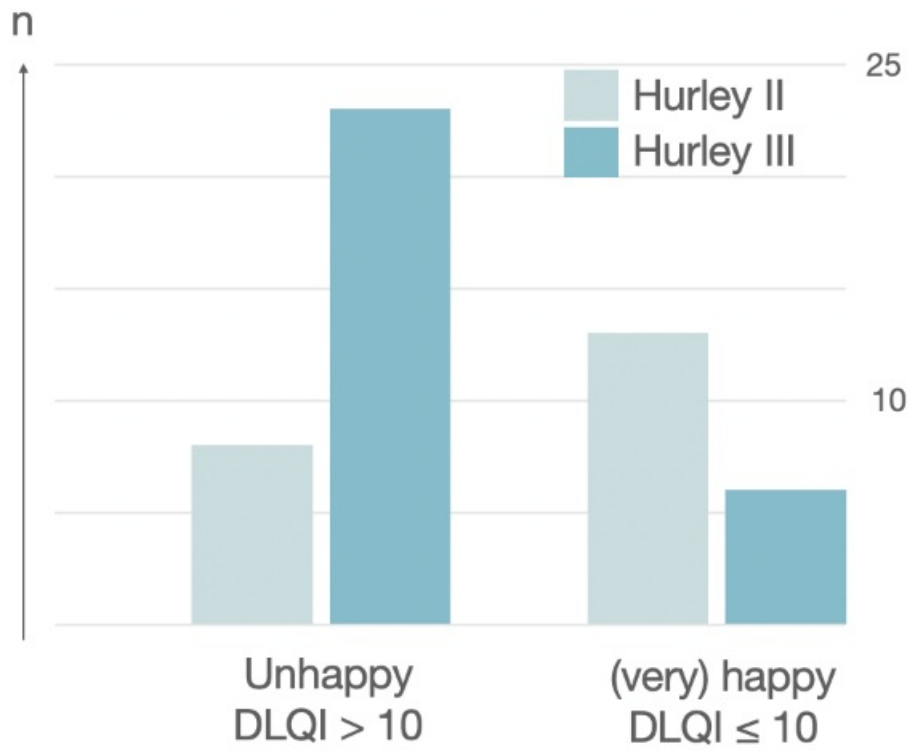


Fig. 2:



Abstract N°: 5342**Bimekizumab efficacy across weight and BMI based subgroups in patients with moderate to severe hidradenitis suppurativa: 48-week pooled results from the randomised, double-blind, placebo-controlled, multicentre BE HEARD I and II phase 3 trials**

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Introduction

Obesity is a known comorbidity of hidradenitis suppurativa (HS).¹ Previous research showed efficacy of adalimumab, an HS biologic treatment, was moderated by weight.² Bimekizumab (BKZ) is a humanised IgG1 monoclonal antibody that inhibits interleukin (IL)-17A and IL-17F; both are proinflammatory cytokines which are elevated in HS lesional tissue.³ We present efficacy of BKZ by weight and BMI subgroups.

Materials and Methods

BE HEARD I and II were identically designed phase 3 trials,^{4, 5} which included initial (Week [Wk] 0–16) and maintenance (Wk 16–48) treatment periods. Adult patients with moderate to severe HS were randomised 2:2:2:1 (initial/maintenance) to receive BKZ 320 mg every 2 weeks (Q2W)/Q2W, BKZ Q2W/Q4W, BKZ Q4W/Q4W or placebo (PBO)/BKZ Q2W.

Here, we report proportions of patients achieving a 50/75/90% HS Clinical Response (HiSCR50/75/90) by weight (≤ 100 kg, > 100 kg) and BMI (< 25 kg/m², ≥ 25 to < 30 kg/m², ≥ 30 kg/m²) categories across initial randomisation groups at Wks 16 and 48. Data reported using observed case and modified non-responder imputation (**Table 1 and 2**).

Results

1,014 patients (BE HEARD I, n=505; BE HEARD II, n=509) were randomised to BKZ Q4W/Q4W (n=288), BKZ Q2W/Q4W (n=292), BKZ Q2W/Q2W (n=288) and PBO/BKZ Q2W (n=146). The majority of patients were ≤ 100 kg (n=602 [59.4%]; > 100 kg, n=408 [40.2%]) with a BMI of ≥ 30 kg/m² (n=600 [59.2%]; < 25 kg/m², n=157 [15.5%]; ≥ 25 to < 30 kg/m², n=253 [25.0%]). Most patients were female (56.8%), mean age was 36.6 years.

At Wk 16, generally similar proportions of patients weighing ≤ 100 kg and > 100 kg achieved HiSCR50: 61.3% vs 56.7% (BKZ Q4W), 63.3% vs 55.6% (BKZ Q2W Total) and 33.7% vs 38.8% (PBO), respectively (**Table 1**). A high proportion of BKZ-randomised patients achieved HiSCR50 response at Wk 48 in ≤ 100 kg and > 100 kg groups: 84.0% vs 74.7% (BKZ Q4W/Q4W), 78.8% vs 83.5% (BKZ Q2W/Q4W), 77.8% vs 75.0% (BKZ Q2W/Q2W), (**Table 2**).

In the PBO/BKZ Q2W group, patients weighing ≤ 100 kg had lower HiSCR50 response rates vs patients weighing > 100 kg, at 63.1% vs 82.5%, respectively.

At Wk 16, the majority of BKZ-randomised patients achieved HiSCR50 response regardless of BMI. For < 25 kg/m², ≥ 25 to < 30 kg/m² and ≥ 30 kg/m² groups, rates were 70.0% vs 59.7% vs 57.0% (BKZ Q4W), 70.5% vs 62.0% vs 56.7% (BKZ Q2W Total) and 43.5% vs 36.6% vs 32.4% (PBO), respectively (**Table 1**). At Wk 48, responses were comparable between the < 25 kg/m² and ≥ 30 kg/m² BMI groups: 82.6% vs 76.6% (BKZ Q4W/Q4W), 84.8% vs 78.9% (BKZ Q2W/Q4W), 82.1% vs 79.4% (BKZ Q2W/Q2W), and 78.6% vs 71.4% (PBO/BKZ Q2W), respectively (**Table 2**). For the ≥ 25 to < 30 kg/m² group, 86.4% (BKZ Q4W/Q4W), 82.2% (BKZ Q2W/Q4W), 68.9% (BKZ Q2W/Q2W), and 65.7% (PBO/BKZ Q2W) achieved HiSCR50 at Wk 48.

Similar trends were seen for HiSCR75/90 across both weight and BMI subgroups (**Table 1 and 2**).

Conclusion

Regardless of weight/BMI category, BKZ demonstrated efficacy and increasing levels of HiSCR50/75/90 clinical responses between Wk 16 and Wk 48. Patients who switched from PBO to BKZ at Wk 16 saw substantial and sustained increases in HiSCR clinical responses across weight/BMI subgroups at Week 48.*

References

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Funding

These studies were funded by UCB Pharma. Medical writing support was provided by Costello Medical.

Table 1. Proportion of patients achieving HiSCR responses among weight and BMI subgroups at Week 16 (OC,^a mNRI^b)

		HiSCR ₅₀			HiSCR ₇₅			HiSCR ₉₀		
		PBO	BKZ Q4W	BKZ Q2W Total ^c	PBO	BKZ Q4W	BKZ Q2W Total ^c	PBO	BKZ Q4W	BKZ Q2W Total ^c
Weight category (kg)										
≤ 100 (n=602)	OC % (n/Nsub)	33.7 (29/86)	61.3 (84/137)	63.3 (205/324)	19.8 (17/86)	40.9 (56/137)	45.7 (148/324)	11.6 (10/86)	25.5 (35/137)	25.0 (81/324)
	mNRI %	32.8 (n=89)	57.1 (n=153)	59.5 (n=360)	19.2 (n=89)	37.5 (n=153)	42.5 (n=360)	11.2 (n=89)	24.4 (n=153)	24.0 (n=360)
> 100 (n=408)	OC % (n/Nsub)	38.8 (19/49)	56.7 (68/120)	55.6 (110/198)	16.3 (8/49)	30.8 (37/120)	35.9 (71/198)	6.1 (3/49)	16.7 (20/120)	17.7 (35/198)
	mNRI %	33.8 (n=57)	54.9 (n=134)	52.7 (n=217)	13.6 (n=57)	29.8 (n=134)	33.9 (n=217)	4.2 (n=57)	16.1 (n=134)	17.2 (n=217)
BMI category (kg/m²)										
< 25 (n=157)	OC % (n/Nsub)	43.5 (10/23)	70.0 (21/30)	70.5 (62/88)	21.7 (5/23)	46.7 (14/30)	51.1 (45/88)	17.4 (4/23)	26.7 (8/30)	26.1 (23/88)
	mNRI %	39.1 (n=26)	67.5 (n=35)	65.0 (n=96)	19.4 (n=26)	46.3 (n=35)	47.1 (n=96)	15.4 (n=26)	27.8 (n=35)	24.0 (n=96)
≥ 25 – < 30 (n=253)	OC % (n/Nsub)	36.6 (15/41)	59.7 (37/62)	62.0 (80/129)	19.5 (8/41)	41.9 (26/62)	41.1 (53/129)	9.8 (4/41)	30.6 (19/62)	27.9 (36/129)
	mNRI %	36.6 (n=41)	52.3 (n=69)	58.6 (n=143)	19.5 (n=41)	35.3 (n=69)	38.3 (n=143)	9.8 (n=41)	27.4 (n=69)	26.8 (n=143)
≥ 30 (n=600)	OC % (n/Nsub)	32.4 (23/71)	57.0 (94/165)	56.7 (173/305)	16.9 (12/71)	32.1 (53/165)	39.7 (121/305)	7.0 (5/71)	17.0 (28/165)	18.7 (57/305)
	mNRI %	29.4 (n=79)	55.3 (n=183)	53.9 (n=338)	14.9 (n=79)	31.1 (n=183)	37.5 (n=338)	5.6 (n=79)	16.5 (n=183)	18.4 (n=338)

Randomised set: patients are summarised according to randomised treatment as allocated at trial baseline; four patients were missing weight-related data (N=1,010). [a] OC: Nsub represents the number of patients with a non-missing lesion count assessment at the given week, and percentages are calculated accordingly (i.e. where data recorded after an Intercurrent event were included as recorded); [b] mNRI: Patients who take systemic antibiotics as rescue medication for HS as defined by the PI or who discontinued due to AE or lack of efficacy were treated as non-responders at all subsequent visits. Other missing data were imputed via multiple imputation; [c] Data were pooled for all patients who received ≥ 1 BKZ 320 mg Q2W dose to Week 16 (BKZ 320 mg Q2W Total). AE: adverse event; BKZ: bimekizumab; BMI: body mass index; HiSCR: Hidradenitis Suppurativa Clinical Response; HiSCR_{50/75/90} response: 50/75/90% reduction in abscess and nodule count with no increase from baseline in abscess or draining tunnel count; HS: hidradenitis suppurativa; mNRI: modified non-responder imputation; OC: observed case; PBO: placebo; PI: principal investigator; Q2W: every 2 weeks; Q4W: every 4 weeks.

Table 2. Proportion of patients achieving HiSCR responses among weight and BMI subgroups at Week 48 (OC^a)

	HiSCR ₅₀				HiSCR ₇₅				HiSCR ₉₀			
	PBO/ BKZ Q2W	BKZ Q4W/ Q4W	BKZ Q2W/ Q4W	BKZ Q2W/ Q2W	PBO/ BKZ Q2W	BKZ Q4W/ Q4W	BKZ Q2W/ Q4W	BKZ Q2W/ Q2W	PBO/ BKZ Q2W	BKZ Q4W/ Q4W	BKZ Q2W/ Q4W	BKZ Q2W/ Q2W
Weight category (kg)												
≤100 (n=602) % (n/Nsub)	63.1 (41/65)	84.0 (84/100)	78.8 (104/132)	77.8 (105/135)	56.9 (37/65)	71.0 (71/100)	62.9 (83/132)	64.4 (87/135)	40.0 (26/65)	43.0 (43/100)	43.9 (58/132)	42.2 (57/135)
>100 (n=408) % (n/Nsub)	82.5 (33/40)	74.7 (71/95)	83.5 (66/79)	75.0 (54/72)	72.5 (29/40)	60.0 (57/95)	55.7 (44/79)	54.2 (39/72)	40.0 (16/40)	41.1 (39/95)	38.0 (30/79)	34.7 (25/72)
BMI category (kg/m²)												
<25 (n=157) % (n/Nsub)	78.6 (11/14)	82.6 (19/23)	84.8 (28/33)	82.1 (32/39)	78.6 (11/14)	78.3 (18/23)	69.7 (23/33)	71.8 (28/39)	71.4 (10/14)	39.1 (9/23)	36.4 (12/33)	41.0 (16/39)
≥25-<30 (n=253) % (n/Nsub)	65.7 (23/35)	86.4 (38/44)	82.2 (37/45)	68.9 (42/61)	60.0 (21/35)	75.0 (33/44)	60.0 (27/45)	54.1 (33/61)	34.3 (12/35)	54.4 (24/44)	46.7 (21/45)	36.1 (22/61)
≥30 (n=600) % (n/Nsub)	71.4 (40/56)	76.6 (98/128)	78.9 (105/133)	79.4 (85/107)	60.7 (34/56)	60.2 (77/128)	57.9 (77/133)	60.7 (65/107)	35.7 (20/56)	38.3 (49/128)	41.4 (55/133)	41.1 (44/107)

Randomised set: patients are summarised according to randomised treatment as allocated at trial baseline; four patients were missing weight-related data (N=1,010). [a] OC: Nsub represents the number of patients with a non-missing lesion count assessment at the given week, and percentages are calculated accordingly (i.e. where data recorded after an intercurrent event are included as recorded). BKZ: bimekizumab; BMI: body mass index; HiSCR: Hidradenitis Suppurativa Clinical Response; HiSCR_{50/75/90} response: 50/75/90% reduction in abscess and nodule count with no increase from baseline in abscess or draining tunnel count; OC: observed case; PBO: placebo; Q2W: every 2 weeks; Q4W: every 4 weeks.

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Abstract N°: 5368**Tildrakizumab in hidradenitis suppurativa. A monocentric retrospective study in 6 patients**

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Introduction & Objectives: Hidradenitis Suppurativa is a chronic, relapsing and remitting inflammatory disease of the pilosebaceous unit. Treatment of this disorder can be challenging because there are few therapies approved for it and sometimes the clinical response is poor. According to some reports, IL-23 inhibitors such as tildrakizumab could be a therapeutic option in patients who are refractory to other systemic therapies. This work summarizes the experience with tildrakizumab in our department.

Materials & Methods: Six patients diagnosed with hidradenitis suppurativa received tildrakizumab. The variables included were patient's demographics, comorbidities, Hurley stage, previous treatments, and the period with tildrakizumab. We evaluated the baseline status of patients with International Hidradenitis Suppurativa Severity Score System (IHS4) and Dermatology Life Quality Index (DLQI) and the therapeutic response until week 32 with Hidradenitis Suppurativa Clinical Response (HiSCR) and DLQI.

Results: All patients had an IHS4 severe (>11) at baseline and at week 32 all achieved a HiSCR50 or higher. DLQI was reduced on average by 7 points. The mean age for patients was 52.5 years with a range between 43 to 63 years. As important comorbidities two patients have history of previous malignancy, one of them currently active and two were at risk of social exclusion. Three patients (50%) had Hurley stage 3 disease and three (50%) had Hurley stage 2 disease. All patients received prior systemic therapy, two of them (33.3%) adalimumab. All patients had prior systemic therapy. Four of the six patients were on concurrent treatment at baseline, two of them with an oral antibiotic agent and two having oral antibiotic and corticosteroid. The mean time with tildrakizumab was 12.4 months with a range between 9 to 21 months. Dosing regimen varies between patients, but most of them received psoriasis dose (100mg week 0 and 4 and then every 12 weeks). In three patients was necessary to decrease the dosing frequency interval. One patient decided to discontinue tildrakizumab due to arthralgias, but rheumatologist ruled out that this adverse effect was secondary to the medication. Another one carried out incorrectly the treatment. Major side effects were not described by patients.

Conclusion: Tildrakizumab improves the symptoms and quality of life of patients with hidradenitis suppurativa, so it could be considered as an alternative therapy in this disease.



Abstract N°: 5484**The evaluation of periodontal health status in patients with hidradenitis suppurativa**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic, recurrent, and debilitating inflammatory skin condition involving the hair follicle. Periodontitis is a persistent inflammatory disease of the tooth supporting structures that has been related to the development of immune-mediated inflammatory diseases. However, the current knowledge on oral health status in patients with HS is limited. The aim of the study was to evaluate the prevalence of periodontitis and characterize the oral microbiome in HS patients.

Materials & Methods:

Fifty-five HS patients and fifty-five healthy controls were enrolled to the study. The presence of periodontitis was assessed in all participants during the periodontal evaluation. The nine crucial periodontal pathogens (*A. actinomycetemcomitans*, *P.gingivalis*, *T. denticola*, *T. forsythia*, *P. intermedia*, *P. micros*, *F. nucleatum*, *E. nodatum*, and *C. gingivalis*) and total bacteria count were analyzed by using RT-PCR based tests in samples. Systemic antimicrobials within three months prior to baseline were prohibited.

Results:

HS patients had a significantly higher prevalence of periodontitis than individuals from control group ($p < 0.001$). The mean total bacteria count was significantly higher in the HS samples than that in the healthy ones ($p < 0.05$). The majority of periopathogens were more frequently detected in HS patients compared to the controls. The most common periodontal pathogen isolated in the HS patients was *T.denticola* (70.9 %), while among healthy controls *C.gingivalis* (34.5%) was the most frequent organism.

Conclusion:

This is the first study assessing the periodontal health in patients with HS. We revealed the higher prevalence of periodontitis as well as periodontal pathogens in HS individuals compared to healthy controls. Further research is needed to establish the association between HS and periodontitis.



Abstract N°: 5489

Nicastrin loss in hair follicle stem cells causes severe skin pathology with features of Hidradenitis Suppurativa

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease that affects 1 to 4% of the population, particularly young women. It concerns the major skin folds characterized by cysts and abscesses, which can progress into scars and sinus tracts. Genetic studies have identified mutations in various components of γ -secretase complex of which nicastrin, as a predominant candidate. Although the pathogenesis is multifactorial and poorly understood, HS is thought to be due to abnormal follicular keratinization and subsequent inflammatory infiltration within the pilosebaceous unit. Therefore, the development of a robust HS mouse model is mandatory to decipher the cellular and molecular mechanisms driving this pathology. We hypothesize that the inactivation of γ -secretase complex in Hair Follicle Stem Cells (HF-SCs) should affect their proliferative activity, differentiation potential and recapitulate the pathophysiology of HS. This hypothesis is based on recent demonstration that HS patients exhibited HF-SC defects with features of replicative stress abnormalities.

Materials & Methods:

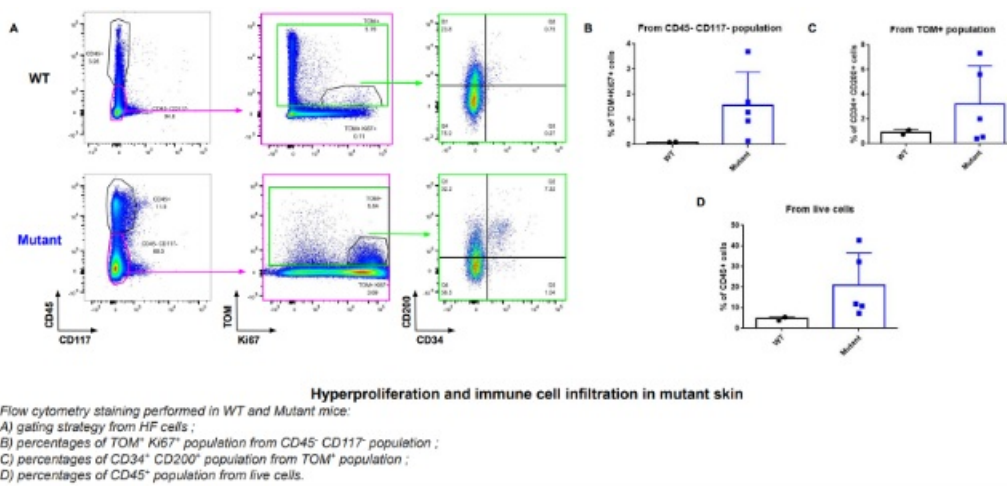
Inactivation of γ -secretase in HF-SCs has been performed by mating *nicastrin^{flox/flox}, Rosa26^{Tom/Tom}* mice with the *Krox20^{Cre/+}* line. In this model, Cre recombinase induce simultaneously biallelic nicastrin deletion and permanent expression of fluorescent reporter Tomato (TOM) in the HF-SCs and their derivatives. We used as control *Krox20^{Cre/+} Rosa26^{Tom/Tom}* mice.

Comparison of the pattern of Tom-expressing HF-SCs and their derivatives between mutants and controls allows us to identify any alterations in cell differentiation and proliferation associated with the γ -secretase loss in HF-SCs

Results:

At one month, mutant mice (*Krox20^{Cre/+}, nicastrin^{fl/fl}, Rosa26^{tom}*) showed severe skin disorganization, including an increased hair follicles density, cyst formation and epidermal hyperkeratinization, the latter two being the hallmark of HS. Ki67 staining of dividing cells showed that majority of cells forming hair follicle were actively proliferating in stark contrast to controls.

We analyzed by flow cytometry cells isolated from hair follicles (figure A) and we observed an increased percentage of TOM+Ki67+CD45- cells in mutant mice (1 to 4%) compared to controls (0.1%) (figure B). About 2-7 % of TOM+ cells express bulge cell markers (CD34+CD200+) in mutant mice. In contrast, bulge cells account for less than 1% of Krox20 expressing cells (TOM+ cells) in controls (figure C). In the skin of mutant mice, we also observed an infiltration of immune cells (CD45+) (figure D), the majority of them are myeloid cells and α b T cells.



Conclusion:

Targeted inactivation of nicastrin in HF-SCs results in skin pathology with characteristics of HS, making this model an interesting genetic tool to decipher the associated mechanisms. Moreover, we showed that deletion of nicastrin in a small Krox20⁺ bulge population is sufficient to alter HF-SC homeostasis, indicating that this population plays a key role in HS.

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Abstract N°: 5518**High-Frequency Ultrasound Assessment and Differentiation between Hidradenitis Suppurativa and Steatocystoma Multiplex: A Case Report**

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Introduction & Objectives: Hidradenitis Suppurativa (HS) is a chronic inflammatory skin condition, which affects the pilo-sebaceous unit and is characterized by the appearance of recurrent painful nodules, abscesses, and fistulas in the inverse regions of the body. HS can significantly impact the patient's quality of life. Steatocystoma multiplex (SM) is a rare skin disorder characterized by the development of multiple benign yellowish cysts which typically form in regions rich with sebaceous glands. Only a few cases of association between the two conditions have been described. High-frequency ultrasonography is a non-invasive imaging method that has been used increasingly in the evaluation of HS. Its utility to provide visualization of subclinical lesions, to assess the disease severity and to be useful in the preoperative evaluation, makes it an important tool in the diagnosis and management of the disease. While histology is considered as the definitive diagnostic method for SM, ultrasonography can serve as an additional diagnostic tool.

Materials and Methods: We present a 24-year-old patient with a 4-year history of red painful nodules with purulent discharge initially on the back and later spreading to the axillary, chest and inguinal area. Simultaneously the patient noticed the appearance of numerous yellowish cysts localized mainly on the back and chest. He was diagnosed with HS in an outpatient setting and was treated with systemic isotretinoin, systemic metronidazole and topical antiseptics for 11 months with a temporary effect. He was then hospitalized for more comprehensive assessment of his condition, including precise HS staging. The yellowish lesions on the chest, back and armpits were biopsied for histological examination, which showed steatocystomas and the diagnosis of SM was also made in addition to HS. The more rare diagnosis of steatocystoma multiplex suppurativa was also discussed. Ultrasound examination was performed with a 18-22 MHz linear probe, which helped differentiate between the two separate skin conditions, HS and SM.

Results: Ultrasonographically the SM lesions were displayed as well-defined, hypoechoic or anechoic cystic structures within the subcutaneous tissue usually with the absence of internal blood flow within the cystic structures. This characteristic aided in distinguishing SM lesions from the pseudocysts commonly observed in HS. Ultrasound assessment was also useful to determine the more severe involvement in HS compared to clinical assessment only using the Hurley, IHS4 and PGA-HS staging, which showed a milder stage of disease.

Conclusion: We presented a rare case of Hidradenitis suppurativa and coexisting Steatocystoma multiplex. The use of high-frequency ultrasound in the evaluation improved the staging of HS and provided valuable insights to differentiate between the two conditions. The identification of the ultrasonographic features specific to each condition can facilitate better diagnosis and appropriate treatment strategies.

Abstract N°: 5527**Self-assessment of structural damage and inflammation in patients with hidradenitis suppurativa**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic, inflammatory disease of the apocrine glands that causes recurrent lesions, pain, oozing, and scarring, impairing patients' quality of life.

In recent years, the use of digital tools has gained importance in medical consultations, as well as in the field of research on dermatological diseases. We consider relevant to study whether patients with hidradenitis suppurativa have the ability to adequately self-assess themselves in this new context.

To estimate the level of concordance between patient and dermatologist assessment using the main measurement instruments used to assess the severity of hidradenitis suppurativa.

Materials & Methods:

We conducted a descriptive cross-sectional study involving patients diagnosed with HS. Participants who came to the hospital were assessed in consultation and then provided with an online questionnaire for self-assessment. Patients who received remote medical care completed the online questionnaire in a self-referred manner, both groups unaware of the dermatologist's verdict.

General clinical and demographic data were collected from each participant. The Hurley scale was used to assess the structural damage of lesions and the International Hidradenitis Suppurativa Severity Score System (IHS4) was used to measure the degree of inflammation. For the patients, the Hurley scale was represented with photographs corresponding to each of the stages and a visual analogue scale (VAS) was used to self-assess inflammatory load.

Results:

A total of 221 patients were included. The mean age of the sample was 38.36 (10.74) years, with a male:female ratio of approximately 1:3. The majority were smokers and overweight. The largest group had Hurley stage II (38.91%).

Regarding to Hurley stages, patients classified as Hurley stage I had the highest degree of agreement with the physician. The same was observed in the self-assessment using the VAS scale. Patients that self-classified as mild were those who most closely matched the score on the IHS4 scale assigned by the physician.

Conclusion:

Although the level of agreement observed was above 50% in all patient subgroups established by severity and inflammation of the lesions, more similar studies are needed to develop tools that fit the current context in which telemedicine plays a key role.

Abstract N°: 5542**Real-world-evidence On Acne-prone Skin with Post-Acne Marks: Assessing Tolerance, Efficacy, and Quality of Life Improvements of a Skincare Regimen in a Multicenter Study In Germany, Spain and Latin America**

Julia Gallinger¹, Cristina Vendruscolo², Nuria Cuesta³, Janina Piehl⁴, Raul De Lucas⁵, Carolina Fernandez Quiroga⁶, Xavi Cubiro Raventos⁷, Anna Vilanova Mateu⁸, Silvia Perez Damonte⁹, Claudia De La Cruz¹⁰, Jannel Obregón¹¹, Roberto Alas Carbajal¹², Mariangeles Dominguez⁹, María Valeria Vagnoni⁹, Veronica Tosi⁹, Carolina Lofrano¹³, Adel Sammain¹

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Introduction:

Acne is a highly prevalent skin condition that affects people globally and is a primary contributor to post-inflammatory hyperpigmentation (PIH) and erythema (PIE). These Acne sequelae, also known as “post-acne marks” can negatively impact the quality of life (QoL) and result in significant psychological distress. While options for treating PIH are limited, Thiazolyl Resorcinol (Thiamidol) has recently emerged as a highly effective inhibitor of human tyrosinase that can significantly reduce PIH.

Objectives:

The aim of this research was to investigate the effectiveness of a skincare regimen in reducing blemishes, post-acne marks, and enhancing the quality of life (QoL). The skincare regimen included a cleanser, hydrogel formulation containing Thiamidol, Salicylic acid, and anti-inflammatory Licochalcone A, and a daycare with UV-filters. An uncontrolled, multicenter study was conducted over a 12-week period. Patients with mild to moderate acne, PIH and PIE, and impaired QoL applied the formulation twice daily and the daycare in the morning. The investigators assessed Acne, PIH, and PIE using a 5-point IGA-scale, counted lesions, and rated the process of discoloration. Patients assessed the efficacy and tolerability of the product and the improvement of CADI (Cardiff Acne disability Index) and additional QoL questions as well as an overall happiness score.

Results

427 patients completed the study, and clinical grading revealed a significant reduction of IGA for Acne, PIH, PIE, and lesion count. The patients confirmed the effectiveness against post-acne marks and blemishes. The CADI Score as well as overall happiness improved significantly during the study.

Conclusion:

The results suggest that the skincare regimen can provide physical and emotional relief, ultimately improving the QoL and overall happiness of patients in real-life conditions.



Abstract N°: 5570**Skin homeostasis in hidradenitis suppurativa: a cross-sectional study.**

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¹Virgen de las Nieves University Hospital, Dermatology, Granada, Spain, ²Universidad de Granada, School of Medicine, Granada, Spain, ³TECe19-Dermatología Clínica y Traslacional, Instituto de Investigación Biosanitaria de Granada, Granada, Spain

Introduction & Objectives: Hidradenitis suppurativa (HS) is a chronic autoinflammatory disease characterized by the development of nodules, abscesses and fistulas appearing in regions of the skin rich in apocrine cells. Among its main symptoms are itching, pain and purulent secretions, which cause great discomfort for the patient. Due to the anatomical areas where the lesions are located, it is common to cover them with dressings, patches or gauze. Knowing the skin homeostasis in areas of the skin affected by HS is the first step to be able to establish recommendations or plan the design of topical treatment vehicles and dressings that respond to the specific skin needs of these patients, since there are currently no specific dressings available for HS.

The aim of this study is to compare skin homeostasis and epidermal barrier function in lesions of patients with HS with healthy areas in the same anatomical region of these same patients and to assess the possible applications of the results obtained in the development of treatments to modify these functions.

Materials & Methods: Cross-sectional study in which patients with HS were included. Skin homeostasis and epidermal barrier function in lesions were assessed using validated instrumentation. A healthy perilesional skin control was assigned to each lesion to compare skin homeostasis parameters.

Results: forty-three patients were included, 22 nodules, 10 abscesses and 25 fistulas were measured. Male:female ratio was 20:23, mean age was 35.95 (14.82) years, 62.79% (27/43) had a Hurley scale II, mean IHS4 was 8.97 (7.64). Barrier function was found to be impaired in the injured skin of HS patients, which is reflected in increased transepidermal water loss (TEWL) and erythema in the three types of HS lesions: nodules, abscesses, and fistulas. A direct association was observed between TEWL in inflammatory nodules and IHS4 stage. In fistulas, a direct association was observed between TEWL and smoking. A trend of increasing TEWL values was observed as a function of Hurley stage.

Conclusion: HS lesions have higher TEWL, and erythema compared to healthy perilesional skin. This reflects epidermal barrier dysfunction dependent on the severity of inflammatory activity. These results could be useful to develop objective classification systems for the severity and degree of involvement of HS or to help in the development of vehicles for specific drugs, antiseptics and dressings for the treatment of the disease.



Abstract N°: 5597**Good or bad? Botulinum toxin in hidradenitis suppurativa**Karina Polak¹, Tomasz Muszyński², Aleksandra Frątczak³, Bartosz Miziołek³, Beata Bergler-Czop³

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Introduction & Objectives:

Hidradenitis suppurativa (HS), also known as acne inversa, is a chronic dermatological condition, characterized by the occurrence of inflammatory nodules, abscesses, fissures and scarring. Various treatment methods are used in its management, including both topical and systemic therapies as well as surgical interventions. Our aim was to investigate current evidence on botulinum toxin in the treatment of hidradenitis suppurativa.

Materials & Methods:

We performed review of literature in EMBASE and MEDLINE databases including keywords such as 'botulinum toxin', 'botox', 'hidradenitis suppurativa', 'acne inversa'. The searching was as broad as possible, including Emtree and MESH approaches, conducted according to the PRISMA guidelines. The following inclusion criteria were applied: original trials, case reports, case series with botulinum toxin use in hidradenitis suppurativa treatment, with or without any concomitant treatment methods, published in English until May 2022. 18 results were identified in EMBASE, 1 in MEDLINE and 50 in both databases and given further analysis.

Results:

The results that matched the inclusion criteria were analyzed concerning 1) type of botulinum toxin used, 2) number of units per procedure, 3) HS initial severity and post-procedural results, 4) concomitant therapies, 5) duration of the post-treatment effect, 6) patients quality of life. Both botulinum A and B toxins were found to improve the course of hidradenitis suppurativa and patients quality of life; also, botulinum toxin managed to reduce the hyperhidrosis present in some patients. No major side effects were noted during the therapy. The effect lasted for several months.

Conclusion:

Botulinum toxin seems to be a safe and effective treatment in patients with HS, not only improving the course of the disease, but also improving patients quality of life. It can be either used in monotherapy or combined with other methods of treatment.



Abstract N°: 5737**Exploring the Efficacy of Secukinumab as a Viable and Successful Treatment Option for Hidradenitis Suppurativa**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic inflammatory condition that primarily affects the intertriginous areas of the body and is characterized by the formation of inflammatory nodules, abscesses, skin tunnels, and scarring. The prevalence of HS in Europe varies between 0.001 and 1.4 %. HS exhibits a higher prevalence among women and is most commonly observed during the third and fourth decade of life. The widely used Hurley classification system categorizes HS into three stages: stage I, with isolated or multiple abscess formations; stage II, involving separate abscesses, fistulas, and scars; and stage III, characterized by interconnected and confluent abscesses, fistulas, and scars throughout the affected area. HS significantly impacts quality of life, causing emotional distress due to pain, discomfort, and disfiguring changes.

HS starts with cutaneous alterations around hair follicles, activating innate and adaptive immune cells and involving pro-inflammatory cytokines as TNF, IL-1 β , and IL-17. The persistent and unregulated immune response leads to intense pain, discharge of pus, irreversible tissue harm, and scarring. Dysregulated Th17 cell axis and elevated IL-17A drive neutrophil recruitment and sustain inflammation. Secukinumab, an IL-17A-targeting biologic, effectively addresses these imbalances. This study aims to demonstrate the success of treating a case series with secukinumab.

Materials & Methods:

Our case series study was conducted in the IInd Department of Dermatology, at Colentina Clinical Hospital in Bucharest, within a national patient support program.

Results:

We share our experience employing secukinumab in a case series of seven complex patients diagnosed with moderate to severe HS (Hurley stage II-III), who have previously encountered unsuccessful treatment outcomes with conventional approaches. We gathered various types of information, including epidemiological data, clinical characteristics, pain intensity, Hurley stage, laboratory findings, and previous treatment outcomes. Following the analysis of data obtained from each patient and their clinical presentation, the treatment protocol involved administering a loading dose of 300 mg subcutaneously on a weekly basis for five weeks, followed by a maintenance dose of 300 mg every 2 weeks.

Significant improvement has been witnessed in select patients, with treatment outcomes evaluated using the Hidradenitis Suppurativa Clinical Response Score (HiSCR) after a 12-week period. Additionally, patients reported positive changes in their dermatological quality of life index (DLQI) and visual analogue scale (VAS) scores. These findings underscore the favourable influence of the therapy on multiple parameters, establishing secukinumab as a viable and advantageous option.

Conclusion:

In conclusion, although managing hidradenitis suppurativa remains challenging, there has been an increase in awareness of the condition in recent years, resulting in improved diagnosis and treatment options. Support programs for individuals with hidradenitis have also emerged. The impact of HS on an individual's quality of life is significant, therefore, early detection, prompt and effective medical intervention are crucial. Biologic therapies such as secukinumab, offer viable options with a high rate of success for the benefit of our patients.

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Abstract N°: 5772**Case series of 3 patients with hidradenitis suppurativa successfully treated with bimekizumab**

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Introduction & Objectives: Bimekizumab, the first and only dual selective inhibitor of IL-17 A and IL-17 F, has been approved for moderate to severe plaque psoriasis and completed phase 3 clinical development in hidradenitis suppurativa. In hidradenitis suppurativa phase 3 clinical trials, bimekizumab demonstrated statistically significant and clinically meaningful improvements over placebo at week 16, measured by HiSCR50 and HiSCR75, with a favorable safety profile. Due to its recent commercialization, the effectiveness of bimekizumab in real-world clinical practice is still being evaluated. We present a case series of 3 patients with HS successfully treated with bimekizumab in our clinical practice.

Materials & Methods: A retrospective analysis was done including patients with hidradenitis suppurativa treated with bimekizumab and followed according to current clinical practice in our hospital. Hidradenitis suppurativa activity scores, including HiSCR (Hidradenitis Suppurativa Clinical Response) and IHS4 (International Hidradenitis Suppurativa Severity Score System), were assessed at baseline and week 16, while improvements in quality of life were evaluated using DLQI (Dermatology Life Quality Index) score. We also reported on safety information.

Results: We present data from three patients with hidradenitis suppurativa treated with bimekizumab every four weeks in routine clinical practice conditions. The three patients were Hurley stage III and had failed previous biological treatment with adalimumab. All patients treated with bimekizumab showed rapid and sustained improvements, with a significant reduction in the number of nodules, abscesses, draining fistulas, and suppuration. Bimekizumab was well-tolerated, with no remarkable adverse events identified. Clinically meaningful improvements were seen in our three patients, irrespective of their profile or the lesions' location. Additionally, patients reported substantial improvements in health-related quality of life after initiating treatment with bimekizumab.

Conclusion: In our experience, bimekizumab is effective in treating hidradenitis suppurativa in clinical practice and well tolerated. Its unique mechanism of action leads to rapid and clinically meaningful improvements that result in better outcomes for patients living with hidradenitis suppurativa.

Abstract N°: 5780**Rosacea in the skin of colour : Epidemiological, clinical, dermoscopic profile and therapeutic evaluation**

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Introduction & Objectives:

Rosacea is a benign chronic centrofacial inflammatory condition frequently encountered in women. In the literature, light phototypes are mostly described comparing to darker phototypes. It associates functional signs causing a variable discomfort. The cutaneous signs of vascular, inflammatory or phymatous type and sometimes ocular signs can engage the visual prognosis. The aesthetic damage can be important with an alteration of the quality of life, justifying an adapted management.

The objective of our study is to describe the clinical and epidemiological profile, the dermoscopic features and the evolution, of rosacea insisting on the particularities of patients with skin of colour.

Materials & Methods:

This is a prospective mono-centric study with a descriptive aim on 80 cases of rosacea collected at the consultation of the Dermatology and Venereology Department of the Ibn Sina University Hospital of Rabat over a 2-year period from December 2020 to January 2023.

Results:

The age group between 25 and 55 years was the most represented with a significant female predominance and 17.5% of familial forms. The main comorbidities were: migraine (21,25%), frontal fibrosing alopecia (13,75%), HP gastritis (12.5%), hypertension (10%), seborrheic dermatitis (7.5%), type II diabetes (5%) and inflammatory bowel diseases(2.5%). The most reported triggers were sun exposure (93,75%), temperature change (63,75%) and stress (58,75%). Transient facial erythema and stinging sensation were the most described symptoms.

88% patients have darker phototype. 40% of our patients had erythematotelangiectatic rosacea, 36.25% had papulopustular rosacea, 21.25% had only flushing and only 2 patients had rhinophyma. The skin lesions were bilateral in all our patients and were mainly located on the cheeks, then on the nose and forehead. The most common dermoscopic findings were an erythematous background and polygonal and linear vessels. Ocular manifestations were found in 33.75% of cases, mainly dry eyes and chronic blepharitis.

General measures and photoprotection were always recommended in patients with rosacea regardless of the clinical stage; alone in the flushing stage, combined with dermocosmetics and/or topical metronidazole in erythematotelangiectatic rosacea, and with topical metronidazole and/or doxycycline in papulopustular forms. In the rhinophyma stage, surgery was indicated. The papulo-pustular phenotype had the best response. The combination of topical metronidazole and cyclines in the papulopustular form was the most effective. Vascular laser and intense pulsed light-based therapy showed spectacular results.

Conclusion:

Our study highlights a great proportion of rosacea in patients with skin of colour. This will enable us to develop and adopt a codified approach for an appropriate diagnosis and treatment in order to improve the quality of life.

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Abstract N°: 5799**Faecal Calprotectin Levels in Patients with Hidradenitis Suppurativa**

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Faecal Calprotectin Levels in Patients with Hidradenitis Suppurativa

Introduction & Objectives: Hidradenitis Suppurativa (HS) is a chronic inflammatory skin disease that affects the hair follicles in areas rich in apocrine glands, such as the axillary, inguinal, and anogenital regions. The clinical presentation includes painful nodules, abscess formation, and scar tissue. HS is often associated with other inflammatory diseases such as pyoderma gangrenosum (PG) and inflammatory bowel disease (IBD). Crohn's disease, a form of IBD, can exhibit similar clinical features to anogenital HS. Faecal calprotectin is a biomarker commonly used in gastrointestinal disorders. Elevated calprotectin has been observed in HS patients without IBD.

This study aimed to evaluate faecal calprotectin levels in HS patients with severe HS with gluteal/anogenital involvement.

Materials & Methods: A total of 19 patients with different phenotypes of severe HS were included in the study: regular phenotype (n=12), syndromic with PG (n=3), and anogenital (n=4). Disease severity was assessed using the Hurley and IHS4 scales. All patients had involvement of the anogenital region, with four patients having predominantly anogenital involvement. Calprotectin levels in stools were tested.

Results: Elevated levels of calprotectin were observed in 7 patients (37%). Subsequent diagnostic tests and consultations revealed that three of these patients had Crohn's disease.

Conclusion: Faecal calprotectin can be elevated in both HS and Crohn's disease. Our results suggest that using calprotectin as a screening tool for IBD in patients with HS can be useful. However, it is important to consider that calprotectin levels can be increased in severe HS, irrespective of the presence of IBD.



Abstract N°: 5816**Epidemiological and Clinical Characteristics of Adult Patients with Hidradenitis Suppurativa in Germany: Baseline data from the German Hidradenitis Suppurativa Registry HSBest**

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Introduction & Objectives:

Hidradenitis suppurativa (HS), also known as acne inversa, is a relapsing chronic inflammatory skin disease, which leads to a significant reduction in quality of life due to the formation of painful nodules, abscesses and tunnels with consecutive scarring. The German Hidradenitis Suppurativa Registry HSBest records patient characteristics as well as disease manifestation and therapy in the long-term course. Baseline data of patients enrolled until March 31, 2023 will be presented.

Materials & Methods:

HSBest is a prospective, non-interventional observational registry enrolling adult patients (≥ 18 years) with clinically diagnosed hidradenitis suppurativa regardless of severity and treatment regimen. Patients are followed up over a five-year period and treated according to site-specific clinical routine. The baseline data presented were collected at inclusion visits between March 2020 and March 2023 at the Institute for Health Services Research in Dermatology and Nursing (IVDP) of the University Medical Center Hamburg-Eppendorf.

Results:

In the first three recruitment years between March 2020 and March 2023, $n=619$ patients were enrolled in HSBest. The majority of participants were female (59.3%; $n=367$) and of Caucasian origin (84.1%; $n=491$), suffered from moderate to severe disease manifestation (Hurley stage II or III; 75.1%), and had undergone surgery for their HS (67.7%). The mean BMI of the registry cohort was $29.7 (\pm 7.0)$. 54.5% ($n=317$) of patients reported regular tobacco smoking. The following comorbidities were detected: Depression (24.2%; $n=150$), pilonidal sinus (23.4%; $n=145$), inflammatory bowel diseases (11.6%; $n=72$), arthritis (11.0%; $n=68$), chronic dental or gingival disease (11.6%; $n=58$), psoriasis (10.0%; $n=62$), polycystic ovary syndrome (9.5%; $n=28$), and diabetes (6.0%; $n=37$). The dermatologic quality of life index (DLQI) averaged $10.3 (\pm 8.0)$.

Conclusion:

In this registry cohort of HSBest, the majority of patients suffered from a moderate to severe form of HS combined with severe distress. In addition to disease-specific skin lesions, high prevalences of highly distressing comorbidities were striking. A large proportion of patients are characterized by a disease-promoting lifestyle, reflected in obesity and nicotine abuse.



Abstract N°: 5851**Hidradenitis suppurativa during a treatment of juvenil idiopathic arthritis with adalimumab: Paradoxal or sign of a syndrome**Zeynep Topkarcı¹, Sezgin Şahin², Özgür Kasapçopur²¹Bakirkoy Dr. Sadi Konuk Training and Research Hospital, Dermatology, Istanbul, Türkiye, ²Istanbul University-Cerrahpaşa, Cerrahpaşa Faculty of Medicine, Pediatric Rheumatology, Istanbul, Türkiye**Introduction & Objectives:**

Hidradenitis suppurativa (HS) is a chronic, inflammatory skin disease usually occur after puberty. Knowledge on pediatric onset HS is still limited and also specific guidelines for the treatment of pediatric HS are lacking. Follicular occlusion followed by follicular rupture has been shown to be crucial to HS development; also an increased and imbalanced cytokine production, such as interleukin 17 and tumor necrosis factor- α , may play a role in HS. Paradoxical reactions defined as the occurrence, during treatment with biologics, of a disease that is usually responsive to this class of drug. Psoriasiform reaction, HS, uveitis, inflammatory bowel diseases, and pyoderma gangrenosum were the most commonly described paradoxical reactions during biological treatment. Adalimumab is the only biologic agent formally approved for the management of moderate to severe HS. Regarding the need for adalimumab discontinuation or not, the recently proposed algorithm management of paradoxical HS proposed to continue adalimumab in mild forms and discontinue treatments only in the case of progressive worsening or in more severe forms. Dapsone is recommended in UK and EU management guidelines for the treatment of mild-to-moderate HS (Hurley stage I and II) where standard first- or second-line agents fail. Dapsone showed good results on the resolution of HS lesions.

Case: A 9-year-old male patient was admitted to our clinic with axillary HS lesions. He was diagnosed with juvenile idiopathic arthritis at the age of 7 and using adalimumab and leflunomide for 2 years. HS lesions started to occur in the last 2 months and gradually became more severe. Since the patient's lesions were moderate and pediatric rheumatologist did not consider to discontinuation of adalimumab and leflunomide treatment, Dapsone 50 mg/day alternately were started. At the end of 6 months, there was a significant regression in HS lesions.

Conclusion: Herein, we report for the first time, to our knowledge, a 9-year-old boy presenting with paradoxal HS due to adalimumab therapy for juvenile idiopathic arthritis, with with excellent response to dapsone.



Abstract N°: 5855

Takayasu's arteritis following Hidradenitis suppurativa in a young woman: A case report of a rare association.

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Introduction & Objectives:

Hidradenitis suppurativa is a chronic inflammatory pathology of the skin that is characterized by deep nodules, recurrent painful abscesses, fistulas, sinus tracts, and scars. These findings are most often seen in body areas rich in apocrine glands. Its pathophysiology is related to the occlusion of follicles followed by their rupture and also immune responses.

Takayasu's arteritis is characterized as a vasculitis involving mainly the left subclavian, aorta, common carotid, renal and vertebral arteries. Its clinical picture involves limb claudication, asymmetry of the systolic blood pressure and of the pulses in the limbs, and a murmur.

Finally, ankylosing spondylitis is also an inflammatory disease that affects the connective tissues. This pathology is marked by inflammation of the joints, notably of the spine.

The present study aims to report a case of association of inflammatory diseases in a young patient who presents, at the same time, the 3 pathologies previously described.

Materials & Methods:

A 25-year-old female patient from Fortaleza-CE presented with multiple erythematous lesions located in the lower limbs and genital region in childhood. Evolved with pruritus, bleeding and pus. The lesions remained with periods of remission, but without a conclusive diagnosis. At 16 she was diagnosed with hidradenitis suppurativa. Initiated treatment with adalimumab. At 22, intense pain emerged in the lumbar and sacral regions. It evolved, also affecting the thorax and upper limbs. The case showed an inflammatory course and the diagnosis was ankylosing spondylitis. The medication was changed to endovenous Infliximab to improve disease control. Nausea and intense vomiting associated with pain in the upper abdomen and fever appeared. It was found thickening and irregular contours in the left subclavian arteries and arterial trunk, compatible with takayasu's arteritis. The patient has no family history of autoimmune disease.

Results:

The mechanism of hidradenitis suppurativa contains a number of immune factors, with a positive regulation of several cytokines, such as tumor necrosis factor (TNF)- α , interleukin (IL)-1, IL-17, IL-23, contributing to the inflammatory picture. Takayasu's arteritis is a chronic vasculitis of large vessels that may be associated with cutaneous manifestations such as erythema nodosum and pyoderma gangrenosum, with clinical presentation resulting from ischemia due to stenosis or occlusion of the affected arteries.

Conclusion:

Hidradenitis suppurativa is an uncommon disease, with uncertain prevalence in different studies, and is

commonly associated with inflammatory diseases such as Ankylosing Spondylitis, while vasculitis such as Takayasu's arteritis are an uncommon heterogeneous group of rare diseases. The onset in conjunction with Takayasu's Arteritis is poorly described in the literature, with only one published case found in the data resource. Therefore it shows the necessity of more studies to elucidate this rare association.

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Abstract N°: 5871**Hidradenitis suppurativa, axial spondylarthritis, and pyoderma gangrenosum successfully treated with bimekizumab**

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Introduction & Objectives: Bimekizumab is the first dual selective inhibitor of IL-17 A and IL-17 F. Bimekizumab has recently been approved for the treatment of moderate to severe plaque psoriasis and has completed with positive results phase 3 clinical development in hidradenitis suppurativa (HS), psoriatic arthritis and axial spondylarthritis (axSpA). In HS phase 3 clinical trials, bimekizumab achieved statistically significant and clinically meaningful improvements over placebo in signs and symptoms of HS at week 16, as measured by HiSCR50 and HiSCR75, with a favorable safety profile. We present the case of a female patient with HS, axSpA, and pyoderma gangrenosum (PG) successfully treated in clinical practice with bimekizumab 320mg every four weeks (Q4W).

Materials & Methods: A 39-year-old female patient with a history of axSpA since puberty and a secondary HS, developed after a biological treatment, came to our Dermatology Unit, referring worsening of both conditions. She has been previously treated with etanercept and certolizumab pegol for her axSpA, followed by adalimumab and ixekizumab for both conditions. After two years of treatment with ixekizumab 80mg Q2W, the patient continued to develop new HS lesions with about 50 active lesions in the groins, armpits, submammary and pubic areas, abdomen, flanks, and lower back. Approximately 25% of these HS lesions were draining. Joint pain was also not being controlled, with intense pain in the lower back, left hip, left knee, and in the foot, costochondral and sternocostal joints. During ixekizumab treatment, the patient presented several episodes of candidiasis treated with fluconazole and, in August 2022, debuted with a PG lesion in the left thigh.

Results: Due to the poor control with ixekizumab of both HS and axSpA, in December 2022, we decided to switch treatment to bimekizumab 320mg Q4W. In the first follow-up visit, after just three months of bimekizumab treatment, the patient had achieved a 75% improvement in HiSCR (HiSCR75), and the pain Visual Analogue Scale (VAS) had improved from 6 out of 10 at baseline to 1. There were no draining lesions or new HS lesions. The PG lesion also resolved. AxSpA symptoms were controlled with no joint pain or inflammation. Bimekizumab treatment was well tolerated, with two episodes of mild candidiasis resolved with fluconazole. The patient continues treatment with bimekizumab 320mg Q4W with good control of HS and axSpA, no new PG lesions have appeared. She's being further studied for a possible SAPHO, PAPA, PASH, or PAPASH syndrome.

Conclusion: Bimekizumab is effective in the treatment of hidradenitis suppurativa and axial spondylarthritis in clinical practice, with no new safety alerts identified. Its novel mechanism of action resulted in rapid and clinically meaningful improvements that translated into better outcomes for the patient. In our experience, bimekizumab was also effective for the treatment of pyoderma gangrenosum.

Abstract N°: 5876**Real-world efficacy and tolerability of secukinumab in hidradenitis suppurativa: A case series of 15 patients from a tertiary university hospital**

Aikaterini Liakou¹, Magdalini Kalamata¹, Andreas Tsantes¹, Eythymia Agiasofitou¹, Soultana Vladeni¹, Aggeliki Dragoutsou¹, Valentina Mpompou¹, Ourania Kotsafti¹, Elina Chatzidimitriou¹, Alexander Stratigos¹

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Introduction & Objectives: Hidradenitis suppurativa (HS) is a chronic inflammatory skin disorder characterized by painful nodules, abscesses, and sinus tracts. Secukinumab, an Interleukin (IL)-17A targeting monoclonal antibody, has demonstrated promising outcomes in clinical trials for HS. However, the assessment of its effectiveness and tolerability in real-world settings is essential.

Materials & Methods: We report a case series of 15 adult patients diagnosed with moderate to severe HS who received secukinumab in our institution. Subcutaneous injections of secukinumab 300 mg were administered at weeks 0, 1, 2, 3, and every 4 weeks thereafter. Disease improvement was evaluated using the International Hidradenitis Suppurativa Severity Score (IHS4) and the Dermatology Life Quality Index (DLQI) at baseline and week 16.

Results: The study included 15 participants with a mean age of 42 years, predominantly males (66.7%). Eighty per cent of the patients (80%) were smokers. The cohort had a mean body mass index (BMI) of 30 kg/m². All patients had received s.c. adalimumab before, with either no improvement, or loss of efficacy. At baseline, 14 patients had severe HS disease (Hurley III), and one had Hurley II. At week 16, the mean IHS4 score improved from 17.6 to 6.9, and the mean DLQI score improved from 22.2 to 11.6. Notably, no serious adverse events related to secukinumab were reported.

Conclusion: This case series of 15 patients provides real-world evidence supporting the efficacy and tolerability of secukinumab in managing moderate to severe HS. Our findings underscore the potential of secukinumab as a valuable therapeutic option for HS patients. Larger studies with extended follow-up periods are needed to validate and strengthen these observations.



Abstract N°: 5887**Dowling-Degos disease and hidradenitis suppurativa: fortuitous or causal association?**Chaima Massaoudi¹, Nouredine Litaïem¹, Soumaya Gara¹, Ines Chabchoub¹, Mariem Jones¹, Zeglaoui Faten¹¹hospital charles nicolle, hospital charles Nicolle, Tunis**Introduction & Objectives:**

Dowling-Degos disease (DDD), also known as reticular pigmented anomaly of the flexural surfaces, is a rare autosomal dominant genodermatosis with variable penetrance. While DDD has been associated with conditions such as infundibular cysts, keratoacanthomas, and squamous cell carcinoma, the co-occurrence of DDD with Hidradenitis suppurativa (HS) has been reported in less than 20 clinical cases

Materials & Methods:

Herein, we report 4 original cases of DDD concomitantly affected by HS.

Results:

We enrolled 4 patients, consisting of 2 women and 2 men, with a mean age of 43 years. Among the patients, three reported a family history of HS and 2 reported a family history of DDD. The mean age of onset for HS was 22 years. Two of the patients were smokers, and one patient was overweight with a BMI of 29. All patients presented with symmetrically distributed hyperpigmented macules with a reticular disposition, primarily affecting the flexures. The main sites of involvement were the axilla (4 patients), inguinal folds (3 patients), submammary folds (2 patients), and the neck (3 patients). Hair and nails appeared normal. Histological examination of all patients revealed irregular epidermis, acanthosis, and elongation of rete ridges with increased basal melanin pigmentation. Active acne, nodules, abscesses, and sinus tracts were observed in all patients. The affected body parts were primarily the axillae (4 patients), inguinal folds (4 patients), submammary folds (2 patients), and the neck (4 patients). Two patients were classified as Hurley stage II, while the other two patients were classified as Hurley stage III.

Conclusion:

DDD is clinically characterized by reticulate hyperpigmentation primarily affecting the flexures, including the axilla, inguinal folds, submammary folds, and neck. The condition may also affect the face, chest, and wrists. The pigmentation tends to be symmetrical and progressive, with exacerbation during the summer months and pregnancy. While DDD lesions are typically asymptomatic, occasional pruritus may occur. The co-occurrence of HS and DDD was first reported in 1990. HS is a multifactorial disease characterized by recurrent abscesses and fistulas, resulting in scarring within skin folds, primarily affecting young individuals. It is hypothesized that a single underlying defect in follicular proliferation may explain the simultaneous occurrence of these conditions. Therefore, mutations in gamma-secretase inhibitors of the NOTCH signaling pathway are suggested to contribute to the development of epidermal and follicular abnormalities.

Haut du formulaire

Bas du formulaire



Abstract N°: 5900**Is There An Association Between Hidradenitis Suppurativa and Atherogenicity: A Case Control Study**Hatice Busra Karaman^{*1}, Eylül Ceren Bal Bayazitli¹, Gulhan Aksoy Sarac¹, Onur Acar², Akin Aktas¹¹Ankara Bilkent Şehir Hastanesi, Türkiye, ²Orhangazi ilçe sağlık müdürlüğü, ankara, Türkiye**Introduction & Objectives:**

Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease that is characterized by deep-seated nodules, abscesses, fistulae, sinus tracts, and scars in the axilla, inguinal area, submammary folds, and perianal area. HS is associated with dislipidemia and other risk factors for cardiovascular disease that contribute to poor health and mortality risk. The aim of our study was to determine whether atherogenic indexes is associated with hidradenitis suppurativa and severity of disease.

Materials & Methods:

This is a case-control study that enrolled 100 patients and 100 controls of similar age and sex were included. Lipid profile, C reactive protein (CRP) and atherogenic indices including the atherogenic index of plasma (AIP), Castelli's Risk Index (CRI-I and CRI-II), atherogenic coefficient(AC) were assessed in both groups. The severity of HS was measured by the Hurley scoring system.

Results:

There are statistically significant differences in serum lipid levels between the HS and control groups. Patients with HS had significantly higher serum triglyceride levels, NHC value and lower HDL levels than control group. CRP value which is an inflammatory marker was significantly higher in patients with HS than control group. Evaluated as atherogenic risk indices; AIP, CRI-I, CRI-II and AC were found to be significantly higher in patients with HS than in the control group.

According to the accepted cut-off values, atherogenic index values were grouped as high and low risk. In the chi-square analysis, patients with HS were statistically significantly in the high-risk group, in all atherogenic indices including AIP, CRI-I, CRI-II and AC.

Considering association between severity of HS and the atherogenic indices, there was a weak correlation between Hurley stage and AIP.

Conclusion:

In this study, the atherogenic lipid indices and CRP were significantly higher in HS patients compared to controls.



Abstract N°: 5925**Effectiveness of bimekizumab (BMZ, double Anti-IL-17 MAb blocker) in Hidradenitis Suppurativa : a real life study (44 cases)**

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Introduction & Objectives: The only approved biotherapy in the world for HS is still adalimumab. The effectiveness is not very high, as about 50 % of the patient reached the HiSCR in Pioneer studies. An anti-IL-17 Mab is about to be approved (secukinumab) with similar results (HiSCR between 50 and 60 %). There is an urgent need for other systemic or biological treatments. As for TNF- α , IL-17 levels are elevated in tissue samples and blood in most patients, with both the A and F isoforms, precisely triggered by BMZ. It seemed logical to try BMZ in HS, and the phase III studies have been recently presented (Be Heard trials; AAD 2023). We present here the first real life study including 3 French expert centres involved in our national network (RESOVERNEUIL) in this open trial.

Materials & Methods: We included in an open study 44 patients, 27 women and 17 men, mean age 34.4 y-o (17-54). HS mean duration: 9.3 years (5-19). Mean weight: 72 kgs (51-112)

Hurley stages: 25 Hurley III, 18 Hurley II, and 1 Hurley I. BMZ was initiated as for psoriasis: 320 mg every month 4 months followed by 320 mg every 2 months.

Average IHS4 at beginning: 18 (5-26).

All but one were smokers (mean 12 pack-years).

All patients were in therapeutic failure, after multiple treatments: all of them had received multiple antibiotics before, following the recommendations (including sometimes ertapenem). All had received the 2 biologics* anti-TNF- α (infliximab and/or adalimumab) and secukinumab before (4 to 22 months).

The primary endpoints were the HiSCR and the ISH4 score.

Results: 28 out of 44 (64 %) had a favourable therapeutic response and reached the HiSCR in 3 months. The ISH4 fell from 19 to 9 in 4 months.

In a follow up average of 7 months, we observed a loss of response in 8 cases (18 %), rescued in 5 cases by sewing back the intervals at 2 weeks.

The results didn't seem to be influenced by smoking status or weight in this cohort.

Conclusion: An international phase III trial (Be Heard trials; BMZ vs placebo) was recently presented (AAD 2023), until 48 weeks. The main results of our real-life cohort seem consistent with the data provided in Be Heard trials: HiSCR 50: 50 to 53,8 % response at W 16; 52 to 67,6 % at W48. The efficacy of BMZ seemed nevertheless to decrease over time in real life, for 18 % of the initial responders. Interestingly, secukinumab (the other anti-IL-17) failures did not appear to predict a secondary failure at BMZ. Indeed, blocking anti-IL-17 antibodies are very rare, reported in less than 1 %. Therefore, BMZ seem to be an interesting option after failure to the 2 other biologics. 2 outstanding issues: the optimal interval between 2 injections (2 or 4 weeks ?) and the subsequent positioning in

1st line of treatment, like the 2 other biologics.

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Abstract N°: 6019**Burden of Treatment in Severe Acne Vulgaris**Lisa Kiely^{*1}, Cathal O'connor¹, Dr.Aysha Almoosa¹, Emer Dight¹, Michelle Murphy¹¹South Infirmary Victoria University Hospital, Cork, Ireland**Introduction & Objectives:**

Acne vulgaris is a common skin condition resulting in a significant personal burden to patients. Although the burden associated with the disease itself has been well reported but there is a paucity of data examining the burden of treatment (BOT) in acne.

Materials & Methods:

We performed a prospective single centre study in a tertiary dermatology department in Ireland. Patients attending the dermatology department for acne management were invited to complete a validated burden of treatment questionnaire with additional qualitative components, modified for use in acne.

Results:

Fifty patients responded to the questionnaire. 68% (n=34) of respondents were female, 32% (16) were male with a mean age of 22.6 years (range 16-45 years). 82% (n=41) of patients were on treatment with isotretinoin at the time of the study with a further 18% (n=9) on oral antibiotic therapy. The average BOT for antibiotics was 4.5/10 (range 2.5 – 6.9) and for isotretinoin was 3.8/10 (range 0.69 – 6.9).

The greatest challenges reported with topical treatment were skin sensitivity and dryness and lack of efficacy. The greatest challenges reported with antibiotic therapy were side-effects including gastrointestinal upset, limited efficacy, and the requirement for long-term treatment. Xerosis was described as the greatest challenge associated with isotretinoin, however 58.5% of patients believed their overall BOT was decreased with isotretinoin with statements such as "I really wish I went on isotretinoin a very long time ago."

Conclusion:

Acne results in a significant physical and psychosocial burden to patients. Patients on isotretinoin rated the BOT of isotretinoin as less than that of antibiotics and topical therapies. Prescribers should be aware of the BOT of various treatments to optimise treatment for acne.



Abstract N°: 6046**assessing quality of life in hidradenitis suppurativa**

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic inflammatory disorder of the hair follicle. Its painful and suppurative character makes it a disabling condition for most patients. It is a disfiguring dermatosis that causes aesthetic discomfort resulting in a significant impairment in the quality of life (QOL).

The aim of our study was to assess the impact of HS on the QOL of our patient.

Materials & Methods:

We conducted a monocentric cross-sectional study over an eight-month period. We included all patients suffering from HS who visited our department in the study period. Patient suffering from psychiatric or organic diseases that could considerably interfere with quality of life were not included in our study. QOL was assessed using the Dermatology Life Quality Index (DLQI) for patients aged over 16 years old and the Children's Dermatology Life Quality Index (cDLQI) for patients under 16 years old.

Results:

Thirty patients were included in the study. Among them 73% were males. Their ages ranged from 13 to 56 years. Two patients were under 16 years old. Active smokers counted for 70% of patients. Family history of HS was recorded in 23% of cases. The mean age at the onset of the disease was 23.27 ± 8.913 years [13 – 46]. The mean evolution time was 7.9 ± 9.144 years [0 – 35]. The most affected areas were the axillary (80%), inguinal (40%) and gluteal (37%) regions. Patients with two affected areas or more counted for 86%. The mean lesions were: Inflammatory nodules (73%), fistulas (53%), hypertrophic scars (53%) and non-inflammatory nodules (50%). All severity stages were found in our population: Hurley I (43%), Hurley II (40%) and Hurley III (17%). Symptoms and signs recorded were: pain (100%), pruritus (70%), suppuration (53%), malodor (53%) and bleeding (33%). Pain intensity varied from mild to moderate (63%) to severe (37%). The intensity of malodor varied from very mild to mild (31%) to intense to very intense (69%). Patients developed one to six flares per trimester. The main comorbidities found were: overweight/obesity (47%), acne conglobata (27%), dissecting cellulitis of the scalp (13%) and metabolic syndrome (10%). The mean DLQI was 10.96 ± 7.441 [1 – 25]. HS had an important to very important impact on the QOL in 50% of patients. The impact was mild to moderate in 43% of cases. The impact of HS on the QOL of the children was mild and moderate respectively. Factors associated with QOL impairment were the presence of fistulas ($p = 0.02$), suppuration ($p = 0.022$), malodorous discharge ($p = 0.02$), Hurley III stage ($p = 0.014$). The worse the pain, the bigger is the impact on QOL ($p = 0.002$).

Conclusion:

A female predominance was recorded in most studies. A male predominance was found in Asian and Turkish studies. In most of the studies, more than 60% of patients were active smokers. Onset was reported in the second decade for most studies. The axilla was the most affected area. The most frequent lesion was the nodule. According to previous studies, the most bothersome symptoms were pain, pruritus and malodorous discharge. Obesity was the main reported comorbidity. HS was reported to have an important impact on QOL of patients. In

the literature, impaired QOL was associated with pain intensity, the Hurley stage, the number of affected areas and the affected folds.

In summary, HS is a chronic disease that has a significant impact on the QOL of patients making psychological support as necessary as medical treatment.

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Abstract N°: 6092

Quality of life in acne vulgaris: Relationship to clinical severity and gender

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Introduction & Objectives: Acne vulgaris is the commonest skin condition affecting more than 80% of individuals at some stage of their life. In many patients, rather than being a self-limiting condition of adolescence, acne vulgaris acquires all the characteristics of a chronic disorder as defined by the World Health Organization, viz a prolonged course, a pattern of recurrence or relapse, manifesting as acute outbreaks or slow onset, and a psychological and social impact on the individual's quality of life.

Though impairment in the quality of life of patients of acne vulgaris is well established, its direct correlation with clinical severity has not been established. The aim of this study was to delineate the factors contributing to the impairment of quality of life and to ascertain their correlation, if any, with the clinical severity of acne vulgaris and the gender of the patients.

Materials & Methods: This was a cross-sectional, questionnaire-based study in a cohort of 60 adolescents (13-19 years old) of both sexes with acne vulgaris attending the outpatient department of the Clinic for dermatovenerology in six months. A physician measured the severity of lesions using the IGA scoring, and all subjects were divided into three groups with mild, moderate, and severe clinical pictures. Evaluation of the quality of life in acne vulgaris sufferers was carried out with a specific CAD index (Cardiff Acne Disability Index), which consists of five questions about the psychological impact of acne on the quality of life.

Data analysis was performed using statistical software (SPSS, version 20.0, SPSS, Inc. Chicago, IL). Data were analyzed descriptively, using ANOVA analysis of variance to determine differences between groups and t-tests for two independent samples to compare means between groups. The difference was considered statistically significant if $p < 0.05$.

Results: There were 32 (53.3%) female and 28 (46.7%) male patients in the examined group, with an average age of 16 years (range 13-19 years). From the total number of patients with acne vulgaris, 20 or 33.3% (8 females and 12 males) had mild acne (the first group), 28 or 46.7% (18 females and 10 males) had moderate acne (the second group) and 12** or 20% (6 females and 6 males) had severe acne (the third group). CAD values** indices expressed as mean \pm SD, i.e., median (range) in the first, second, and third groups were 6.30 ± 3.27 , 10.21 ± 3.07 and 12.33 ± 2.50 respectively ($p = 0.001$), in women 8.75 ± 3.30 , 11.77 ± 2.43 and 13.33 ± 1.53 ($p = 0.08$), and in men 4.66 ± 2.16 , 7.40 ± 1.82 , respectively 11.33 ± 3.21 ($p = 0.006$).

Conclusion:

In this study, the impact of Acne vulgaris on the quality of life of adolescents was closely related to the severity of the clinical picture of the disease. Namely, the adolescents of the second and third groups (severe forms of the disease) had a statistically lower quality of life compared to the respondents of the first group (milder forms of the disease). In contrast, the difference in the quality of life was not statistically significant between the second and third groups. It has also been shown that acne has a more significant impact on the quality of life in women.



Abstract N°: 6104**Comparison of hormone parameters and insulin resistance with the severity of the clinical picture of postadolescent acne and adult female acne**Danijela Dobrosavljevic^{*1}, Jelena Jeftic², Maja Stamenov³, Snezana Minic³, Vesna Dimitrijevic-Sreckovic⁴

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Introduction & Objectives: Acne is a chronic inflammatory disease of the pilosebaceous unit with non-inflammatory and inflammatory lesions in the clinical picture. Female acne can be classified into: persistent - which begins in the adolescent period, those that begin after the age of 25, and recurrent.

Materials & Methods: To examine the influence of hormonal status and insulin resistance on the severity of the clinical picture of patients with acne resistant to topical/systemic therapy. We examined post-adolescent acne (PA) (19-24 years) and adult female acne (AFA) (> 25 years) patients - the existence of polycystic ovaries, obesity and metabolic syndrome, and and therapeutic response in both groups.

Sixty-five female patients; 32 in the PA group and 33 in the AFA group. Hormonal status, biochemical analyzes and OGTT with insulinemia, HOMA-IR, siMS scores and pelvic ultrasound were performed. The severity of the clinical picture of acne in both groups was evaluated based on the Global Acne Score, as well as the Adult Female Acne Score (AFAST), including the GEA scale and submandibular score.

Results: In the PA group, Global Acne Score significantly correlated with LH/FSH ($p=0.005$) and elevated testosterone levels ($p=0.013$), with glycemic levels at 30' ($p=0.004$) and 60' ($p=0.019$). In the AFA group, AFAST GEA scale statistically correlated with reduced level of vitamin D ($p=0.002$), and the AFAST total score ($p=0.010$). There was a statistically significant difference in Global Acne Score and AFAST scores before and after therapy in both groups of subjects.

Conclusion: Disease severity scores in acne resistant to local and/or systemic antibiotic therapy show a correlation in relation to different parameters. The PA had correlation to insulin resistance parameters and clinical clearance of the lesions once the metformin and/or myositol with diet and non-sedentary life style were introduced. Etiopathogenically, according to the hormonal profile, these two groups of acne differ. They have in common the cure/significant improvement of disease severity scores when the existing metabolic disorder is also treated.



Abstract N°: 6123**Quality of life impairment in adults with acne: results from a cross-sectional survey.**Caroline Costa*¹, Athana Cavalcante¹¹Federal University of Piauí, Specialized medicine, Teresina, Brazil

Introduction & Objectives: Acne is the most common dermatosis in clinical practice. According to the epidemiological data, it is the eighth most frequent disease, on a global scale, with 9.4% of general prevalence, including adults and adolescents of various ethnic groups (1). Although the major of lay people and many doctors consider it as a simple and self-limited disease limited to adolescence period, acne may also affect different aspects of adult's life. Disorders of body image development, socialization and sexuality, in addition to anxiety and severe depression associated with suicidal ideation, have been associated with the disease (2,3,4,5).

Quality of life (QoL) questionnaires are useful tools to understanding how acne may harm patients in their daily activities. They may help physicians and healthcare professionals identify depressive disorders, facilitate adherence to treatment, and assess the effectiveness of therapy (6,7).

We aimed to assess how acne impairs quality of life (QoL) of adults assisted in a Dermatology outpatient.

Materials & Methods: We performed a single-centre, cross-sectional survey and enrolled 96 patients with acne. All participants were evaluated in the outpatient of a tertiary care hospital during a 24-weeks period and were older than 18 years old. Patients without active lesions at the time of the medical appointment, or who had only acne scars, were excluded. We applied the Cardiff acne disability index (CADI) questionnaire in a translated and validated version for use in patient's native language. An anonymous demographic questionnaire with questions about age, gender, marital status, home location, integration in the labour market and academic degree was also added. We assessed participants regarding presence of acne scars and also severity of acne, classifying it in mild, moderate or severe in accordance with physicians' evaluation.

Results: Among 96 participants of the sample, 75 (78.1%) were female. The mean age was (24.8 ± 6.94) years. There was a predominance of: single participants (n = 82 / 85.4%); subjects not included in the labour market (n = 67 / 69.8%); individuals who had completed high school (n = 64 / 66.7%); residents in urban area (n = 81 / 84.4%); and participants with moderate acne (n = 41 / 42.7%) and scars (n = 64 / 66.7%) (Table 1). The mean of the CADI score was 5.5 ± 2.88. Ranging from 0 to 14, a 0-5 CADI score translates into mild impairment of QoL; 6-10 score indicates moderate impairment; and 11-15, severe harm. We found a negative impact in QoL measured by CADI questionnaires in all participants of the study (n = 54 / 56.2%, mild QoL impairment; n = 36 / 37.5%, moderate impairment; n = 6 / 6.3%, severe impairment), but there was no association between the analysed socio-demographic or clinical variables and more impaired QoL (Table 2).

Conclusion: QoL impairment was mild or moderate in most of the sample, as reported in previous adult acne studies (8,9). Our findings did not show an association between increased QoL impairment and presence of acne scars or more severe disease. Results of QoL surveys may depend on patients' self-perceptions about the disease and individual subjective factors other than the severity of acne. QoL in acne patients may also be affected by social, behavioural, cultural and ethnic influences; job configuration; and also type of professional acne care. (10,11). In addition to this, a limitation of our study was sampling by convenience, not population-based, which can limit the generalization of results.



Abstract N°: 6135**Adult female acne: long-term follow-up after use of azelaic acid in the treatment, and during the maintenance phase**

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Introduction & Objectives: Adult female acne (AFA), a multifactorial disease, affects women over the age 25 years and it is characterized by more prolonged duration. The clinical presentation has some particular aspects such as predominance of facial mild or moderate involvement with inflammatory lesions in mandibular area, mentum, and neck. AFA impacts quality of life and requires a specific therapeutic approach, with maintenance therapy as an essential element.

Materials & Methods: A cross-sectional study including 40 women, aging from 25 to 44 yo, mean age was 32.7 (SD: 5.42) with mild to moderate acne, for 6 months, was conducted after approval by Institutional Research Ethics Committee and signature of Consent Form and Authorization for Images. At the end of treatment, we offer them the possibility of follow up for an additional 6 months as maintenance phase. During the first 6 months visits occurred monthly, and then every 3 months, completing 12 months of treatment. Clinical assessment consisted of anamnesis, photo evaluation, specific QoL questionnaire for acne (Acne-QoL), laboratory tests for control, including fasting glucose, CBC, serum levels of insulin, homeostasis model assessment (HOMA-IR), total cholesterol, LDL, HDL, triglycerides, AST, ALT, alkaline phosphatase, GGT, creatinine, urea, sodium and potassium, pregnancy test and hormonal tests (LH, FSH, total and free testosterone, SDHEA) at baseline and after 6 months. Treatment was performed with 15% azelaic acid (AZA) 15% gel twice a day isolate or in association with spironolactone (SPIRO) 100 mg/day for moderate acne. In the maintenance phase just 15% AZA was used.

Results: A total of 21 women wished to continue being followed up at the outpatient clinic. The following reasons were declared for no participation: long distance from home to hospital (N=5); not being able to leave work (N=4); moved to another city (N=1); no adherence (1), and no response to invitation (N=8). After 6 months, there was a significant improvement in total score and all domain scores of AcneQoL ($p < 0.001$). No hormonal abnormalities from laboratory tests were detected. The improvement was considered very satisfactory by the physician and all patients: IGA 2 to IGA 0 in 14 patients and IGA 3 to 0 in 7 patients (Table 1). The IGA 0 was maintained after 6 months. We also noticed an improvement in the acne induced pigmentation. AZA 15% gel acts as antimicrobial, anti-inflammatory, depigmenting, and mild comedolytic; it is also useful for post-inflammatory hyperpigmentation. Spironolactone is an aldosterone antagonist with anti-androgenic activity, blocking the androgen receptor and inhibiting androgen.

Conclusion: Maintenance therapy brings significant improvement in the reduction of lesions in women with mild and moderate adult acne. As much as possible, systemic therapy is the choice, and anti-androgens, particularly spironolactone, which is considered the first option in association with topical agents, such as 15% azelaic acid gel, used twice a day. This is the best topical regimen. Other topical anti-acne drugs can cause irritative dermatitis as adult women with inflammatory lesions have more sensitive skin and hyperseborrhea is not always present.

Table 1

Frequencies of IGA
IGA
2 to 0
3 to 0

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Abstract N°: 6180**Rosacea and Helicobacter pylori. A case control type study in Ecuador.**Luz Maria Dressendorfer Garces^{*1}, Diego Paredes¹¹Pontificia Universidad Católica del Ecuador, Medicine, Quito, Ecuador**Introduction & Objectives:**

Rosacea is a chronic skin disorder that mainly affects the face, with many cutaneous signs like erythema, papules, pustules and eye damage. The triggers in the pathophysiology of this disease are still unknown. There are microorganisms like Demodex folliculorum that has a role in the pathophysiology, but recent studies show that there is a relationship between Helicobacter pylori and rosacea, due to this bacterium has a high prevalence in patients with rosacea and because when patients are treated with medication for Helicobacter, the skin lesions improve. In Ecuador, there aren't studies that show any connection between Helicobacter pylori and Rosacea.

The main objective was to compare the prevalence of Helicobacter pylori in patients with rosacea versus patients without Rosace.

Materials & Methods:

A case control study was conducted. The sample was calculated in 25 patients with rosacea and 50 controls who met the inclusion criteria. They were evaluated with a rapid test of dyspepsia and were investigated on Helicobacter pylori antigen in stool. The variable rosacea was compared with the variable sex, age, Helicobacter pylori infection and dyspepsia. The statistical analysis was performed on the EpiInfo 7 program. The measure of association was Odds Ratio and the measures of significance were chi square, t student and the p value was less than 0,05.

Results:

In the rosacea group ,80% were females and 5 were male with a relation of 4:1. The mean age of cases was 55.7 +/- 11,8, and the mean age of controls was 58 +/- 11,6. The age range with more prevalence of rosacea was from 51 to 60 years (48%).

Of the 25 cases , 10 patients (40%) had tested positive for Helicobacter Pylori antigen and 15 patients (60%) had a negative test. On the other side, of the 50 controls 22 patients (44%) had a positive test for Helicobacter pylori antigen and 28 patients (56%) had a negative test with an Odds ratio equal a 0,84 and a p value of 0,93.

Conclusion:

The study demonstrated that there wasn't any relation between Helicobacter pylori and rosacea. Prevalence of Helicobacter pylori wasn't significantly higher in patients with rosacea than control group. Although, there was a significant connection between dyspepsia and Helicobacter pylori.

Other studies should be conducted to evaluate the real prevalence of rosacea.

Abstract N°: 6284

Comparison of Social Media Content on Hidradenitis Suppurativa: A Cross-Sectional Study

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Introduction & Objectives:

Dermatologists worldwide have turned to social media as an alternative approach to engage with and educate patients. However, a lack of regulation poses a challenge as patients navigate a stream of unverified content. Previous research has shown that patients may turn to social media seeking information regarding diagnosis and treatment. This study aims to analyse and compare content using the 'hashtag' tool across three of the most popular social media platforms to determine the information that patients are exposed to online.

Materials & Methods:

We identified hashtags across Instagram, TikTok and Facebook for '#hidradenitissuppurativa'. The top 50 videos returned by algorithm across each site were selected for analysis. Data extracted for comparison included; content creator demographics, number of followers, type of content and associated hashtags. Exclusion criteria included posts that were created in a language other than English and recurring, duplicate posts.

Results:

One-hundred and sixty-nine posts were identified and 19 were excluded for analysis. Of the total 150 posts included, 50 across each platform were selected and analysed. Sixty-seven percent of posts were created by females (n=101/150), 10% by males (n=16/150) and 22% other (n=33/150). Distribution was similar across all platforms. User accounts on TikTok have a significantly higher number of followers (median= 38,700, range=902-17,600,000 followers) compared to Facebook (median=1375, range= 58-777,000 followers) and Instagram (median=2818, range= 57-9,800 followers).

Conclusion:

At the time of this study, TikTok and Facebook had a significantly higher number of patient accounts sharing HS-related content compared to Instagram (70-78% versus 50%). Dermatologists represented 12% of users on TikTok posting HS-related content and displayed the largest number of educational videos at 22%. Instagram has the largest presence of Patient Support Groups across all platforms at 22% however, only 36% of HS-related posts analysed on Instagram were focused on raising awareness of HS compared to 92% on Facebook and 74% on TikTok.

Study limitations include the cross-sectional nature of the study on a small volume of content analysed and the dynamic nature of social media platforms and their use of algorithms to continuously display new content.

This study demonstrates a snapshot of the breadth of HS-related information available on social media. Our findings suggest that patients are more likely to use social media platforms to raise awareness of HS compared to Dermatologists and Patient Support Groups. Although TikTok, with the largest presence of Dermatologists, has the highest number of educational posts, this study highlights the lack of education-related content across all three social media platforms as a whole.

This study suggests a disproportionate number of patients creating content to raise awareness on HS on social media compared to patient support groups or medical professionals. It is reported that the median age of onset for HS is between 21-29 years old and given the large presence of younger patients on social media we propose that it is a useful platform that Dermatologists and official institutional bodies can utilise as an alternative method of health promotion and patient education. Further research to explore social media trends across a range of dermatological conditions can help guide targeted education campaigns in the future.

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Abstract N°: 6339**Squamous cell carcinoma complicating hidradenitis suppurativa: Our experience**Emna Mnif¹, Fatma Hammemi¹, Rim Chaabouni¹, Khadija Sellami¹, Abderrahmen Masmoudi¹, Hamida Turki¹¹CHU hedi chaker, dermatology, sfax**Introduction & Objectives:**

Hidradenitis suppurativa (HS) or Verneuil's disease is a chronic inflammatory suppurative disease. The occurrence of squamous cell carcinoma (SCC) on these lesions is the most severe local complication.

Materials & Methods:

We conducted a retrospective study between January 2012 and December 2022 enrolling all patients being followed for HS, who developed SCC confirmed by histological examination.

Results:

Over 10 years, three male patients who were followed for HS developed one or two SCCs. These patients had a normal BMI and a gluteal phenotype of HS (LC3) staged at Hurley grade 3. Two patients (66%) were smokers. The average duration between diagnosis of HS and the onset of the tumor was 26 months. The histology concluded a well-differentiated SCC, a moderately undifferentiated invasive SCC with an in situ SCC in the same patient and an ulcerated keratoacanthoma. The extent study showed inguinal lymph node involvement in two patients and the absence of distant metastasis in all patients. Surgical treatment was combined with chemotherapy in two patients. One patient died due to post-surgical complications.

Conclusion:

SCC is an uncommon complication of HS, with 132 cases reported in a 2021 review. It mainly affects male patients, smokers and with HS staged at Hurley's 3. Gluteal and perianal areas are the most frequent locations and well-differentiated SCC is the most frequent histological type. A review of the literature conducted in 2020 showed that the average duration between the onset of HS and degeneration was 25.5 years. The significantly shorter time period in our results could be explained by delayed diagnosis of the disease and tumor.



Abstract N°: 6350**Ceramide-based skincare provides adjunctive efficacy and improved tolerance to retinoids in patients with mild-to-moderate acne**

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Introduction & Objectives: Acne vulgaris is the most common inflammatory skin disorder, affecting up to 20% of the Canadian population. While topical retinoids are the mainstay of acne treatment, they are associated with local adverse events such as skin irritation. These adverse events have been associated with poor tolerability and poor treatment adherence. Efforts to improve topical retinoid tolerability and adherence may include utilizing adjunctive skincare, such as appropriate cleansers and moisturizers. As ceramides are key physiologic lipids required for the construction and maintenance of the epidermal barrier and restoring the skin's natural protective barrier, the use of skin care products containing ceramides may be particularly beneficial for acne sufferers.

Objectives: Evaluate the impact of a ceramide-containing hydrating cleanser and facial moisturizing lotion on acne treatment tolerability and adherence.

Materials & Methods: Seven Canadian sites participated in this open-label, cohort study designed to clinically evaluate a combination treatment, which included a topical retinoid, twice-daily use of an adjunct cleanser, and once-daily use of a moisturizer. Subjects completed a total of four study visits, over a duration of 12 weeks. Visits occurred at screening/baseline, and weeks 4, 8, and 12. At each visit, investigators completed i) the Dry and Irritated Skin Scale (DISS), which graded the presence of skin roughness, flakes/scales, erythema, dehydration, and inflammation, with higher total scores corresponding to a worse condition; and ii) the Investigator Global Assessment (IGA) of acne, which rates acne severity on a 5-point scale ("clear", "almost clear", "mild", "moderate", "severe"). In addition, Investigators completed the Global Aesthetic Improvement Scale (GAIS) at each follow-up visit, which rated the subject's response to treatment as "very much improved", "much improved", "improved", "no change", or "worse".

Results: A total of 110 subjects (80 females, 30 males) were included in the analyses. The average age of the sample was 23.79 (SD: 7.48), including 20 pediatric subjects (ages 12-17) and 90 adults (>18 years). The sample consisted of subjects presenting mild (n = 37; 33.64%) and moderate acne (n = 73; 66.36%) at baseline. After 12 weeks of treatment, 94.55% (n = 104) of subjects achieved "improved" or better based on the GAIS, and 71.82% (n = 79) of subjects presented with "clear" to "almost clear" skin. The average DISS score significantly improved by 62.77% from baseline (M = 6.58) to week 12 (M = 2.45; p<0.05). Rates of subject-reported itchiness, soreness/pain, and stinging remained stable throughout the 12-week study period.

Conclusion: Daily use of a ceramide-based skincare regimen was associated with the prevention of retinoid-induced adverse events such as skin itchiness, soreness/pain, and stinging, and improved compliance with prescription acne treatments.

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Abstract N°: 6471**A double-blind, placebo-controlled, randomised trial evaluating the efficacy and safety of a HSP90 inhibitor (RGRN-305) in hidradenitis suppurativa: a novel mechanism of action**

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Title: A double-blind, placebo-controlled, randomised trial evaluating the efficacy and safety of a HSP90 inhibitor (RGRN-305) in hidradenitis suppurativa: a novel mechanism of action**Introduction & Objectives:**

Hidradenitis suppurativa is a chronic inflammatory skin disease characterised by painful nodules and abscesses that may form sinus tracts and extensive scarring. Despite its debilitating nature, the therapeutic options remain limited; thus, a pressing need exists for novel treatments. Heat shock protein (HSP) 90 is a common chaperone that folds and promotes the activity of numerous client proteins including many proinflammatory proteins. Recent studies indicate that HSP90 may be a novel drug target for inflammatory skin diseases. To the best of our knowledge, the present study is the first double-blinded, placebo-controlled trial investigating the feasibility of HSP90 inhibition as a novel mechanism of action in treating moderate-to-severe hidradenitis suppurativa.

Materials & Methods:

This was a double-blind, placebo-controlled, randomised phase 1B clinical trial (NCT05286567). Patients eligible for inclusion were at least 18 years of age with moderate-to-severe hidradenitis suppurativa (defined as ≥ 6 inflammatory nodules or abscesses in ≥ 2 distinct anatomical regions). Patients were randomly assigned in a 2:1 ratio to receive RGRN-305 250 mg (HSP90 inhibitor) or placebo administered orally as a tablet once daily during a 16-week treatment period. The primary endpoint was the percentage of patients with Hidradenitis Suppurativa Clinical Response 50 (HiSCR50) at week 16. The safety profile was assessed by vital signs, physical examinations, clinical laboratory tests, electrocardiograms, and adverse events.

Results:

Between September 22, 2021, and 29 August, 2022, a total of 15 patients were enrolled, completed the study, and included in all analyses (ten received RGRN-305 and five received placebo). A higher percentage of patients treated with RGRN-305 achieved HiSCR50 at week 16, the primary endpoint, compared with placebo (60% [6/10] vs 20% [1/5]). The efficacy was supported by improvement in all clinical secondary endpoints evaluated at week 16 such as the harder-to-reach HiSCR endpoints (HiSCR75: 50% [5/10] versus 0% [0/5], HiSCR90: 30% [3/10] versus 0% [0/5]). The other clinical secondary endpoints included improvement in the Hidradenitis Suppurativa Physician's Global Assessment (HS-PGA), International Hidradenitis Suppurativa Severity Score System (IHS4), Dermatology Life Quality Index (DLQI) scores, and pain numeric rating scores. No deaths or serious adverse events were reported. The incidence of treatment-emergent adverse events was similar between RGRN-305-treated and placebo-treated patients.

Conclusion:

RGRN-305 treatment resulted in a clinically meaningful improvement in hidradenitis suppurativa with a favourable safety profile. Thus, our proof-of-concept study demonstrates HSP90 inhibition may be a novel mechanism of

action in treating hidradenitis suppurativa, presenting a potential treatment, which warrants further clinical investigation.

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Abstract N°: 6478

Efficacy and safety of the IL-17A- and IL-17F-inhibiting Nanobody® sonelokimab in patients with active, moderate-to-severe hidradenitis suppurativa: Results from the global, randomized, double-blind, placebo-controlled Phase 2 MIRA trial

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Introduction & Objectives: Management of hidradenitis suppurativa (HS) is complex and challenging, and there is a large unmet need for more effective therapies. Nanobodies represent a new generation of antibody-derived targeted therapies, consisting of ≥ 1 antigen-binding variable region of heavy-chain-only antibodies (VHH). Sonelokimab (SLK) is a novel humanized Nanobody consisting of three covalently linked VHH domains. With two domains, SLK selectively binds with high affinity to IL-17A and IL-17F, which are central drivers of inflammation in HS. Being small in size (~40 kDa) and containing a third domain binding to human albumin, SLK is specifically designed to penetrate difficult-to-reach inflamed tissues and directly target sites of inflammation. We present the Week (W) 12 results of the MIRA trial evaluating the clinical efficacy and safety of SLK in patients with active, moderate-to-severe HS.

Materials & Methods: MIRA is a 24-week global, randomized, prospective, parallel-group, double-blind, placebo-controlled Phase 2 trial (NCT05322473). Eligible patients were ≥ 18 years old with HS for ≥ 6 months, Hurley Stage II/III, a total abscess and/or inflammatory nodule (AN) count ≥ 5 , and presence of HS lesions in ≥ 2 distinct anatomical areas. Patients were randomized 2:2:2:1 to receive either SLK 120 mg, SLK 240 mg, placebo, or adalimumab (ADA; reference arm, not powered for statistical comparisons). The primary endpoint was the proportion of patients achieving HiSCR 75 ($\geq 75\%$ reduction from baseline in total AN count, with no increase in abscess or draining tunnel count) in the SLK 120 mg and SLK 240 mg treatment arms vs. placebo at W12. The primary analysis was based on the intention-to-treat population, with missing data imputed as non-responders. Secondary outcomes included HiSCR 50, International Hidradenitis Suppurativa Severity Score System (IHS4), Dermatology Life Quality Index (DLQI), and NRS30 for Patient Global Assessment of skin pain.

Results: Overall, 234 patients were randomized (SLK 120 mg, n=67; SLK 240 mg, n=66; placebo, n=68; ADA reference arm, n=33).** Discontinuation rates were low, with >95% of patients completing W12. Baseline characteristics were similar between treatment arms. Overall, 59.8% were female, 63.7% had Hurley Stage II HS, 17.5% had previous exposure to biologics, and 10.7% continued approved concomitant antibiotics. At W12, a significantly greater proportion of patients receiving SLK achieved the primary endpoint of HiSCR 75 (120 mg, 43.3%, $P<0.001$; 240 mg, 34.8%, $P=0.007$) vs. placebo (14.7%) (**Table**). Similarly, more patients achieved HiSCR 50 with SLK (120 mg, 65.7%, $P<0.001$; 240 mg, 53.0%, $P=0.003$) vs. placebo (27.9%) at W12. Significant decreases from baseline in IHS4 were seen with SLK at W12 (least squares mean change: 120 mg, -19.3, $P<0.001$; 240 mg, -14.5, $P=0.020$) vs. placebo (-7.9). Responses were significant with SLK for other endpoints, including a DLQI reduction ≥ 4 points and NRS30 skin pain response. SLK was well tolerated with no unexpected safety findings. *Candida* infections were reported more frequently in patients receiving SLK; all candida cases were mild to moderate, and none led to treatment withdrawal. No cases of inflammatory bowel disease were reported.

Conclusion: In the MIRA trial, the IL-17A- and IL-17F-inhibiting Nanobody SLK demonstrated high levels of clinical response including HiSCR 75 at W12 compared with placebo in patients with moderate-to-severe HS, with a favorable benefit–risk profile.

Table. MIRA trial primary endpoint results: HiSCR 75 response (ITT; NRI)*

	Placebo (n=68)	SLK 120 mg (n=67)	SLK 240 mg (n=66)
Proportion of patients achieving HiSCR 75, n (%)	10 (14.7)	29 (43.3)	23 (34.8)
Risk difference (SLK treatment arm – placebo), percentage points [†]	–	28.9	20.4
Stratified odds ratio (95% CI)	–	4.82 (2.06, 11.32)	3.13 (1.35, 7.27)
P value [‡]	–	<0.001	0.007
<p>*NRI used for all missing data. [†]Calculated from a Cochran–Mantel–Haenszel test stratified by Hurley stage and prior biologic use. [‡]P values are multiplicity controlled. CI, confidence interval; HiSCR75, a $\geq 75\%$ reduction from baseline in total abscess and/or inflammatory nodule count, with no increase in abscess or draining tunnel count; ITT, intention-to-treat; NRI, non-responder imputation; SLK, sonelokimab.</p>			



Abstract N°: 6607**Skin Tape stripping is a minimally-invasive approach that accurately detects biomarkers of early and chronic disease in hidradenitis suppurativa**

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Title:

Skin Tape stripping is a minimally-invasive approach that accurately detects biomarkers of early and chronic disease in hidradenitis suppurativa

Introduction & Objectives:

Hidradenitis Suppurativa (HS) is a chronic, debilitating inflammatory skin disease with an increasing global prevalence. To optimally treat HS, there is a need for early therapeutic intervention before the scarring process develops. However, treatment options for early stage-HS are limited, imposing a significant burden and a negative impact on the quality of life of patients. A significant diagnostic and treatment delay often exists, largely due to lack of biomarkers that can identify early-stage disease. While biopsies are considered the gold standard for studying molecular alterations in HS skin, a reproducible, minimally-invasive approach is needed for diagnosis of early HS, and for longitudinal disease monitoring in trials and in pediatric populations. We sought to determine whether skin tape strips can detect early and late molecular alterations in HS and identify biomarkers of disease activity.

Materials & Methods:

We performed RNA sequencing on tape strips collected from lesional and healthy-appearing (nonlesional) HS skin (n=22) and healthy controls (n=21). We compared biomarkers of uninvolved or non-lesional skin with those of chronic or inflamed skin lesions and normal skin to identify biomarkers of early and late stage HS. We correlated the expression of cutaneous biomarkers between tape strips and HS biopsies.

Results:

Tape strips detected upregulation of known HS biomarkers (e.g., IL-17A, TNF α) in nonlesional and/or lesional skin. Tapes trips identified upregulation of several novel therapeutic targets in lesional and/or nonlesional skin including OX40, JAK3 and CCR4 (p<0.05). There was a high and significant correlation between expression of genes within the Th17 and TNF- α pathways between tape strips and biopsies. HS clinical severity was significantly correlated with expression of biomarkers (including TNF α , IL17A/F, OX40, JAK1-3, IL4R) in HS lesional and/or nonlesional skin.

Conclusion:

This work suggests that tape strips can reliably identify molecular alterations and cutaneous biomarkers of early and late stage HS. Tape-stripping has direct applicability for early identification of patients that can benefit from

early therapeutic intervention before irreversible scarring occurs. Tape stripping provides a novel modality for monitoring disease evolution, and treatment efficacy in longitudinal studies, and may help advance HS towards individualized therapy.

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