Abstract N°: 33

Can Social Media Assist in Raising Melanoma Awareness? A Survey-Based Cross-Sectional Study Among Romanian Digital Users

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Introduction & Objectives:

Nowadays, individuals extract medical insights from online content sharing platforms, with leading virtual platforms enabling access to knowledge, guidance, and opinion exchange. Many doctors have actively engaged in online communities, creating educational accounts to cater to the informational needs of the general public. This study aims to identify the impact of social media in enhancing awareness about melanoma.

Materials & Methods:

In this cross-sectional study, questionnaires were distributed to the general population over eight consecutive weeks through online channels, specifically Facebook and Instagram. The goal was to gather qualitative data on the interplay between social media, epidemiological variables, and behaviors related to melanoma and sun protection. Inclusion criteria encompassed individuals aged 18-65 who were regular users of Facebook and Instagram.

Results:

The present study involved 221 participants, predominantly aged 26 to 35 (47.1%), mostly females (77.82%). Urban residents constituted the majority (71.94%), contrasting with the minimal rural representation (3.61%). Almost half actively consumed medical educational content online (44.79%), while 12.66% avoided online medical advice. Sun-protective habits were widespread, with 80.99% using SPF, 54.29% wearing UV-filter sunglasses, and 53.84% avoiding sun exposure between 10 AM and 4 PM. Dermatological advice from social media influenced behaviors, such as use of products with sun protective factor (50.67%) and sun exposure avoidance (45.7%).

Survey respondents rated sun-protective measures on a scale from 0 to 8, with the highest average for avoiding sun exposure during peak hours (7.3). Dermatological check-ups were infrequent, with 49.32% sporadically visiting a dermatologist. Dermoscopic evaluations were rare (36.66%), with 27.14% using it preventively. Personal and family history of dysplastic nevi and melanoma were low.

The survey, active over a period of 60 days, was primarily accessed through Instagram, underscoring its leading role in the digital industry and demonstrating its cost-effective and potentially unbiased nature as a tool for scientific data reporting. While the association between younger age (under 35) and better dermatological practices was hinted (covariance coefficients 0.02-0.05), it lacked statistical significance (correlation coefficients 0.09-0.23). Similarly, the link between urban residence and superior dermatological practices showed minimal correlation (correlation coefficients 0.05-0.08). Moreover, this type of e-surveys does not only offer statistical insights into distinct dermato-oncological screening behaviors but also serves as a tool to raise awareness about appropriate sun protection practices and the recommended frequency of dermatological referrals, and is

particularly effective when the questionnaire incorporates science-based knowledge and is elaborated by healthcare professionals.

Conclusion:

The research offers insights into the dermatological behaviors of those interacting with medical content on social media. Findings indicate that regular social media users show receptiveness to dermatological advice on specific platforms, providing an ideal setting for organizing online skin cancer awareness campaigns and promoting further dissemination of medical information.

Abstract N°: 95

Multi-centre prospective clinical performance analysis of an Artificial Intelligence as a Medical Device deployed within UK NHS urgent suspected skin cancer pathways

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Introduction & Objectives:

Over 25% of patients with suspected skin cancer in England waited over four weeks from urgent referral to diagnosis in October 2023 [1]. Implementation of AI can augment this pathway to improve timely diagnosis.

Materials & Methods:

A prospective, post-deployment, multi-centre clinical performance review of AIaMD - a UKCA Class IIa-approved, AI-based, skin lesion analysis medical device - was performed. AlaMD is intended for use in the screening, triage and assessment of skin lesions suspicious for skin cancer, and is currently deployed as a decision support tool at 11 NHS sites. Patients assessed by the three most recent versions of AIaMD from April 2022 to November 2023 were eligible for inclusion. Outcomes were confirmed from histology reports for cancerous lesions and histology reports or Consultant teledermatology assessment for non-cancerous lesions.

Results:

AIaMD assessed 29,453 lesions with outcomes confirmed, including 686 melanoma, 1,014 SCCs, 2,123 BCCs and 1,200 pre-malignant lesions. AIaMD referral sensitivity for histologically-confirmed melanoma, malignancy and pre-malignancy was 95.2% (653/686), 97.1% (3754/3866) and 96.4% (1,135/1,200) respectively. Across all benign lesions confirmed by teledermatology Consultant review or histopathology, AIaMD specificity was 71.2% (13,409/18,824) and for those confirmed by biopsy it was 28.5% (993/3481). The negative predictive value – how often AIaMD labelled cases as eligible for discharge and correctly ruled out cancer - was 99% or 100% in all 11 sites. Across 7 Secondary Care sites, the conversion rate of referrals to skin cancer diagnosis of the AIaMD pathway was 31-73% greater than the Primary Care referrals that had come in. One site reported reduced average wait time to first appointment by 11 days, 10% reduction in biopsies and 13% reduction in routine follow-up appointments.

Conclusion:

This post-market service evaluation reported the clinical outcomes of AIaMD – an AI device used for assessment of skin lesions. The pathway was sensitive, identifying 3,754 out of 3,866 skin cancers, and specific, correctly identifying seven out of every ten benign lesions assessed and confirmed clinically or histologically. Moreover, AIaMD implementation was linked to a number of pathway benefits. The integration of AIaMD into skin cancer diagnostic pathways could significantly improve the accuracy of urgent suspected skin cancer referrals, removing unnecessary specialist review of benign lesions.

[1] Statistics | Cancer Waiting Times. NHS; [cited 2023Dec29]. Available from: https://www.england.nhs.uk/statistics/statistical-work-areas/cancer-waiting-times/monthly-data-and-summaries/2023-24-monthly-cancer-waiting-times-statistics/cancer-waiting-times-for-october-2023-24-provisional/

Declarations: Authors are employed by or contractors with the AI provider

The TELESPOT project : implementation of a teledermoscopy system in primary healthcare centers for early skin cancer detection, results of a 3-years prospective study

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Introduction & Objectives:

The incidence of skin cancers is rising, posing challenges for healthcare providers. Dermatologist scarcity and long waiting times hinder prompt diagnosis and management. Teledermoscopy (TDS) can aid in triage and expedite suspicious lesion management. The "TELESPOT" project initiated in 2019 involved six primary healthcare centers (PHCs) acquiring dermoscopic images sent to a tertiary skin cancer center (TSCC). TSCC provided triage reports prioritizing lesion management as low-priority (LPM) or high-priority (HPM).

Materials & Methods:

Two study phases included initial acquisitions from six PHCs (phase 1) and an extension phase with three additional PHCs (phase 2). Preliminary evaluation focused on raw screening data, satisfaction scores, and comparison with prior studies. Final evaluation analyzed data statistically between phases and PHC groups. Primary outcomes included LPM versus HPM lesions, with secondary outcomes such as diagnosis, image quality, time from TSCC report to care, correlation between TSCC report and histopathological diagnosis, and satisfaction scores.

Results:

Results showed 9.2% HPM recommendations, with a slight increase from 7.6% in phase 1 to 9.7% in phase 2. For the six PHCs in both phases, a significant improvement in triage (phase 2: 15.7% vs. phase 1: 7.6%) was noted, indicating PHCs became more proficient. Non-evaluable cases were 2.1%, with no significant differences between initial and additional PHCs. The mean interval between HPM triage and face-to-face (FTF) visit was 9 days, significantly faster than conventional care. 84.1% of HPM lesions were histopathologically confirmed, and TSCC's positive predictive value for HPM lesions was 83.3%. FHP and patient satisfaction scores remained excellent and stable.

Conclusion:

Long-term TDS implementation in PHCs demonstrated added value, offering high satisfaction and efficient triage for suspicious lesions. The 2.24-fold improvement in triage quality over time suggests increased PHC proficiency. However, TDS limitations persist in initial triage, particularly for rare clinical presentations like amelanotic melanoma.

Abstract N°: 138

Unilateral periorbital petechial rash with underlying insular arteriovenous malformation

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Unilateral periorbital petechial rash with underlying insular arteriovenous malformation

Introduction & Objectives:

Materials & Methods:

Results:

An 18-year-old woman presented with an acute petechial rash localised on the right periorbital region. In previous day, she had developed transient weakness and numbness in the left upper limb before sustaining a syncopal episode for 15 minutes. The patient was otherwise well, with no fever, abdominal or infective symptoms. There was no family history of similar rashes. She noticed the periorbital rash immediately after vomiting. There were few similar episodes of spontaneous periorbital rash in the past 6 months that usually resolves in several days. On examination, there were scattered pinpoint petechial macules localized predominantly on the right periorbital region. Dermoscopy revealed non-blanchable structureless petechial purpura. There were no rashes elsewhere, including the oral and conjunctival mucosa. She had no trauma, fever, contactants or any associated drug intake. She has a significant history of right insular arteriovenous malformation (AVM) which ruptured when she was 4 years old and had undergone gamma knife surgery at 8 and 13 years of age. Full blood count and coagulation panel were unremarkable. CT and MRI brain imaging revealed a stable right insular AVM with no acute intracranial hemorrhage or infarct. She was referred to Neurology and awaiting electroencephalography for evaluation of seizure. The petechial rash subsided without treatment within 4 days. The cause is likely due to the rupture of capillaries in the upper dermis resulting from elevated intravascular pressure during vomiting. This can also occur after straining during activities such as crying, coughing, weightlifting and delivery. The localization of the petechial rash mainly around the right periorbital region was intriguing and likely related to the right AVM. We wish to highlight this rare entity known as post-emetic periorbital petechiae which resolves spontaneously and requires no intervention. However, further investigation for the triggers of emesis – in this case of post-ictal vomiting, is warranted.

Conclusion:

Abstract N°: 188

Patient and Physician Experience in the Utilization of Teledermatology in a Tertiary Government Hospital in the Philippines: A Cross-sectional Study

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Introduction & Objectives:

In the face of the pandemic, various hospitals were driven to utilize teledermatology even without large-scale planning. It is likely that patients and physicians alike have experienced various challenges during its integration in various health institutions. A number of studies support its efficiency, however, the acceptability and satisfaction among users were less documented. The objective of the study was to determine the experience of patients and physicians in the utilization of teledermatology at the Rizal Medical Center Dermatology Department.

Materials & Methods:

This study was an analytical, cross-sectional study conducted at the Rizal Medical Center Department of Dermatology from January to August 2023. The research used the Andersen Model for healthcare utilization as the main anchor for analysis and writing. Ethical approval was obtained from the Rizal Medical Center (RMC)-Institutional Review Board (IRB) prior to commencement.

Results:

: A total of 315 teledermatology patients and 14 dermatology residents were included in the study. The average distance to care and travel time saved were at 194.61 (±1153) kilometers and 182.87 (±330) minutes, respectively. The average transportation cost and daily wage saved were 672.62 (±1474) Php and 738 (±1432) Php, respectively. The patients who were satisfied with teledermatology lived farther from and saved more travel time. Most physicians preferred face-to-face consultations since it provided easier means to conduct physical examination. Nonetheless, the majority of physicians were satisfied with the ease of communication and the convenience that teledermatology provided, and most were willing to continue its use.

Conclusion:

The high acceptability and satisfaction among patients and physicians utilizing teledermatology provides evidence that it can be integrated to the health service delivery. In countries where access to dermatologic care remains a challenge, teledermatology is a promising modality to help solve health disparities even beyond the Coronavirus disease (COVID-19) pandemic.

Evaluation of Intralesional Injection of Platelet Rich Plasma Compared with Mitomycin-C plus Dexamesathone in Treatment of Peyronie's Disease

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Introduction & Objectives:

Background: Peyronies disease (PD) is a physically and psychologically debilitating illness marked by a fibrous inelastic tunica albuginea scar that results in a visible penile scar and deformity.

Objective: In order to assess the efficacy of intralesional injection of platelet rich plasma to Mitomycin-C with Dexamethasone in the treatment of Peyronie's Disease, researchers conducted a study.

Materials & Methods:

This study was Prospective interventional randomized comparative trial carried out on adult's male Patients with Peyronie's disease who visited the Andrology outpatient clinic, Kasr El Aini Hospital, and Cairo University. Only 50 patients with Peyronie's disease were included in the first screening of 75 patients who complained of PD. The study enrolled those who met the inclusion criteria.

All patients were subjected to history taking, Physical examination, International Index of Erectile Dysfunction, Peyronie's disease questionnaire (PDQ), Test for intracorporeal injection, Penile Duplex evaluation and Laboratory preparation: (to assess risk factors for ED.

50 patients with PD were given the following treatment: A newly produced combination of 1ml dexamethasone (8mg/2ml) 1ml mitomycin (0.2mg) was injected into 25 patients in Group A using a 3 ml syringe and a 25G/26G needle at the periphery as well as in the plaque (GA). Patients received three injections at one monthly interval. Group B (GB): included 25 patients received PRP injection, 1 injection every 2 weeks for a period of 2 months in the plaque ensuring uniformity of the injected drug.

Results:

There was a statistically significant improvement in PDQ domains, and IIEF scores after treatment with no superiority of neither option. Additionally, degree of curvature and erectile dysfunction improved in both groups after treatment as well; but to a different extent.

Conclusion:

Intralesional injection of PRP and Mitomycin-C plus Dexamesathone could improve Peyronie's Disease symptoms. Mitomycin-C plus Dexamesathone more effective than PRP in Penile curvature and plaque size improvement, while PRP was more effective in improvement of erectile function

Abstract N°: 304

Assessing the Utility of Multimodal Large Language Models GPT-4V and LLaVA in Identifying Melanoma Across Different Skin Tones

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Introduction & Objectives: Large language models (LLMs) are artificial intelligence (AI) tools trained on large quantities of human-generated text, adept at processing and synthesizing text to mimic human capabilities. The versatility of LLMs in addressing various requests, coupled with their capabilities in handling complex concepts and engaging in real-time user interactions, indicates their potential integration into healthcare.** Multimodal LLMs with visual understanding, such as Generative Pre-trained Transformed 4 Vision (GPT-4V) and Large Language and Vision Assistant (LLaVA) can solve novel and intricate tasks due to unique capabilities arising from the convergence of language and vision modalities, combined with inherent intelligence and reasoning abilities. This study assesses the ability of multimodal LLMs to accurately recognize and differentiate between melanoma and benign melanocytic nevi across all skin tones.

Materials & Methods: Our dataset consisted of macroscopic images of melanomas (malignant) and melanocytic nevi (benign) obtained from the publicly available and validated MClass-D dataset, Dermnet NZ, and dermatology textbooks. Each LLM was provided with 20 unique text-based prompts consisting of questions about "moles" (the term used for benign and malignant lesions), instructions, and image-based prompts. Our prompts represented potential users such as general physicians, providers in remote areas, or educational users and residents. Prompts were designed to either involve conditioning of ABCDE (asymmetry, border irregularity, color variation, diameter > 6mm, evolution) melanoma features or to assess effects of background skin color on predictions.

Results: Analysis revealed GPT-4V outperformed LLaVA in all examined areas with overall accuracy of 85% compared to 45% in LLaVA, and consistently provided thorough descriptions of relevant ABCDE features of melanoma. While both LLMs were able to identify melanoma in lighter skin tones and recognize dermatologists should be consulted for diagnostic confirmation, LLaVA was unable to confidently recognize melanoma in skin of color nor comment on suspicious features such as ulceration and bleeding. Across all prompts analyzing feature conditioning, GPT-4V correctly identified the melanoma while LLaVA did not when color and/or diameter was held constant. This suggests these features influence melanoma detection in LLaVA, with less importance placed on symmetry and border. Both LLMs were susceptible to color bias as when a pigment was darkened with all other features held constant, the lesion was believed to be malignant. Finally, image manipulation did not impact GPT-4V's diagnostic abilities; however, LLaVA was unable to detect these manipulations and was vulnerable to visual referring associated with melanoma manifestations.

Conclusion: Although limitations are present, GPT-4V can accurately differentiate between benign and melanoma lesions. Despite our findings, it is critical to account for and address limitations such as reproduction of existing biases, hallucinations, and visual prompt injection vulnerabilities, and incorporate validation checks before clinical uptake. There is an urgent global need to address high volumes of skin conditions posing health concerns, and the integration of multimodal LLMs, such as GPT-4V, into healthcare has the potential to deliver material increases in efficiency and improve education and patient care.

Abstract N°: 522

Pityriasis rosea presenting with a heraldic patch within a tattoo

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Introduction & Objectives:

Pityriasis rosea (PR) is an acute, self-healing polymorphous exanthem, affecting mainly young patients. The lesions spread on the trunk and limbs, and usually do not affect the face, scalp, palms, and soles. Most openly, people complain of prodromal symptoms before the appearance of the rash. Some of the most commonly reported prodromes include mild fever, respiratory tract symptoms, malaise and headache. It is hypothesized that human herpesvirus 6 and 7 might be involved in the pathogenesis of the exanthems and preceding symptoms.

Koebner phenomenon is described as an appearance of lesions of underlying dermatosis in uninvolved skin of the cutaneous condition as a consequence of trauma. Such patients may developed new lesions in sites of excoriations, tattoos, and local trauma sites. The koebnerization is usually described in psoriatic patients, it is also described in other dermatoses. However, the elective location to traumatized areas has not been reported during PR.

Materials & Methods:

This is a case report of a 21-year old female with PR, with a herald patch appearing on a tattoo.

Results:

We present a case of a 21-year–old, otherwise healthy woman, presented with small rose scaly ovoid patches of the trunk. She reported having profuse rhinorrhea two-three weeks before the appearance of the rash and no other symptoms. She recalled an initial larger oval patch, with rose, slightly elevated finely scaly borders and pale center, within a thin black tattoo of the left side of the trunk. It appeared before the rash, with smaller patches similar to the initial one, spread to the rest of the body. A diagnosis of pityriasis rosea (PR) was made.

Conclusion:

Except Koebner phenomenon - prone diseases like psoriasis, lichen or vitiligo, many dermatoses have been anecdotally described in tattoos. PR is not known to display affinity to traumatized areas and, to our knowledge, PR has never been reported within tattoos. Previous cases could have gone unnoticed, been unreported, or the localization to a tattoo is most likely merely fortuitous. The occurrence of a herald patch in a tattoo could be mistaken initially for psoriasis or tinea corporis.

Abstract N°: 617

An overview of prevalent female genital dermatoses

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Introduction & Objectives:

Little is known about the pattern, incidence severity & impact of conditions involving the genital epithelium in Iraq.

The social status of our society precludes women of all ages; especially the unmarried, to announce their genital problems to their families, which result in late presentation to the specialist & in many instances grave consequences.

Materials & Methods:

A total of 588 female patients were seen & examined during the period from 1st Jan. 2016 till 1st Jan. 2017.

A careful detailed history was taken from all patients, together with a thorough physical examination of affected skin & extra genital sites.

Results:

The patients were assigned into three main groups to simplify their description

Group 1: sexually transmitted infections (44.2%)

Group 2: dermatoses of other infective origin (25.3%)

Group 3: miscellaneous group (30.5%)

Conclusion:

Disorders of genital epithelium are confusing, the** majority of problems are dealt with by non-dermatologists. Even experienced dermatologists face difficulties in diagnosis because the normal characteristics of common diseases are lost or modified at this site; a team work is therefore needed for better approach to these problems.

Comparative analysis of the implementation of Vitiligo Extent Score (VES) versus Vitiligo Area Severity Index (VASI) scores in vitiligo

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Introduction & Objectives: Vitiligo Area and Severity Index (VASI) is standing on the top of the cited and implemented scoring tools for vitiligo. However, an easily applicable and time-saving tool has been a need. This cross-sectional study aimed at comparing VASI and Vitiligo Extent Score (VES) and to consider the implementation of VES as a user-friendly tool by doctors as applied to observed clinical patterns of nonsegmental vitiligo (NSV) in our population.

Materials & Methods: For each patient with NSV, vitiligo was assessed using both VES and VASI as well as vitiligo disease extent by hand units.

Results: VES and VASI scores showed a strong significant correlation. Both scores were found reliable despite the presence of unrepresented areas in the VES with tendency of the values for the body surface area (BSA) by the VES to be lower than that by hand units.

Conclusion: In comparison with VASI, VES has proven to be a clear, user-friendly score for vitiligo assessment. However, special concern is to be given for required modification for pediatric population. A slight modification may be required regarding the pediatric population.**

Abstract N°: 717

ChatGPT-4 Demonstrates High Diagnostic Concordance with Teledermatologists and Superior Clinical Image Description: A Cross-sectional Comparative Study

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Introduction & Objectives:

Background The integration of artificial intelligence in healthcare, particularly with ChatGPT models, is significantly transforming medical diagnostics. teledermatology may benefit from these advancements

Objective:

To compare the performance of ChatGPT-4 in executing essential teledermatology tasks, including integrating clinical images with metadata, accurately describing images, and generating differential diagnoses, to that of human teledermatologists.

Materials & Methods:

Our cross-sectional study compared data from 154 teledermatology consultations between December 2023 and February 2024 with ChatGPT-4's performance using the GPT chatbot "Dr. Dermbot". Diagnoses concordance with teledermatologists was classified as 'Yes' ('Top1' for exact matches, 'Top3' for one of the top three), 'No', or 'Partial'. Teledermatologists' and ChatGPT-4's image descriptions received scores ranging from 1 to 5, based on criteria including location, color, size, morphology, and a description of the surrounding area. The scores were then compared. Accuracy of ChatGPT-4's descriptions were categorized as 'Yes', 'No', or 'Partial'.

Results:

Out of 154 cases, ChatGPT-4 achieved a Top1 concordance in 108 cases (70.8%) (95%CI: 63.2%-77.4%) and a Top3 concordance in 137 cases 87.7% (95%CI: 81.5%-92.0%). There were 4 cases (2.6%) of partial concordance and 15 cases (9.7%) of discordance. For image descriptions, ChatGPT was accurate in 130 cases (84.4%), partially accurate in 22 cases (14.3%), and inaccurate in 2 cases (1.3%). The quality of ChatGPT-4's image descriptions significantly surpassed those of teledermatologists across all evaluated parameters.

Conclusion:

ChatGPT-4 demonstrates a significant capacity to analyze metadata and clinical images, providing precise descriptions and offering accurate differential diagnoses. In most cases, its diagnostic accuracy rivals that of human teledermatologists during asynchronous interactions. These findings emphasize the potential for integrating AI algorithms into teledermatology practice.

Abstract N°: 755

Stress and Sleep Quality's Impact on Facial Skin Among Women Aged 25-40

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Introduction & Objectives:

Recent literature indicates a significant link between stress, sleep quality, and facial aging. Managing stress and improving sleep quality are crucial in skincare to combat facial aging. The objective of this paper is to quantify the impact of stress and poor sleep quality on the clinical signs of aging of women aged between 25 and 40 years old.

Materials & Methods:

The study enrolled 33 women aged 25 to 40 residing in France, and 77 women of the same age range living in China. Their stress level and sleep quality were collected over a 6-month period. Stress level was monthly collected using the Perceived Stress Scale questionnaire. Sleep quality was weekly scaled between 1 and 10 by the volunteers.

The corneometer gauges superficial epidermal hydration levels by assessing electrical properties. The vapometer tracks Transepidermal Water Loss, indicating skin barrier function. The sebumeter measures surface sebum levels. The cutometer evaluates upper epidermal biomechanical properties via suction, assessing firmness, elasticity, and passivity. Wrinkles, spots, pores, color, and skin texture were analyzed from standardized photographs.

Volunteer's average stress level and sleep quality was calculated over the 6-month period. For each item data were stratified into groups (medium stress/high stress; poor sleep quality/good sleep quality). Student T-tests were performed where data had normal distribution and equal variance. If data were not normally distributed, Mann Whitney U tests were performed. $P < 0.05$ was considered statistically significant.

Results:

Impact of stress: In China, volunteers with higher perceived stress over 6 months have a higher R9 on the cheek (+13.4%), indicating skin fatigue In China, volunteers with higher perceived stress over 6 months have a larger average pore size (+9.5) and higher roughness on the forehead (+15%). In France, transepidermal water loss is correlated with the average perceived stress score.

Impact of poor sleep quality: In China, volunteers with poorer sleep quality over 6 months have a larger R0 on the cheek. An increase in this parameter indicates less firmness of the skin (+9%). In France, volunteers with poorer sleep quality over 6 months have greater roughness (+20%) and larger pores (+16%) on the forehead, and an increased (+12%) in the Lab* parameter a*. In China, volunteers with poorer sleep quality over 6 months show higher transepidermal water loss (+12%).

Conclusion:

This study aims to determine the impact of stress and sleep quality on individuals aged between 25 and 40 years old. It has been shown that stress impacts skin mechanical properties (fatigue in China), pore size (in China), transepidermal water loss (in France), and skin texture (in China). It has been shown that poor sleep quality affects skin firmness (in China), skin roughness and color (in France), as well as transepidermal water loss (in China) and pore size (in France).

A Cream With Antiaging Microdipeptide and Bakuchiol Demonstrated Clinical Improvement in Neck Sagging, Tech-Neck Lines, and Photodamage in Neck and Decolletage Areas

Brenda Edison[1], Li Feng[1], Surabhi Singh[1], Sandhiya Kannan[1], Ritamarie Guerrero[1], Ramine Parsa[1], Ruchi Patel[1], Marisa Dufort[1], Barbara Green[1]

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Introduction & Objectives: As age progresses, the human neck area displays more distressed features that are not desirable, including sagging, neck folds and lines, age spots, and hyperpigmentation. The high percentage of mobile device penetration among consumers also leads to excess neck lines and wrinkles from prolonged bending and constant looking down. There is a need to provide effective topical solutions to reduce neck roughness as well as smooth and firm the neck and decolletage.

Materials & Methods: A clinically-proven microdipeptide (acetyl dipeptide-31 amide) technology was developed that demonstrated the potential to reduce skin inflammation and stimulate the skin's supporting matrix. Bakuchiol, an anti-aging and antioxidant ingredient, has also exhibited skin renewal benefits. This clinical study was designed to assess the effectiveness of a skin cream with a unique blend of microdipeptide, bakuchiol, and other brightening and firming ingredients to reduce the key signs of neck and decolletage aging with twice daily use. The 16-week study included 42 healthy female subjects, ages 47-65 across all Fitzpatrick skin types, and having mild to moderate wrinkles, fine lines, laxity and/or crepiness on the neck, and hyperpigmentation on decolletage by expert visual grading (4 to 6 on a 0 to 9 scale).

Results: All targeted skin aging signs at neck and decolletage areas showed statistically significant improvement starting at week 8 and continued improvement to week 16, including firmness, texture, smoothness, diminished mottled hyperpigmentation, and reduced photo-induced discreet hyperpigmentation ($p < 0.001$). Instrumental measurements also revealed significant skin brightening and erythema reduction, $p < 0.05$. Consumer self-assessment and clinical photography confirmed the clinical findings/gradings. In addition, these clinical outcomes are further supported by in vitro and ex vivo investigations showing the microdipeptide activity on inhibiting the expression of inflammatory cytokines and inducing multiple matrix building biomarkers.

Conclusion: These results demonstrated that the new cream was well-tolerated and effective in improving neck skin texture and firmness as well as brightening the neck and decolletage and reducing the overall signs of aging.

Abstract N°: 988

Perianal fistulas masquerading as condyloma acuminata

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Introduction & Objectives:

Condyloma acuminata refers to anogenital warts caused by human papillomavirus (HPV) infection . Herein, we present a case of histologically proven condyloma acuminata, which on follow up revealed underlying perianal fistulas.

Materials & Methods:

Case report

Results:

A 40-year-old Chinese male with no significant medical history was referred to the dermatology clinic for painless perianal lesions of 5 months duration, with intermittent contact bleeding. He was a heterosexual and denied any previous anal intercourse. Examination revealed 2 pinkish, fleshy and verrucous looking papules at 1 o'clock position from the anal opening. A provisional diagnosis of condyloma acuminata was made. The patient declined sexually transmitted infections screen in view of cost. After discussion, he opted for a shave excision of his perianal lesions. On the day of procedure, a hint of purulent discharge was seen emanating from both lesions upon distant application of pressure on his left buttock cheek. Aerobic swab of pus grew mixed growth of gram-negative bacilli and enteric organisms. The patient was covered with oral augmentin. The patient was seen 2 weeks later and noted to have healing perianal wounds with no recurrence of lesions. Histology showed viral warts with focal ulceration. On follow-up review 3 months later, the patient had a new painful left upper medial buttock swelling (with subsequent ulceration and discharge) and recurrence of the same 2 perianal papules at the previous sites of shave excision. MRI perineum revealed underlying complex perianal fistula disease at these sites . The patient was subsequently managed by colorectal surgery.

Conclusion:

This case highlights a rare presentation of perianal fistulas, with initial appearance of condyloma acuminata-like perianal lesions. In this patient's context, these may represent secondary HPV infection of granulation tissue at the external opening of the perianal fistulas. There have been limited reports of similar presentations in the literature. Perianal fistula disease should be considered in a patient presenting with verrucous looking perianal lesions, especially if discharging and recurrent despite intervention.

Abstract N°: 1034

Evaluating the patient perspective of a multidisciplinary male genital dermatoses clinic

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Introduction & Objectives:

Genital dermatoses are an important and common source of referrals from primary to secondary care, and have significant implications for patients' quality of life. Chelsea and Westminster hospital runs a tertiary male genital service led by dermatology, urology and genitourinary medicine consultants, who run the clinic with an attending model. We aimed to assess patient perceptions and satisfaction with this clinic format.

Materials & Methods:

A survey was carried out on adult patients attending the male genital clinic at Chelsea and Westminster Hospital (London) between March 1, 2023 and July 31, 2023. Patients 18 years or older were given the paper survey to complete when attending. Patient demographics as well as qualitative responses on a range of questions were recorded, and patients were given space to document any other comments.

Results:

50 patients completed the survey with 20 patients being new to clinic and 30 being follow-ups, with the average age range of patients being 50-59. Overall patients strongly agreed with the statement that they felt at ease and did not feel embarrassed during the consultation that their privacy was maintained during consultation, and that overall they had a good experience. Patients overall also strongly agreed with the statements that they felt involved with my care, and felt happy with the format of the clinic, with 72% of responses strongly agreeing with both statements. The majority of patients (97%) preferred face to face clinics.~~

Conclusion:

Genital dermatosis can lead to significant morbidity and mortality amongst dermatology patients, and are a common cause of presentation to sexual health services1. Our results highlight a high level of satisfaction with the multidisciplinary and attending model of care, especially with a face to face consultation. Moreover, patients reported they felt comfortable during consultations and their privacy was maintained despite having numerous medical professionals in the clinic room. The RCP principles for good outpatient care highlight the need for novel outpatient care pathways to deliver patient centred care, and ensure clinic templates reflect the case complexity and needs of patients2. The attending model can be contrasted to the conventional outpatient model of single clinician/specialty led clinics, and demonstrates how a comprehensive multidisciplinary approach can be incorporated into NHS clinics with high levels of patient satisfaction, alongside clinical efficiency and expertise in a single clinic appointment. The integrated multidisciplinary approach prevents duplication of clinic appointments adding to cost and time savings for both clinicians and patients.

1. Hartley A, Bates C, Fernando I, et alO37 Genital dermatology is a high proportion of the case load presenting to walk-in sexual health services across the united kingdom. *Sexually Transmitted Infections* 2017;93:A13-A14.
2. Royal College of Physicians. *Outpatients: the future – adding value through sustainability* London: RCP, 2018.

Teledermatology in the Age of Social Media: Development of a Validated Questionnaire and a Cross-sectional study on Epidemiology, Outcomes and Satisfaction of Patients in a Tertiary Hospital

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Introduction & Objectives:

Teledermatology has provided a new dimension to dermatologic care. The practice has significantly grown following the Coronavirus 19 (COVID-19) pandemic, and with this is a paralleled increase in social media use. As more health care professionals are pushed into online spaces, an understanding of the intersection between social media and teledermatology is needed to help dermatologists provide quality service without compromising the standard of care.

The aim of this study is to identify the most common reasons, influencing factors, outcomes, and patient satisfaction with teledermatology consultation. It is specifically aimed to: (1) describe the demographic characteristics and social media profile of patients who sought teledermatology consultation, (2) determine the factors in seeking teledermatology consultation, (3) determine outcome of treatment, (4) determine patient satisfaction with the teledermatology experience, and (5) compare treatment outcome and satisfaction based on disease chronicity. Using the results of this study, dermatologists can adapt and tailor their individual practice in a way that is most satisfactory for patients without compromising the quality of care. This can also serve as a gauge whether teledermatology can give the same quality of care and satisfaction as with face-to-face consult.

Materials & Methods:

This is a single-center, questionnaire-based, cross-sectional descriptive and analytical study of adult patients seen through a tertiary hospital's teledermatology platform for any dermatologic condition from August 1, 2021 to September 30, 2021.

The study consisted of two phases. The first phase was the validation of questionnaire. The second phase was the deployment of the validated questionnaire online.
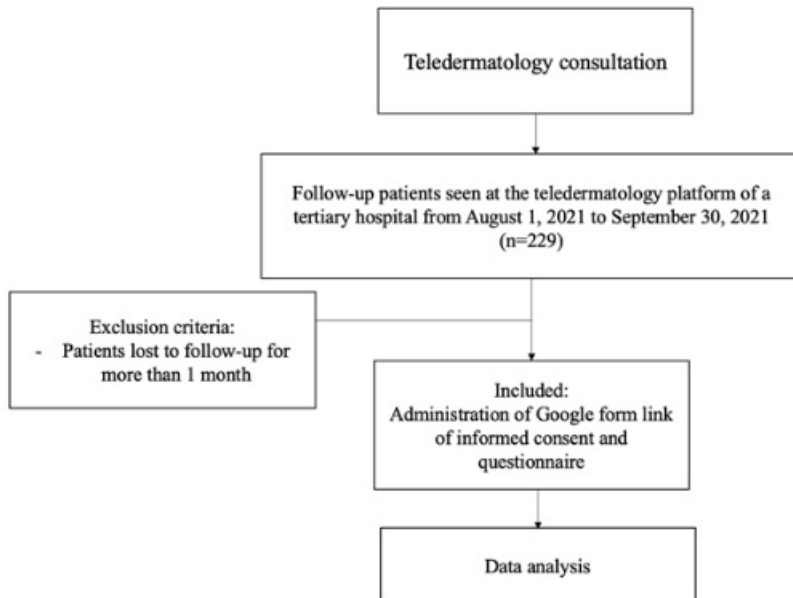
Figure 1. Flowchart of Methodology

Results:

Two hundred twenty-nine (229) patients completed the study. Acne (76.86%) was the most common reason for teledermatology consultation. Accessibility (86.9%) was the main influencing factor prompting consultation, while some patients stated fear of going to the hospital due to COVID-19 (54.14%) as a reason. Social media, which includes Facebook groups and beauty bloggers/vloggers, was the most common source of information for skin-related concerns and teledermatology, while only 3.95% answered doctors as their source of information. Treatment outcome and satisfaction were correlated with disease chronicity, with acute diseases having more significant improvement and satisfactory treatment. Patients were very satisfied (69%) with teledermatology experience, although most still preferred face-to-face consultation (53.1%).

Conclusion:

Teledermatology provides effective treatment outcome and satisfaction. The presence of social media may help navigate teledermatology to enhance health information dissemination.

Abstract N°: 1120

Cancer-associated point mutations within the extracellular domain of PTPRD affect protein stability and HSPG interaction

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Introduction & Objectives:

PTPRD* represents a well-established tumor suppressor gene, which is frequently mutated in cutaneous skin cancer such as malignant melanoma (MM) and cutaneous squamous cell carcinoma (cSCC). It is estimated that 17.2% of MM have mutations in PTPRD, which is the most common tumor suppressor gene in terms of malignancy type, also about 5% mutated in cSCC. Due to the low response rate to cytotoxic chemotherapy, there were no effective treatments for MM or advanced cSCC until recently. With the advent immune check point inhibitors (ICIs), identifying a new target for optimizing cancer treatment is an immediate and severe global demand. PTPRD shows many mutations in cutaneous malignancies, it has potential predictive significance for immunotherapy. However, the underlying features and mechanisms of PTPRD in skin cancer remain unclear. Also the mechanism for PTPRD to regulate cellular functions as a tumor suppressor is assumed to be through the tyrosine phosphatase activity in the intracellular region, the function of its extracellular domain (ECD) in cancer remains elusive.

Materials & Methods:

We systematically examined the impact of 92 cancer-associated point mutations dispersed within the ECD adapting overexpression-based screening approach used by the strong CMV promoter in HEK293T cells.

Results:

Our study uncovered that 69.6% of the mutations suppressed total protein expression and/or plasma membrane localization. These results suggest that the majority of mutations within the ECD have the potential to compromise the stability of PTPRD protein by altering the conformation, which may result in mislocalization and eventual degradation. These cancer-associated point mutations, which likely damage the protein conformation, are widespread throughout the entire ECD and no prominent hotspots are identified. Even if the mutations do not directly affect the stability of the protein structure, they might associate with a high tumor mutational burden (TMB), which represents the total amount of somatic mutations in the tumor genome. PTPRD mutation counts may serve as a biomarker for predicting therapeutic response to ICI. Among mutations with no such destructive effects, certain mutations within the first Ig domain adjacent to the glycosaminoglycan-binding pocket enhanced the binding ability of PTPRD to heparan sulfate proteoglycan (HSPG), the interaction with which is proposed to suppress the phosphatase activity.

Conclusion:

Our findings that cancer-associated point mutations around the putative HS binding site in the Ig domains enhance the binding ability to HSPGs suggest a potential novel mechanism for tumorigenesis resulting from PTPRD mutations. Although further research is required, our comprehensive analysis has elucidated the molecular biological facets of a prospective target for ICIs, representing a pivotal therapeutic avenue in the realm of skin cancer treatment moving forward.

Abstract N°: 1163

Aquagenic keratoderma in a pediatric patient. A case report

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Aquagenic keratoderma in a pediatric patient. A case report

Introduction:

Aquagenic keratoderma is a rare disease characterized by recurrent occurrence of confluent, whitish-translucent and hyperkeratotic papules on palms and soles triggered within minutes of contact with water, which may be asymptomatic or associated with pruritus or pain. Has been found in 40-80% of patients with cystic fibrosis, associated with the use of drugs such as aspirin, celecoxib, clarithromycin or tobramycin; and less frequent family cases have been described. The key to diagnosis is their appearance after exposure to water and the tendency to resolve in a few days and confirmation is performed by skin biopsy. Multiple treatments have been used, such as oral oxybutynin, aluminum chloride hexahydrate 20%, topical corticosteroids, topical keratolytics, oral antihistamines, botulinum toxin, iontophoresis, and endoscopic thoracic sympathectomy has also been used in severe cases. We present a case of an 11-year-old female who was diagnosed with aquagenic keratoderma, diagnostic confirmation was performed with skin biopsy, symptomatic treatment was given and clinical observation showed control of the disease as the patient grew older.

Results:

The patient is an 11-year-old female patient with no significant past medical history who presents episodes of hyperkeratotic and pruritic warty plaques located on the left palm of the hand; these lesions appeared after contact with water and were self-resolving in 2-3 days without leaving scars.

A skin biopsy was performed which showed marked skin hyperkeratosis essentially orthokeratotic, slight acanthosis and in the dermis scarce superficial perivascular lymphoid infiltrate, these findings are compatible with keratoderma and given the context of the patient a diagnosis of aquagenic keratoderma was made.

Symptomatic management was performed with moisturizing creams in periods of exacerbation with education to the patient and family of the nature of this condition. Clinical observation was performed showing a decrease in the frequency of occurrence of episodes as the years passed and the patient grew older.

Conclusion:

Although aquagenic keratoderma is a rare disease, it is important for the dermatologist to know this disease in order to make an adequate diagnosis and educate the patient about the recurrent nature of the lesions with exposure to water, as well as to determine the best therapeutic option or, as in our case, to perform symptomatic management and observe the evolution which was with a tendency to self-recovery.

Abstract N°: 1315

Bridging Healthcare Gaps: Patient and Physician Experience in the Utilization of Teledermatology in a Tertiary Hospital in the Philippines

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Introduction & Objectives:

In the face of the pandemic, various hospitals were driven to utilize teledermatology even without large-scale planning. It is likely that patients and physicians alike have experienced various challenges during its integration in various health institutions. A number of studies support its efficiency, however, the acceptability and satisfaction among users were less documented. Hence, this study aims to determine the experiences in the utilization of teledermatology among patients and physicians in Rizal Medical Center, Department of Dermatology.

Materials & Methods:

This study employed a single-center analytical cross-sectional design. Patient and physician questionnaires were utilized. The minimum sample size employed for this study was 306 with 95% Confidence Interval and 5% margin of error. This study was able to recruit beyond the required sample size with a total of 315 respondents.

Results:

A total of 315 teledermatology patients and 14 dermatology residents were included in the study. The average distance to care and travel time saved were at 194.61 (±1153) kilometers and 182.87 (±330) minutes, respectively. The average transportation cost and daily wage saved were 672.62 (±1474) Php and 738 (±1432) Php, respectively. The patients who were satisfied with teledermatology lived farther from and saved more travel time. Most physicians preferred face-to-face consultations since it provided easier means to conduct physical examination. Nonetheless, the majority of physicians were satisfied with the ease of communication and the convenience that teledermatology provided, and most were willing to continue its use.

Conclusion:

The high acceptability and satisfaction among patients and physicians utilizing teledermatology provides evidence that it can be integrated to the health service delivery. In countries where access to dermatologic care remains a challenge, teledermatology is a promising modality to help solve health disparities even beyond the Coronavirus disease (COVID-19) pandemic.

Abstract N°: 1484

Rare diffuse dermatological manifestations in a patient suffering from kimura's disease

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Introduction & Objectives:

Kimura's disease (KD) is a rare chronic inflammatory entity of unknown etiologies, firstly described as "eosinophilic hyperplastic lymphogranuloma" in 1937(1) and mostly happening in young Orientals. Japanese and Chinese articles have mentioned it as asymptomatic angiolymphatic lesions specified with lymphadenopathy (2), usually at head and neck (3), major salivary glands (4), and distinct unusual sites as well as kidney, orbit, ear (5) or involving nerves (6), and causing bronchial asthma (7). T helper 2 cells-biased cytokines including interleukin (IL)-4 and IL-5, were mentioned to be involved in the progression of KD (8). The dermis is involved with T-cell lymphoid follicles centered by the germinal B cell, endothelial proliferation (9), and noteworthy count of eosinophils infiltrating the area (10), are of certain histopathological features of the KD. The lesions are known to slightly get slowly enlarged (11).

Materials & Methods:

Microscopic analysis,Sections from skin lesion biopsy disclose acanthosis, hyperkeratosis, parakeratosis with focal areas of ulceration, and epidermal erosion. The upper and lower dermis showed perivascular and interstitial infiltration of lymphocytes, histocytes, and eosinophils. The vessels with plump endothelial cells were present. Finally, the diagnosis of KD was distinguished.

Results:

Our presented case was female. Based on the literature, It has a connection with the male gender that is very strong (1-11), while recent studies are reporting female cases of KD in Oriental (12,13) and West (14-15). This patient was relatively young (35-year-old). In a systematic review literature, Kakehi et al., a total of 215 pieces of researches were collected with a total of 238 patients. Mean age was 35 years, as well as our case. Overall, the male/female ratio was 4:1, with 17:1 in patients under the age of 20, 4:1 in patients aged 20–39, and 2:1 in patients aged higher than 40 (16). Our case showed micro-proteinuria, whereas there were no indications for kidney biopsy as the patient was responding to treatment. On the other hand, many studies have focused on kidney function disorders in KD. Rebelos et al. reported a male Asian patient with nephrotic syndrome and also KD (17).

Conclusion:

The Cutaneous manifestationsof our presented case are unique; while showing consistent histopathology and clinical characteristics as KD. Unusual skin manifestations of the disease in this patient may indicate that a number of patients may be misdiagnosed. Since KD is a rare disease, It is better to be considered that many patients may present with new and specific manifestations that have not been seen before. Therefore, since One of the most accurate methods of diagnosis is tissue biopsy and pathological examination, it is better to consider tissue biopsy to rule out KD in suspected cases with new and unique or unknown skin manifestations that are not compatible with other lesions.

Abstract N°: 1554

Knowledge, Attitudes, and Practices on Teledermatology among Dermatologists in the Philippines

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Introduction & Objectives:

Teledermatology has been widely used during the coronavirus disease 2019 (COVID-19) pandemic to overcome barriers in access to care. The objective of this study was to assess the current knowledge, attitudes, and practices regarding teledermatology among dermatologists in the Philippines.

Materials & Methods:

This was a cross-sectional and analytical study conducted from January 2022 to April 2022, among Filipino dermatologists using a self-administered online questionnaire. Descriptive statistics was used to summarize the demographics of the participants. The two-sample t-test, Chi-square test, and multiple logistic regression model were used to analyze the data.

Results:

Out of 113 respondents, 108 (95.5%) had adequate knowledge and a positive attitude toward teledermatology. The majority (110/113, 97.35%) practiced teledermatology. The most commonly used platform was instant messaging applications (78/100, 70.91%), and the most common factor that influenced their practice was patient demands or needs (74/110, 67.27%). Those who did not practice teledermatology cited technological difficulties as the main reason.

Conclusion:

Teledermatology was widely used by Filipino dermatologists to provide remote care during the COVID-19 pandemic. However, to fully utilize its potential and limit potential issues associated with its use even after the pandemic, continuous training and education among dermatologists and a more enabling technological environment may be needed.

Abstract N°: 1626

Utilization of artificial intelligence chatbot in decreasing turnaround time in a tertiary government hospital in the Philippines: A retrospective study

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Introduction & Objectives:

The COVID-19 pandemic radically changed how healthcare services are provided to patients globally. It paved the way for adopting newer tools and digital technologies, particularly the rise of Telemedicine. Incorporating artificial intelligence technology into patient consultation can improve operations, potentially reducing wait times and enhancing healthcare delivery efficiency.

The objective of the study is to evaluate the effectiveness of an artificial intelligence chatbot in reducing the turnaround time for patient consultations at a tertiary government hospital in the Philippines.

Materials & Methods:

A retrospective study was conducted at the Dermatology Specialty Skin Center Outpatient Department of Rizal Medical Center. Descriptive statistics were used to describe the average turnaround time before and after utilizing the artificial intelligence chatbot. A paired samples t-test was used to determine the difference between the turnaround time before and after utilizing the artificial intelligence chatbot.

Results:

A total of 320 participants were included in the analysis. Artificial intelligence chatbots have reduced the average consultation time by 0.53 hours. A dependent samples t-test indicated that the decrease in TAT before and after implementing the artificial intelligence chatbot was statistically significant ($p < .001$). This shows that the artificial intelligence chatbot is effective in alleviating the turnaround time in the institution.

Conclusion:

Utilizing an artificial intelligence chatbot can substantially reduce the turnaround time for patient consultations. It can also improve operational efficiency and effectively handle patient flow in a demanding healthcare setting.

Knowledge, attitude and practices regarding leprosy amongst nursing officers at a tertiary care teaching center in Central India

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Introduction & Objectives:

India had achieved the goal of elimination of leprosy as a public health problem at the national level in 2005, but it still has a high burden of leprosy, with an annual detection of more than 10000 new cases. Despite significant achievement in reducing the prevalence there is a dearth of proper knowledge regarding leprosy not only in the general public but also amongst the healthcare workers.

Nurses comprise a major proportion of the healthcare community and they act as opinion leaders and influencers in the society. Unfortunately, many times, they are not well-trained regarding leprosy and its clinical manifestations. Lack of adequate scientific knowledge and positive attitude can hamper the success of National Leprosy Eradication Program (NLEP). Therefore, this study was done to assess the knowledge, social attitude and practices about leprosy amongst nursing officers working at a tertiary care teaching centre.

Materials & Methods: This was a cross-sectional study in which nursing officers working at a tertiary care centre were asked to mark their responses in a well-structured questionnaire comprising of questions related to various aspects of knowledge, attitude and practices on leprosy (Fig 1). The data was collected using online Google forms and analyzed by Strata software version 17.

Results: A total of 215 nursing officers including 167 females and 48 males participated in the survey. Age of the participants ranged from 22 to 38 years. Their work experience varied from less than 1 month to 15 years (Table 1). Out of 215 participants, only 99 (46.5%) had encountered cases of leprosy. Most (180, 83.72%) of the participants knew that leprosy is caused by a bacterium, and 60% participants knew that it is predominantly transmitted by respiratory route. 171 (79.53%) participants were aware that leprosy affects both peripheral nerves and skin and 206 (95.81%) knew that it can present as loss of sensation. However, less than half (105, 48.84%) of the participants knew about the correct incubation period of leprosy. When asked about the duration of treatment of multibacillary leprosy only 48.37% participants answered correctly. Majority (80.47%) of the participating individuals believed that leprosy is curable. Approximately 95% of the participants were aware of NLEP and 93% knew that treatment for leprosy is available free of cost in government hospitals. Only 4.65% participants strongly agreed to marry a person cured from leprosy, 6.04% strongly disagreed to shake hands with a leprosy patient and 3.26% strongly believed that leprosy is a disease that one should fear. Majority of participants strongly agreed for the need of proper handwashing and to use mask and gloves while taking care of a leprosy patient. The detailed responses are shown in Table 2. A significant association was noticed between duration of experience and correct knowledge about the mode of transmission of leprosy (p=0.015).

Conclusion: A large proportion of nursing officers employed at a tertiary care teaching centre are not aware about the correct incubation period, duration of treatment and mode of transmission of leprosy. Few of them also have negative attitude towards the disease; which could be detrimental to the patients. It is, therefore, essential to adequately train and retrain them in order to develop right knowledge and perception about leprosy so that they can counsel and care for ailing patients in a healthy manner and move towards eradication of leprosy.

Fig 1:

Questionnaire

1. Age:
2. Sex: M/F/Other
3. Years of experience:
4. Department where you are posted:
5. Have you encountered someone with leprosy till now: Yes/No
6. Leprosy is caused by -
      a. Bacteria   b. Virus   c. Curse   d. Don't know
7. Leprosy is transmitted mainly by -
      a. By touch   b. Respiratory route   c. Food and water   d. Don't know
8. What parts of the body are commonly affected by leprosy-
      a. Peripheral nerves   b. skin   c. CNS   d. Both a & b
9. Incubation period of leprosy can be as high as -
      a. 2 years   b. 5 years   c. 6 months   d. 1 month
10. Duration of treatment in multibacillary leprosy is -
       a. 6 months   b. 1 month   c. 1 year
11. Is leprosy curable? Yes/No
12. Are you aware of the National Leprosy Eradication Programme [NLEP]? Yes/No
13. Is medicine for leprosy available free of cost at govt hospitals? Yes/No
14. Can leprosy present as loss of sensation? Yes/No

Answers to question number 15 to 23 are to be given in following format -
   a) Strongly agree
   b) Agree
   c) Neutral
   d) Disagree
   e) Strongly disagree
15. Leprosy patients should be allowed to join social gatherings & religious activities
16. I am ready to share my work environment with a leprosy patient
17. I am ready to marry a person who has been cured from leprosy
18. I would avoid sharing room with a family member diagnosed with leprosy
19. If am diagnosed with leprosy I will be comfortable in informing my friends and close relatives
20. I am ready to shake hands with a leprosy patient
21. Leprosy is a disease that we should fear
22. We should perform proper handwash before and after dealing with leprosy patients
23. Mask and gloves are to be worn while taking care of leprosy patient

24. What would you do if you come across a person in your neighbourhood with symptoms suggestive of leprosy?
   a) Counsel him/her for checkup at the nearby health centre at the earliest
   b) Prescribe MDT for leprosy
   c) Bring the patient to your health facility
   d) Stop all social interaction and stay away from him/her
   e) No intervention

Table 1:

EXPERIENCE (IN MONTHS)	NO. OF PARTICIPANTS	PERCENTAGE
0 - 12	51	23.72%
13 - 60	144	66.98%
61-120	17	7.91%
121 - 180	3	1.40%
TOTAL	215	100%

Table 2:

Question	No. of respondents (%)					Grand total
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	
Leprosy patients should be allowed to join social gatherings & religious activities	40 (18.6%)	110 (51.16%)	38 (17.67%)	19 (8.84%)	8 (3.72%)	215 (100%)
I am ready to share my work environment with a leprosy patient	37 (17.21)	112 (52.09%)	45 (20.93%)	13 (6.05%)	8 (3.72%)	215 (100%)
I am ready to marry a person who has been cured from leprosy	10 (4.65%)	62 (28.84%)	98 (45.58%)	32 (14.88%)	13 (6.05%)	215 (100%)
I would avoid sharing room with a family member diagnosed with leprosy	16 (7.44%)	48 (22.33%)	72 (33.49)	52 (24.19%)	16 (7.44%)	215 (100%)
If am diagnosed with leprosy I will be comfortable in informing my friends and close relatives	62 (28.84%)	96 (44.65%)	46 (21.40%)	10 (4.65%)	1 (0.47%)	215 (100%)
I am ready to shake hands with a leprosy patient	29 (13.49%)	98 (45.58%)	50 (23.26%)	29 (13.49%)	13 (6.05%)	215 (100%)
Leprosy is a disease that we should fear	7 (3.26%)	39 (18.14%)	47 (21.86%)	77 (35.81%)	45 (20.93%)	215 (100%)
We should perform proper handwash before and after dealing with leprosy patients	135 (62.79%)	61 (28.37%)	12 (5.58%)	3 (1.40%)	4 (1.86%)	215 (100%)
Mask and gloves are to be worn while taking care of leprosy patient	123 (57.21%)	72 (33.49%)	10 (4.65%)	6 (2.79%)	4 (1.86%)	215 (100%)

Abstract N°: 1794

Cutaneous mastocytosis after radiotherapy for breast cancer, case report.

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Introduction & Objectives:

Mastocytosis is a group of disorders characterized by the abnormal and excessive accumulation of mast cells, chronically and episodically, in any tissue, such as the skin (cutaneous mastocytosis) or beyond (systemic mastocytosis). These cells release vasoactive mediators such as histamine, heparin, leukotrienes and prostaglandins. Triggering factors include temperature changes, mechanical stimuli, radiotherapy, etc. Associated with KIT exon 17 mutations, it presents clonal expansion and alterations in mast cell apoptotic processes. Cutaneous mastocytosis may be related to local mast cell hyperplasia due to increased mast cell tryptase in the dermis and in the interkeratinocyte extracellular space. It begins in young or middle-aged adults and gradually progresses with multiple reddish macules or urticaria pigmentosa lesions over the years, often accompanied by Darier's sign. Only fewer than 10 cases of mastocytosis secondary to adjuvant radiotherapy of breast cancer are described in the literature, occurring between the ages of 43 and 62 years, with onset of the dermatosis ranging from 3 to 24 months. We present a case of cutaneous mastocytosis secondary to radiotherapy for breast cancer treatment in a patient outside the typical time of presentation by age.
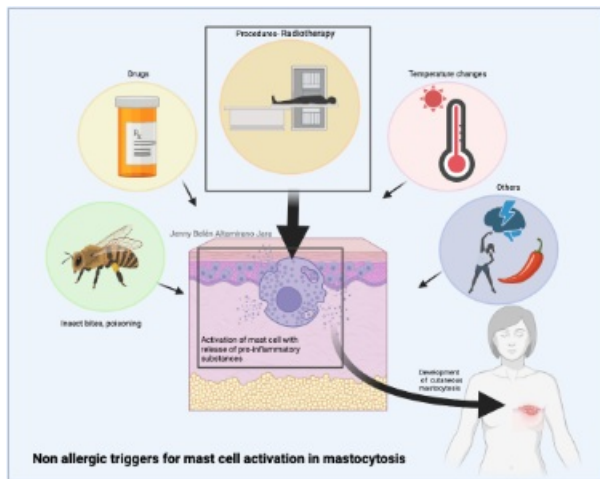

Fig 1. Created by the author.

Materials & Methods:

A 78-year-old female with a history of hypertension, diabetes, presented with a dermatosis localized to the left breast. She described numerous monomorphic macules, erythematous to brownish, averaging less than 3 mm in diameter, sensitive to palpation and clothing friction, and exacerbated by heat stimuli. Physical examination revealed a positive Darier's sign.

The dermatosis developed two years after radiotherapy for infiltrating lobular carcinoma grade 2 in the left breast and metastatic lobular carcinoma in the lymph nodes, treated with surgery, lymph node dissection, one month of radiotherapy, and oral exemestane for five years until July 2023.

Results:

An incisional biopsy confirmed the diagnosis of mastocytosis, revealing a perivascular and diffuse dermal infiltrate of mast cells with few eosinophils and hyperpigmentation of the basal layer.

Laboratory and imaging tests showed no abnormalities in other organs, confirming the diagnosis of cutaneous mastocytosis.

Antihistamines were prescribed for the appearance of lesions and the importance of avoiding triggers was explained. The risk of anaphylaxis and the importance of carrying epinephrine were emphasized. With continuous clinical follow-up and relevant serum tryptase monitoring, the cutaneous manifestations gradually resolved over time.

Conclusion:

It is crucial to understand the pathogenesis of mast cell accumulation and their continuous release of proinflammatory substances, driven by C-kit mutations and triggering factors. Although previously undescribed triggers have emerged, such as radiation therapy for breast cancer, this manifestation is atypical of such treatment.

The main goal of treatment is to avoid potential triggers. Antihistamines are recommended for symptomatic relief when necessary. Other therapeutic options include UVB phototherapy, topical corticosteroids and cromoglycate.

Further research is warranted to explore the relationship between mastocytosis and radiotherapy and to elucidate its pathophysiological mechanisms. In addition, prospective studies investigating the safety of relatively new treatments are needed.

Abstract N°: 1801

Two cases of the successful use of colchicine in treating recalcitrant epidermolysis bullosa acquisita.

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Introduction & Objectives:

Epidermolysis bullosa acquisita (EBA) is a rare autoimmune dermatosis characterized by subepidermal blistering. While systemic corticosteroids remain the cornerstone of EBA management, alternative therapies are under explored. Herein. Two cases of EBA in male patients aged 72 and 69, are reported presenting with blistering lesions on the trunk and extremities. The diagnosis of EBA was established through direct immunofluorescence examination of peri bulla tissue. These two case reports aim to show that methotrexate associated with colchicine and pentoxifylline may benefit.

Materials & Methods:

The medical records of two male EBA patients with trunk and extremity blisters were retrospectively analyzed. Clinical, laboratory, and histopathological data were collected. The diagnosis was confirmed by direct immunofluorescence of the biopsied tissue clinically affected.

Results:

First Case: A 72-year-old man presented with tense blisters on an erythematous base and milia on the trunk and extremities. No ocular or oral lesions were noted. Laboratory findings indicated elevated thyrotropic hormone and anti-thyroperoxidase antibodies, consistent with Hashimoto's thyroiditis. Skin biopsy revealed subepidermal blistering with eosinophilic infiltrate. Immunofluorescence demonstrated IgG and C3 deposition along the basement membrane zone. Treatment with prednisone initially improved symptoms, but recurrence ensued upon tapering. Subsequent therapies, including dapsone and tetracycline, showed limited efficacy. Combination therapy with methotrexate, colchicine, and pentoxifylline induced sustained remission for more than three years till the patient death by COVID-19 in 2020.

Second Case: A 69-year-old man presented with tense blisters associated with pruritus on the trunk and extremities, along with oral mucosal involvement. Skin biopsy revealed subepidermal blisters with a predominant eosinophilic infiltrate. Direct immunofluorescence confirmed the diagnosis of EBA. Treatment with prednisone and topical betamethasone initially improved symptoms, but new blisters appeared. Subsequent therapy with colchicine, methotrexate, and pentoxifylline resulted in sustained remission. Doses were tapered with continued lesion-free status after one year of treatment losing follow-up after that.
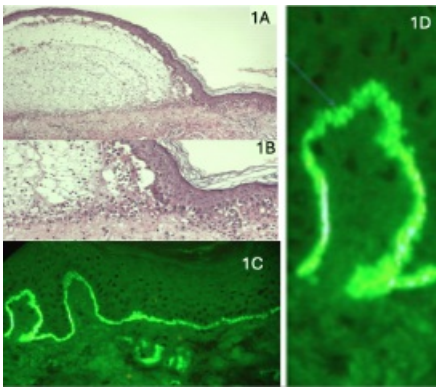
Fig.- 1A-B Histopathologic examination. 1C IFD, 1D. Serrated pattern in U-shaped IFD.

Conclusion:

Epidermolysis bullosa acquisita (EBA) manifests as a rare autoimmune blistering disease affecting various age groups. It presents in inflammatory and mechanical-bullous forms with diverse clinical phenotypes. Differential diagnosis relies on histopathological examination and direct immunofluorescence, demonstrating characteristic features such as subepidermal blisters and linear IgG and C3 deposition along the basement membrane zone. The serrated u characteristic of eba stands out in immunofluorescence.

Despite its rarity, EBA's association with autoimmune conditions like Hashimoto's thyroiditis underscores potential shared pathogenic pathways. Treatment modalities include systemic corticosteroids, immunosuppressants, and newer biologics like rituximab.

Further research is needed to establish standardized protocols for optimal management. Methotrexate, colchicine and pentoxifylline demonstrate efficacy, offering therapy options with improved outcomes and fewer adverse effects.

Abstract N°: 1807

"Evaluation of surgical resident's knowledge in scar management"

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Introduction & Objectives:

Scar management holds crucial significance in surgical care, exerting a pivotal influence on patient satisfaction, functional outcomes, and overall quality of life following surgery. As future practitioners, surgical residents necessitate comprehensive knowledge and proficiency in scar management techniques to ensure the delivery of optimal patient care.

This study endeavors to evaluate the knowledge of surgical residents in scar management using diverse assessment methods.

Materials & Methods:

A questionnaire comprising 12 questions was distributed among 50 surgical residents to evaluate their knowledge, practices, and attitudes concerning the management, care, and prevention of surgical scars, along with their interactions with patients and their scars. Data were collected anonymously.

Results:

A total of 50 surgical residents completed the questionnaire.

Among the respondents, a substantial 66% indicated that they predominantly served as the primary surgeon in a majority of surgical cases they encountered.

80% of residents claim to notice a difference in the quality of sutures performed in the emergency operating room.

In terms of knowledge of scar formation, 68% of residents displayed adequate understanding, correctly identifying the primary phases of the healing process.

Moving on to scar assessment, 52% of residents expressed confidence in their ability to impartially evaluate the appearance and quality of surgical scars.

Regarding scar prevention techniques, only 38% of residents demonstrated comprehensive knowledge, encompassing various prevention methods such as specific dressings and post-operative care regimens.

Half of the residents exhibited interest in learning novel scar management techniques.

Concerning attitudes toward patients and their scars, 78% of residents emphasized the significance of patient's aesthetic and functional contentment with their post-operative scars.

Regarding communication with patients about scars, 60% of residents reported feeling at ease discussing patient's concerns about surgical scars while offering emotional support.

It was observed that, that residents in plastic surgery, maxillofacial surgery, and senior residents tended to perform better with superior knowledge in scar management.

Scar formation at the site of surgical incision and its adverse aesthetic effects typically impose a psychological burden on patients. Generally, strategies for minimizing the development of scarring are integrated into the operative plan to achieve improved aesthetic outcomes post-surgery.

The findings of this study illuminate several crucial aspects of surgical scar management and the attitudes of surgical residents towards their patients and their scars.

The varying levels of knowledge among residents regarding scar formation, assessment, and prevention underscore the necessity for continuous education and training in this domain.

Conclusion:

This study highlights the importance of ongoing education, training, and support for surgical residents in scar management. By addressing gaps in knowledge and enhancing communication skills, healthcare providers can ensure that patients receive comprehensive care that addresses their concerns and promotes optimal healing outcomes.

Abstract N°: 1820

Challenging papules restricted to bilateral forearms in elderly male

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Introduction & Objectives: Syringoma is a benign adnexal tumour of intraepidermal portion of eccrine sweat ducts, affecting 0.6-1% of population worldwide. Prevalence in elderly male is 0.1 %. Male to female ratio is 1:2. Types include localized, familial, generalized and associated with Down's syndrome. They are more frequent in women and occur during puberty or third/ fourth decade. They present as small ,1 to 5 mm, dermal, skin colored/yellowish/ mauve papules with rounded surface.

Materials & Methods: A 62-year-old diabetic male presented with asymptomatic, multiple, discrete, bilaterally symmetrically arranged, well defined, round, dull erythematous papules, 2x2 to 3x3 mm, follicular and non-follicular over bilateral upper limbs with predominant involvement of extensor aspect and few on the flexure aspect since 6 months. Lesions started on bilateral upper limbs simultaneously as few lesions with rapid increase in number. There were no lesions elsewhere on the body especially face. There was no history suggestive of photosensitivity, similar involvement in past/ family. Dermoscopy** revealed multiple, brown, ill-defined patches with brown lines, brown globules, white structureless area surrounded by brown lines. On histology dermis showed multiple ducts lined by two layers of cuboidal epithelium with clear lumen, some with comma tail like extension giving tadpole like appearance. Also noted were small, solid strands and nests of basaloid cells with dense fibrous stroma. Diagnosis was syringoma restricted to bilateral extensors of forearm in elderly male without facial involvement.

Results and Conclusion: Diagnosis of syringoma includes clinical examination, dermoscopy and skin biopsy. Clinicians should not solely rely on clinical findings as histology is confirmatory. Commonest presentation is over face in young females. Presentation in elderly males and over extremities is rare and should be kept as differential diagnosis of papules presenting over extremities.

Abstract N°: 1842

Cutaneous Rosai-Dorfman disease at the SARS-CoV2 vaccine injection site

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Introduction & Objectives: Rosai-Dorfman disease (RDD), also known as sinus histiocytosis with massive lymphadenopathy, is a rare, benign, and self-limiting condition characterized by reactive proliferation of histiocytes.

Materials & Methods: A 64-year-old male without relevant personal history presented with an asymptomatic lesion on his left arm, which appeared 4 months earlier, with an abrupt onset and progressive growth. Interestingly, the location of the lesion coincided with the injection site of the third dose of the Pfizer® vaccine against SARS-CoV-2, administered 8 months earlier. On physical examination, a red-brown infiltrated plaque of 3 cm diameter was observed. The plaque consisted of multiple confluent cup-shaped papules resembling a cluster of cherries. No lymphadenopathy, masses, or organomegaly were identified. Dermoscopy revealed structureless pale pink areas and peripheral branching vessels. Histological examination demonstrated a superficial and deep nodular dermal infiltrate composed of a population of histiocytic cells. These cells had ovoid nuclei, prominent nucleoli, and abundant granular cytoplasm. Isolated images of emperipolesis were also observed. Immunohistochemical staining was positive for S100, CD163, focal CD68, OCT2, and cyclin D1, while CD1a was negative. The diagnosis of Rosai-Dorfman disease was established. Analytical and radiographic studies (total body CT scan) ruled out systemic involvement. Consequently, intralesional infiltration of triamcinolone acetonide was performed, resulting in partial remission after 3 months.

Results: Rosai-Dorfman disease (RDD), an idiopathic non-Langerhans cell histiocytosis, can be associated with viral infections, autoimmune diseases, neoplasms, and vaccinations. The most common presentation involves massive, painless bilateral cervical lymphadenopathy. However, up to 40% of patients may exhibit extranodal involvement. Skin lesions are present in 10% of cases and are not uncommonly seen in the absence of lymph node and/or extracutaneous disease. Cutaneous disease manifests as single, clustered, or widespread xanthomatous, erythematous, or red-brown papules, nodules, or plaques. Three cases of cutaneous RDD following SARS-CoV-2 vaccination have been reported, although none of these lesions coincided with the vaccine injection site. The underlying mechanisms are not well understood. Additionally, two cases have been described after SARS-CoV-2 infection and hypotheses suggest that granulomatous reactions may be due to an aberrant immune response and a cytokine storm caused by interferon dysregulation, an essential alteration in COVID immunopathology.

Conclusion: We present a case of cutaneous RDD at the SARS-CoV-2 vaccine injection site. Clinicians should consider RDD within the spectrum of rare cutaneous manifestations associated with SARS-CoV-2 infection and its vaccines.

Abstract N°: 1843

Warthin's tumor, an extracutaneous neoplasia that dermatologists should be aware of

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Introduction & Objectives: Warthin's tumor (WT), also known as papillary cystadenoma lymphomatosum, is a rare and benign salivary gland tumor that occurs almost exclusively in the parotid gland.

Materials & Methods:

Case 1: An 82-year-old male, with a history of high-risk squamous cell carcinoma (SCC) on the scalp, presented with two lesions on face and frontal region, clinically suggestive of basal cell carcinomas. During the general physical examination, a mass was identified at the left mandibular arch, 4.5x5 cm in diameter, soft consistency and adhered to deep planes. Suspicioning SCC metastasis, an ultrasound-guided biopsy and a total body CT scan were requested. In the radiological study, an ovoid lesion was observed at the tail of the left parotid, with practically homogeneous uptake of intravenous contrast. The borders were well defined and did not infiltrate adjacent structures. In the histological study, lobules of neoplastic epithelium were identified, formed by a double layer of eosinophilic epithelial cells located on a reactive lymphoid stroma. A diagnosis of Warthin's tumor was established.

Case 2: A 71-year-old male, being followed up for actinic keratoses and a keratoacanthoma on the right arm, attended his review appointment in Dermatology consultations. During the physical examination, a mass of 5x3 cm in diameter was identified at the right cervical region, of firm consistency, immobile and adhered to deep planes. He presented a lesion with similar characteristics at the level of the left mandibular arch. Suspicioning a lymphoproliferative syndrome, an ultrasound-guided biopsy of both lesions was requested. The histological study revealed an epithelial proliferation like that described in case 1, so the diagnosis of bilateral Warthin's tumor was established.

Results: WT is the second most frequent benign tumor of the parotid gland, following pleomorphic adenoma. It occurs more often in male smokers (>50 years), generally between the fifth and seventh decades of life. 10% of cases are bilateral. The main clinical manifestation is a slow-growing laterocervical mass, at the lower pole of the parotid gland and rarely painful. The differential diagnosis includes pleomorphic adenoma, SCC, metastases, and lymphadenopathies. Histologically, it is an adenoma composed of a bilayered columnar and basaloid oncocytic epithelium that forms multiple cysts with numerous papillae, accompanied by a proliferation of follicle-containing lymphoid tissue. The most common treatment is a superficial or partial superficial parotidectomy.

Conclusion: We present two cases of Warthin's tumor, a neoplasm that we must consider in the differential diagnosis of slow-growing laterocervical masses.

Abstract N°: 1923

Skin during pregnancy: Explore its needs to develop a new multipurpose lotion

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Introduction & Objectives:

Skin during pregnancy and postpartum period undergoes multiple physiologic changes. They are under mechanical, hormonal, metabolic and immune influences. A research program on normal appearing skin and red stretch marks during pregnancy and four months postpartum has been conducted before developing a product targeting skin essential need.

Materials & Methods:

Clinical scoring, NMFs and ceramides samplings, laser-doppler, cutometer, confocal microscopy analysis and ex vivo stretching tests have been performed among 20 pregnant women with red stretch marks, 14 being followed for 4 months postpartum. Multipurpose lotion was clinically tested in prevention (n=32) and regression (n=32) studies. The second one was conducted for 3 months postpartum among woman with red striae, which were observed by 3D imaging system, colorimetry and chromameter. Hydration was quantified by corneometry.

Results:

On normal appearing skin, decreased NMFs and ceramides were objectivated. Pruritus was extensive but maximum on tension zones (abdomen). Inflammation was detected by clinical redness, increased Doppler blood flow, tension skin model and Confocal Microscopy (brilliant cells). Decreased mechanical properties were quantified by cutometer.

Confocal microscopy of red stretch marks showed decreased density of dermal papillae, with elongation plus disorganized collagen and inflammation. The 3 last abnormalities persisted in postpartum.

Multipurpose lotion contains 3 maracuja extracts targeting dryness, pruritus, tension and inflammation. It increased hydration by 44% at 4 hours, 29% at 8 hours and persisted 24 hours. It limited the appearance of stretch marks during 3 last months of pregnancy (17% of women developed some) and during 6 weeks postpartum (22% with striae) (expected frequency of 70%).

In the regression study, it significantly decreased length (-24,6%), width (-23,4%), redness (-16.4%) and visibility of striae (Delta E-29,1%).

Conclusion:

Applying multiple noninvasive methods is necessary to reach a global view of the skin during pregnancy. Normal appearing skin undergoes multiple modifications during pregnancy, without normalization after 4 post-partum months. In red striae, stretching induces alterations of skin structures and dermal fibers as well as skin inflammation. Cosmetic product with patented natural ingredients may have a positive impact on skin during pregnancy and in the postpartum period.

Characterizing Global Dermatologic Engagement and Needs: a cross-sectional study across 83 countries

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Introduction & Objectives:

Lack of access to dermatologic care is a global health crisis. A robust understanding of current engagement in global health dermatology is essential to support ongoing efforts and to develop new impactful initiatives; yet there is a dearth of knowledge on current involvement and needs in caring for underserved populations on a global level. We aimed to better characterize the scope of activity and needs of dermatologic clinicians and partners who care for underserved populations worldwide.

Materials & Methods:

An eight-question survey, collaboratively developed with clinicians and industry professionals, was distributed in-person to conference attendees at three dermatology conferences in Asia, Europe, and the United States from July 2023 - March 2024.

The survey, available in English, captured respondent country of origin, professional role, and community efforts to increase access to dermatologic care. Specifically, those who affirmed engagement in community work were asked about frequency of care delivery for underserved patients, number of patients reached, community type (e.g., low-income, rural remote, elderly, homeless, migrant or refugee, and LGBTQIA+), methods utilized (e.g., education, clinics, teledermatology, product donations), and most prominent needs.

Results:

A total of 724 respondents completed the survey. Within this subset, 537 participants from 83 different countries endorsed actively engaging in efforts to increase access to dermatological care in their communities. Most of the respondents (94%) were dermatologists or dermatology-focused health professionals. Two-thirds reported weekly engagement with underserved populations. One-quarter reached at least 500 patients annually. The populations most frequently supported were low-income (60%), rural remote or urban underserved (60%), and elderly individuals (54%). The primary means of support was through healthcare provider and patient education followed by outreach clinics. A global majority (75%) identified increased affordable care as their highest priority, followed by regional differences such as increased dermatology training in African countries (62%) and provision of clinician-focused educational resources in Latin American countries (48%). The most desired tangible intervention was financial support (62%) through grants, sponsorships, and career development awards.

Conclusion:

This cross-sectional assessment identified a broad subset of dermatology practitioners caring for underserved communities globally, some of whom care for over 1000 patients per year. One limitation of this study is that it

was conducted at international conferences, which typically require significant financial resources to attend. Therefore, responses may underestimate the scope of all dermatologists caring for underserved populations. Results indicated that future efforts to support this work should be both patient-focused through increased care affordability and practitioner-focused through increased training opportunities. Financial support was cited as the highest-priority intervention to meet these needs. Intersectional collaboration via private-public partnerships is one solution. Future investigation is needed to contextualize the challenges of providing high-quality dermatologic care in underserved settings around the globe.

Low TFM Soap Bars – A Transformative Approach to Safe and Holistic Cleansing for Better Skin Barrier Health

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Introduction & Objectives:

Cleanser selection is critical for skin barrier health. Mild cleansing bars can be designed with sustainably sourced oils and reduced Total Fatty Matter (TFM) using transformative plant-based technologies (1). These bars demonstrate benefits on skin barrier and microbiome as well as clinical superiority Vs. traditional soaps.

Materials & Methods:

Methods:

Gene expression analysis on living skin equivalents (LSE) treated with low TFM bars; differentiated skin keratinocytes treated with skin microbiome ferments of plant-derived entities. Fully randomised double-blind face and forearm clinical studies (>100 volunteers, 4 weeks) measuring skin health through dermatologist and instrumental evaluation.Home-use tests (> 5000 consumers) across multiple geographies.

Results:

In *in vitro* squalene hydroperoxide (SQOOH)-challenged LSE models, the low TFM bars significantly ($p < 0.01$) upregulated skin hydration, barrier and skin autophagy repair gene expression. Further, the skin microbiome fermented plant-derived entities significantly ($p < 0.01$) upregulated skin barrier-linked gene expression (AQP3, KRT4) suggesting pathways for low TFM bar superiority.

The low TFM soap bars delivered clinically significant, superior ($p < 0.05$) skin hydration, glow, even-tone in expert dermatologist assessments using MSCR G&R scale (2) compared with marketed higher TFM soaps.

In large-scale home-use tests, low TFM bars were rated betterby consumers (t-test, 2-tailed 95% significance) on various skin condition end points. This was observed across different ethnicities, skin colour, usage conditions and water hardness.

Conclusion:

Well-designed, sustainable low TFM bars have been shown to deliver clinical and consumer-perceivable efficacy. This robust data set can now reassure dermatologists and consumers that these can be safely built into daily cleansing regimens both to help maintain and boost skin barrier health,while cleansing effectively.

Abstract N°: 2116

Facilitators and barriers to implementation of specialty (dermatology) core-curricula in UK medical schools: medical education deans' perspective

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Introduction & Objectives:

Specialty curriculum implementation, like dermatology, is varied and inconsistent across UK medical schools. The aim of the study was to gain perspective of UK medical schools deans on the facilitators and barriers to implementation of specialty specific core-curriculum using dermatology as a specialty. Ethics approval was sought and approved from the Research Ethics Committee, University of Nottingham (Research Ethics reference no: FMHS363-1021).

Materials & Methods:

Online semi-structured interviews were requested via the Medical Schools Council, UK, with deans of medical education across Scotland, England and Wales. The interview topic guide related to qualifications, leadership, clinical course, and stakeholders involved in curriculum implementation. The thematic analysis from the interviews was undertaken using NVivo qualitative data analysis software or equivalent. Interviews were conducted using Microsoft (MS) teams virtual platform to allow flexibility and feasibility in the context of Covid-19 pandemic and changes to working patterns at universities and medical schools. Data was analysed and managed, using the Framework Method.

Results:

A total of four deans of medical education responded to the interview request, via the Medical Schools Council. They belonged to four UK medical schools, situated in Wales, Scotland and England, which helped in purposive sampling of gathering views from different UK countries. The themes generated were curriculum planning and review; specialty champion leads; cultural and political influences and student factors. UK's regulatory body the General Medical Council (GMC) and its upcoming Medical Licensing Assessment (MLA) were important factors for curriculum reviews. The government initiative to create more generalists contributed towards the development of new medical schools, for example, in Scotland. The skill set, expertise, and enthusiasm of the dermatology teaching leads was vital for teaching medical students their specialty subjects. The Covid-19 pandemic had impacted clinical and teaching activities widely. They observed a shortage in the dermatology workforce as a specialty. Deans felt it was important to ring-fence funding and protect time for undergraduate education. Student feedback was a powerful voice with regards to quality of teaching, availability of appropriate staff and their overall student experience. A blended learning approach, incorporating teledermatology and experiential clinical direct patient care could provide a balance to attain confidence and competence amongst medical students when dealing with dermatology patients.

Conclusion: This study provided a unique insight on the perspectives of UK deans of medical education on specialty curriculum (dermatology) implementation. Political (local and central agencies, like the GMC, MLA, UK government and Health education boards) and cultural influences, availability and enthusiasm of specialty champions as well as student satisfaction were important factors for dermatology. Immense NHS workloads, paucity of adequate clinical staff for teaching, and impact of Covid-19 pandemic were other challenges that

influenced curriculum implementation. Strategies for undergraduate leads to improve specialty core-curricular implementation included formal training in medical education, appropriate recognition in job plans and review of professional development in yearly appraisals.

Abstract N°: 2148

Primary Hyperhidrosis and Sensitive Skin Syndrome: A National Pilot Survey

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Introduction & Objectives:

Sensitive skin syndrome (SSS) is characterized by subjective cutaneous hyperreactivity to innocuous stimuli and affects approximately 50% of the US population (1). Early data suggests eccrine gland pathology and inappropriate activation of inflammatory mediators may contribute to SSS (2). Given primary hyperhidrosis (HH) is the most common disease of the eccrine gland, we sought to evaluate the frequency, quality, and location of SSS in this population.

Objective 1: To evaluate the frequency, quality, and location of sensitive skin syndrome in a primary

hyperhidrosis population

Objective 2: To use predictive modeling to identify features that distinguish those with sensitive skin

syndrome from those without in a primary hyperhidrosis population

Materials & Methods:

An IRB-exempt survey was disseminated by the International Hyperhidrosis Society to their membership. Statistical analysis was performed (*GraphPad Prism*). A predictive classification model for SSS was built using random forest machine-learning algorithms.

Results:

38.19% (637/1668) of respondents suffered from primary HH. Of these, 89% self-reported SSS; 92% qualified as SSS via Sensitive Scale-10 scores (SS-10) (3,4). 75% believe HH impacts their skin sensitivity. HH severity scores were significantly higher for SSS (M=5.7/10) than non-SSS (M=4.9/10; p=0.0018). SSS occurred frequently in body regions both affected and unaffected by HH: craniofacial HH frequently co-occurred with facial/axillary SSS; facial HH with axillary/plantar SSS; plantar HH with axillary/total body SSS; and axillary HH with facial/total body SSS. More severe primary HH was correlated with higher SS-10 scores (p<0.0001). Predictive modeling designated SS-10 scores as the most useful distinguishing feature for SSS.

Conclusion:

These data are the first to propose and support a relationship between SSS and HH; SSS occurred more frequently in this cohort than in the general population even in areas unaffected by HH and/or sweat. While more research is needed, screening HH patients for SSS may be warranted.

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Abstract N°: 2162

Sensitive Skin: A Survey of Dermatology Resident Physicians' Perspectives and Educational Exposures

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Introduction & Objectives:

Sensitive skin syndrome (SSS) is a subjective syndrome characterized by cutaneous hyperreactivity, affecting over 40% of individuals globally. 1 In the US, over 60% of patients with a primary diagnosis of SSS seek dermatologic care.2 Given the prevalence of SSS and the need for specialized care, this study aimed to evaluate dermatology residents' exposure to SSS education and their perspectives on its management.

Objective 1: Assess dermatology resident physician's educational exposure to sensitive skin syndrome

Objective 2: Evaluate resident's perspectives and management approaches to sensitive skin syndrome

Objective 3: Make recommendations for improving the diagnosis and management of sensitive skin syndrome

Materials & Methods:

An IRB-approved survey was electronically distributed to dermatology residents registered to the Dermatology-In review list. 214 survey responses were statistically analyzed with GraphPad Prism software using Fisher's exact tests.

Results:

Although 84% of residents had treated patients with SSS, only 48% received specific SSS education during residency. Less than 25% felt very knowledgeable about SSS diagnosis, clinical evaluation, or management. Residents with SSS education were more likely to gather allergy history ($p=0.0015$), address reactivity to products ($p=0.003$), advise on avoiding triggers ($p=0.01$), review current products, recommend discontinuation of irritants ($p=0.03$), and recommend SSS-formulated over-the-counter products ($p=0.0007$). They also more frequently prescribed immunomodulators ($p=0.02$), topical steroids ($p=0.016$), and phototherapy ($p=0.02$).

Conclusion:

Residents who receive SSS education are better equipped to diagnose and comprehensively treat SSS patients, suggesting that a dedicated SSS curriculum should be incorporated into residency training. Residents reported challenges with all aspects of SSS patient care and heterogenous management approaches are likely a reflection of a general lack of consensus on how best to define, diagnose, and manage SSS.3,4 Increasing research on SSS is essential to better align management with evidence-based approaches.

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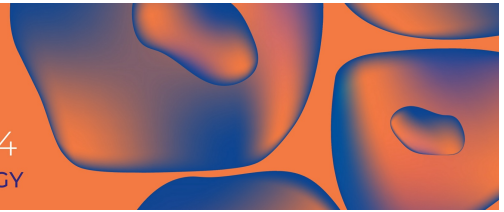
Abstract N°: 2233

Reintroducing Moulages in Dermatological Teaching with 3D-Technologies

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Introduction & Objectives:

Three-dimensional characteristics of skin diseases are important. Some are even named after their haptic efflorescences such as Papillomatosis confluens et reticularis or Urticaria pigmentosa. Before color photography became prevalent, a widely used tool conveyed these aspects realistically were moulages. Up to many thousands of these life-sized wax models of skin conditions could be found in all big European clinics. Since their decline, dermatological teaching materials relying only on two-dimensional photography are lacking the third dimension. We used recent advancements in 3D-technologies to revive moulages by creating a life-sized skin model using merely 3D-scanning and 3D-printing technologies and evaluated its use in teaching dermatology in medical school.

Materials & Methods:

A human face was 3D-scanned and several basic dermatological skin findings were virtually added before printing the object in full-color and flexible material for highest realism. Within the basic skin finding course at a German Medical Faculty in summer semester of 2023, 214 medical students were taught using the 3D-moulage and their feedback as well as that of 9 specialists and 22 residents evaluated using a questionnaire.

Results:

Using 2D-photographs for correctly identifying basic skin findings such as maculas, plaques or papules yielded the lowest confidence with a median of 4.0 of 10. Providing the participants with a 3D-scan of these haptic features increased the confidence in identification to 8.0 of 10 and exposing them to the physical 3D-model yielded a confidence of 9.0 (Fig. 1a).

96.7% of students either definitely or probably viewed the incorporation of moulages into medical school favorably (Fig. 1b) and 94.6% favored integrating moulages into postgraduate training. 88.1% saw moulages as beneficial for patient communication and surgical preparation. 91.3% welcomed high-resolution 3D-scanning for documenting skin lesions. 93.9% of medical students agreed or strongly agreed that they would like to use 3D-models for training surgical procedures before performing them for the first time on a patient. The results for residents and specialists were generally also positive, but in some cases more subdued with only 55% of specialists agreeing on the need for 3D-models for training surgical procedures. Lastly, 98.2% of students said they would probably or definitely have a better understanding of skin lesions with the help of moulages.

Conclusion:

Using photographs alone lacks the tactile information needed for confident diagnosis of skin pathologies. Incorporating 3D-scans and physical moulages improves understanding and confidence in identifying basic skin lesions. Modern 3D-moulages show promise for enriching dermatological education at all training stages. Traditional photography for documenting skin pathologies is outdated, with high-resolution 3D-scanning being essential for clinical practice.
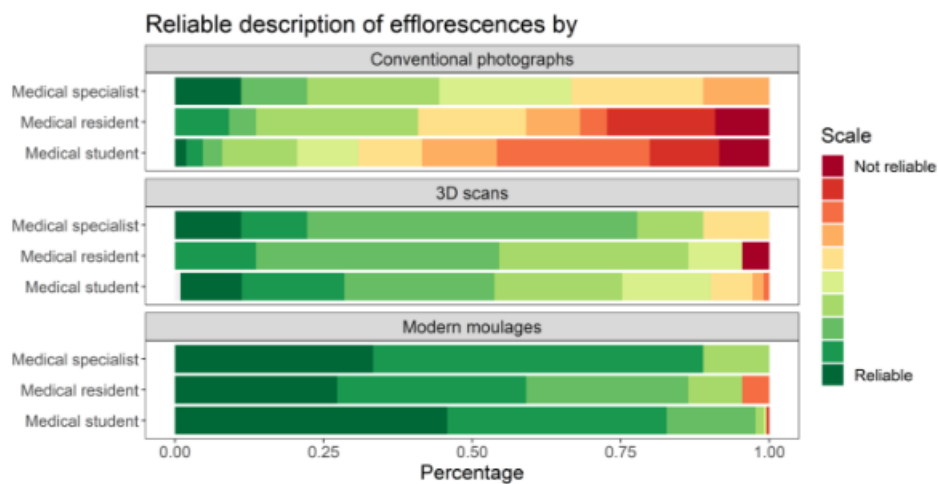
Figure 1a. Feedback from medical students (n=214), residents (n=22), and specialists (n=9) regarding their ability to accurately describe skin eruptions utilizing traditional photographs, 3D scans, and contemporary moulages.
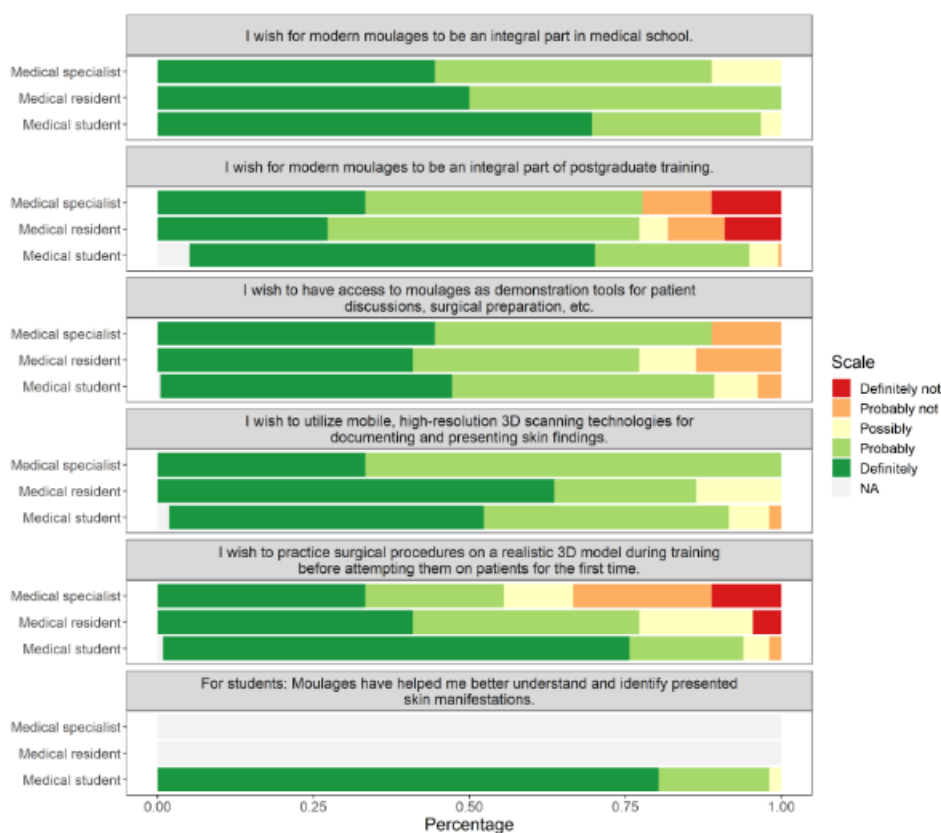

Figure 1b. Feedback gathered from medical students (n=214), residents (n=22), and specialists (n=9) regarding the application of modern moulages and 3D scans across diverse domains. NA indicates data not available.

Dermatologists' Attitudes to Digital Health Interventions: Insights From a Cross-Sectional Survey and Cluster Analysis

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Introduction & Objectives: The introduction of Digital Health Interventions (DHIs) has been proposed as a solution to enhance dermatological care by improving quality, empowering patients, and increasing efficiency. However, Germany lags behind other European countries in this regard. One barrier is the potential low acceptance among dermatologists.** The aim of this study is to examine the acceptance, current usage, and potential future usage of DHIs among dermatologists, and to identify clusters based on their acceptance, describing differences between them.

Materials & Methods: A cross-sectional survey was conducted, with 1,000 dermatologists in Germany randomly invited to participate. The questionnaire consisted of Likert scale items to assess DHI acceptance, developed based on previously conducted focus groups. Additionally, questions regarding current and future DHI usage were included. Exploratory Factor Analysis (EFA) was used to identify factors, and the data served as input for a two-step clustering algorithm.

Results: The survey of 170 dermatologists (average age 50.8 years, SD 10.3; 55.7% female) identified four factors through EFA: (1) "Positive Expectations and Acceptance of DHIs," (2) "Digital Competence of Dermatologists," (3) "Negative Expectations and Barriers," and (4) "Dermatologists' Perspectives on Patient Acceptance and Competence." Cluster analysis revealed three clusters. Cluster 1 ("Undecided"; n = 69) had moderate usage intentions (F1; M 3.2; SD 0.6) and negative expectations towards DHIs (F3; M 3.5; SD 0.6). Cluster 2 ("Open-minded"; n = 60) showed high usage intentions (F1; M 4.1; SD 0.3) and digital competence (F2; M 4.3; SD 0.4). Cluster 3 ("Rejecters"; n = 26) had low usage intentions (F1; M 2.0; SD 0.6) and low digital competence (F3; M 1.9; SD 0.7). The majority in all clusters agreed that there are inadequate reimbursements or incentives for DHIs. The "Open-minded" were notably younger compared to other clusters and exhibited the highest adoption rates of DHIs. However, only one-third of the "Open-minded" utilized DHIs such as Teledermatology or AI. A majority of all three clusters ("Undecided": 75.0%; "Open-minded": 59.3%; "Rejecters": 100%) agreed that the national eHealth strategy has not strengthened patient care.

Conclusion: A significant group of dermatologists expressed willingness to use DHIs more frequently. However, structural barriers (e.g., inadequate reimbursement) may hinder the adoption of DHIs among dermatologists. The differing rates of application and acceptance of DHIs in the identified clusters may contribute to health disparities and must be carefully considered during DHI implementation.

Abstract N°: 2236

Dermatological Patients' Attitude To Digital Health Interventions: Insights from a Cross-Sectional Survey and Cluster Analysis

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Introduction & Objectives: The introduction of Digital Health Interventions (DHIs) has been proposed as a solution to enhance dermatological care by improving quality, empowering patients, and increasing efficiency. Germany lags behind other European countries in this regard, with dermatologists and physicians citing low patient demand as a barrier. This study aimed to examine the degree of acceptance and usage of DHIs among dermatological patients, to form clusters based on acceptance, and to describe differences and similarities between the clusters.

Materials & Methods: Dermatological patients (Psoriasis, Atopic Dermatitis, Acne Vulgaris, Skin Cancer) were invited to participate in a cross-sectional survey through relevant patient organizations. The questionnaire consisted of Likert scale items to assess DHI acceptance, developed based on previously conducted focus groups. Additionally, questions regarding current and future DHI usage were included. Exploratory Factor Analysis (EFA) identified factors, and the data served as input for a two-step clustering algorithm.

Results: A total of 344 patients participated in the survey, with an average age of 52.5 years (SD 14.8; 74.0% female). Four factors were identified through EFA: (1) "Acceptance of DHIs and Trust"; (2) "Digital Patient Competence"; (3) "Concerns about DHIs"; and (4) "Positive Influence of DHIs". Cluster analysis revealed four clusters. Cluster 1 ("Digital Skeptics"; n = 49) exhibited moderate acceptance (F1; M 2.8, SD 0.6) and no positive expectations towards DHIs (F4; M 2.2, SD 0.6). Cluster 2 ("Cautious Adopters"; n = 106) showed high acceptance (F1; M 3.9, SD 0.4) and competence (F2; M 3.8, SD 0.5). Cluster 3 ("Digital Enthusiasts"; n = 98) demonstrated high acceptance (F1; M 4.5, SD 0.3), competence (F2; M 4.5, SD 0.4), and positive expectations (F4; M 4.5, SD 0.5). Cluster 4 ("Impact Uncertain Adopters") displayed high willingness to use (F1; M 3.9, SD 0.6) and competence (F2; M 4.3, SD 0.5), but low perception of positive influence (F4; M 2.8, SD 0.6). The "Digital Enthusiasts" were notably younger than the "Digital Skeptics" and the " Impact Uncertain Adopters". Together with the"Digital Enthusiasts", the latter cluster frequently exhibited the highest usage rates of DHIs, such as digital medication reminders (24.6% and 24.7%, respectively). Many patients in all groups, except the"Digital Skeptics", expressed willingness for increased usage of many DHIs, including electronic health records, with 75% of the Adopters (Clusters 2 and 4) and 94% of the"Digital Enthusiasts" envisioning more frequent usage.

Conclusion: The results indicate a considerable group of dermatological patients willing to use DHIs more frequently, suggesting a demand for digital services. However, it is important to note that varying rates of DHI application and acceptance among identified clusters may contribute to health disparities, necessitating consideration during DHI implementation.

Understanding Patient Priorities in Teledermatology for Psoriasis: A Discrete Choice Experiment

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Introduction & Objectives: Teledermatology offers potential benefits such as improved efficiency, flexibility, and patient-centered care. Despite positive findings and guidelines supporting its use, adoption in Germany remains low. Furthermore, existing store-and-forward (S&F) teledermatology platforms primarily focus on initial diagnoses rather than chronic conditions. One explanatory aspect could be the low preference of chronic patients for such teledermatology services. This study aims to assess the preferences of patients with psoriasis regarding dermatology treatment through a discrete choice experiment.

Materials & Methods: A discrete choice experiment was conducted to examine the influence of various characteristics on patient preferences for teledermatology, including two modes (video consultation and store-and-forward consultation), compared to conventional consultations. Participants were randomly assigned to scenarios representing acute flare-ups and follow-up care. Analysis of the two scenarios was performed using a conditional logit model. Patients were recruited through two patient organizations.

Results: A total of 221 individuals with psoriasis participated, with a mean age of 58.9 years (SD 12.2); 39.8% were female. One-fifth (22.3%) considered their psoriasis to be severe (Patients' Global Assessment [PtGA] > 7). 85% percent of participants were visiting a doctor's office due to their psoriasis, and only 7.0% were not using any medical treatments. The majority (60.1%) had been treated in the same practice for five years or longer. Forty-two percent required more than two hours to attend a consultation, and 38.8% reported waiting more than a week for a consultation during acute flare-up. In the acute care scenario, a minimum of 37.3% and a maximum of 69.8% of respondents could imagine making use of teledermatology treatment. In the follow-up care scenario, the figures varied between 28.0% and 63.0%. In both scenarios, when deciding to use teledermatology care, patients considered the care provided by the treating physician (acute: 0.49, p <0.001; follow-up: 0.51, p: <0.001), the possibility of being able to ask sufficient questions (acute: 0.35, p <0.001; follow-up: 0.52, p: <0.001), a very good response to the patient's concerns (acute: 0.48, p <0.001; follow-up: 0.50, p: <0.001) to be important. In the acute scenario, feedback within 24 hours was also very important to patients (0.51, p <0.001). In contrast, neither patient group showed a preference for one of the teledermatology modes (acute: 0.048, p: 0.34; follow-up: 0.08, p: 0.107).

Conclusion: A significant proportion of psoriasis patients prefer teledermatology services for both acute and routine consultations. Factors such as continuous care provided by the attending physician, responsiveness to patient concerns, and prompt treatment during acute flare-ups are important attributes of services. Improving teledermatology services to align with patient preferences could increase demand, especially for chronic skin diseases.

Abstract N°: 2276

The role of oxidative stress in atopic dermatitis and psoriasis

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Introduction & Objectives:

Atopic dermatitis (AD) and psoriasis (PsO) are common skin diseases with an increasing prevalence and pathogenesis that are not fully understood. Emerging evidence suggests that oxidative stress plays a role in AD and PsO. The aim of the our study was to compare markers of oxidative and nitrosative stress in patients with AD, and PsO.

Materials & Methods:

Patients with PsO (n = 40) and AD (n = 40) were included in this study. Markers of oxidative and nitrosative stress were monitored: level of lipid peroxidation expressed through TBA-reactive products malondialdehyde (MDA) and advanced oxidation protein products (AOPP), concentration of nitrogen monoxide-nitrate and nitrite products (NOx), nitrite (NO2) and nitrate (NO3) and activity of enzymatic antioxidant protection, cuprous oxide dismutase (SOD) and catalase (CAT).

Results:

Using statistical analysis, no statistically significant difference was found in any parameter of nitrosative/oxidative stress and antioxidant protection.

CAT has good diagnostic accuracy (AUC=0.719) in separating patients with AD from patients with PsO. The cut-off value for CAT activity was 0.436 U/L, which means that patients with an activity of this enzyme below the specified value have a high probability of belonging to the group suffering from PsO, and conversely, patients with an activity of the CAT enzyme above this threshold value most likely belong to to a group of patients suffering from AD.

Conclusion:

The results of this study can help in understanding the role of oxidative stress in the etiopathogenesis of AD and PsO. This study, together with other studies, could influence the consideration of the use of antioxidants in the treatment of dermatological diseases.

Abstract N°: 2289

Assessment of impact of active ingredient on skin microbiota equilibrium: in vitro and in vivo approaches

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Introduction & Objectives:

The human skin is a protective barrier against external threats and maintains essential physiological functions. Within its ecosystem lies a diverse community of microorganisms collectively known as the skin microbiota. These microbial inhabitants, comprising bacteria, fungi, viruses, and archaea, play pivotal roles in maintaining skin health, immunity, and homeostasis. Preserving skin microbiota homeostasis is of crucial importance for maintaining healthy skin and a cosmetic active ingredient can help with this maintenance.

The objective of this work was to combine in vitro models and in vivo studies to evaluate the ability of an active ingredient to preserve skin microbiota equilibrium.

Materials & Methods:

In vitro tests included growth model of different bacterial strains, adhesion study using Reconstructed human epidermis (RHE) topically treated by the active prior to the deposition of different bacterial strains and assessment of biofilm formation of diverse bacterial strains using crystal violet dye. Membrane micro vesicles induction model on lactobacilli has been assessed by Electronic Microscopy An in tubo sniff-test assessed the anti-odor efficacy of the active ingredient.

Two in vivo studies were performed to evaluate effects of the active ingredient on microbiota. A first clinical study under gynecological control included 50 women with vulvo-vaginal irritations or in menopause period. It has been performed to evaluate the capacity of the active ingredient to rebalance the intimate microflora which could be affected after vaginosis or mycosis pathologies. A second clinical study has been performed on 27 subjects to evaluate the effectiveness on the axillary microbiota by sensory evaluation, volatile organic compounds quantification and microbiota analysis.

Results:

In vitro results demonstrated that the active ingredient is able to limit growth, adhesion and biofilm forming properties of pathogenic strains, without affecting commensal bacteria. The active ingredient also showed a positive prebiotic effect on the growth of lactobacilli strains and induced membrane micro vesicles formation traducing prebiotic effect . It also inhibited odors produced by specific bacteria without impacting their viability.

In vivo results demonstrated that the active ingredient promotes the growth of lactobacilli showing a prebiotic and protective effect of vaginal microflora. It significantly increases the Staphylococcus to Corynebacterium ratio of the axillary area reflecting a beneficial effect for axillary microbiota.

Conclusion:

The multiple impacts of an active ingredient on microbiota have been demonstrated by the combination of in vitro models and in vivo clinical studies supporting vaginal and axillary potential efficacy. Other tests could be considered to complement these assessments.

Abstract N°: 2387

A study on clinico-demographical profile of patients availing the teledermatology service at a tertiary care centre.

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Introduction & Objectives: ** Delivery of patient care services has drastically evolved; where teledermatology specifically has brought about a paradigm shift in our day-to-day practice and is increasingly utilised since the pandemic era. Keeping this in mind we conducted a study aimed to discern how teledermatology is being utilized,focusing on the patterns related to patient clinical and demographic characteristics using the store-and-forward pattern.

Materials & Methods:

This study was conducted after ethical clearance from the institute. Database of patients were analysed for one year (January 2022 to March 2023).Demographic details of the patients, clinical signs and symptoms, diagnosis, differential diagnosis, whether diagnosis could be made by image collected and analysed. The store-and-forward approach of telemedicine was used.

Results:

A total of 74 patients were included in the study. There was a female preponderance with male: female ratio- 1:2.5. Most of the patients (88%) hailed from an urban background. The highest frequency of users for this service, were those aged between 20-30 years (35%). Conversely, the number of elderly (>60 years) patients and paediatric patients were notably lower, and comprised only 2.7% and 4% respectively.

Diagnosis was possible for 61 (82.4%) cases. Four most common conditions encountered were acne (31.8%), eczematous disorders (18%), melasma (14.8%), superficial fungal infections (13.3 %). Chronic cases (74%) exceeded the acute cases (26%) in numbers. In terms of old versus new cases, the proportion was 1:73.

 The remaining cases where diagnosis was not possible (18%) were asked to come for a face to face consultation, however none of these patients turned up. In contrast, only 4 % of the patients where diagnosis was possible opted for a re-consultation through teledermatology and none chose to visit the clinic.

Conclusion:

Teledermatology is poised to shape the future of dermatology practice. While it cannot replace traditional medicine, it emerges as a crucial approach for managing growing and aging populations. It offers a solution by democratizing health delivery and briding the gap between the primary and specialist dermatological care services. Our main purpose was to highlight the various conditions which we encount in our teledermatology setup at a referral centre, and to also see the demography of the patients which can be useful in the future to increase the utilisation of teledermatology, particularly in the peripheral areas where such services are either not accessible or not utilized to its maximum potential; as supported by our study where majority of the utilsers were from an urban background. Similary, we also saw a discrepancy in utilization pattern according to age group where the elderly population in our country, are still not availing this service despite its convinience and easy accessibility. In terms of dermatolgical conditions, acne eczematous disorders, acne, melasma and superficial

fungal infections were the most common dermatoses encountered, which can often be managed by primary heath care providers while patients with dermatological conditions that require specialist attention like vitiligo, psoriasis, lichen planus, autoimmune blistering and connective tissue disorders, sesually transmitted diseases and hair and nail related dermatoses were not utilising this facility at all.

Abstract N°: 2490

Characterizing nipple skin injuries in postpartum women

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Introduction & Objectives:

Recently, the White House announced the first ever Initiative on Women's Health Research led by first lady Dr. Jill Biden, Ed.D. This initiative recognizes the need for improvement in management and prevention of common women's health conditions, including maternity and post-partum cares. Prior research has characterized nipple trauma in response to breastfeeding, but no study has looked at specific dermatological conditions in postpartum women and tracked these changes over an extended period (1,2). Postpartum hormonal changes can lead to painful changes in nipple skin. Atopic dermatitis is the cause of half of all breast and nipple dermatitis during breastfeeding (3). A third of postpartum women are too busy with their newborn to attend postpartum checkups, indicating a need for resources to determine specific nipple skin injuries and consider potential treatments (4). This study aimed to characterize nipple skin injuries in postpartum women, evaluate contributing factors, and assess available therapeutic treatments.

Materials & Methods:

An anonymous survey was distributed through Facebook groups for new and expecting mothers, and photos of current nipple injuries secondary to lactation were gathered. All surveys and photos were collected securely through RedCap. A retrospective cross-sectional study was designed including a total 391 postpartum women.

Results:

Incidence of nipple skin injury was significantly greater in women over 35 (39.85%) compared to women 34 and under (23.81%, P=0.0038). Prevalence of nipple skin injuries in women breastfeeding in the first six months was 28.97%, from six to twelve months was 21.33%, and over one year was 38.66% (P=0.0342). Qualitative data demonstrated the most prevalent skin-related concerns of breastfeeding women were pain (55%), appearance (34%), and breastfeeding ability (16%).

Conclusion:

These results demonstrate the disproportionate impact of breastfeeding on nipple skin of older mothers, and the long-term persistence of nipple skin injuries.

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Abstract N°: 2563

Microbial and Heavy Metal Contamination in Herbal Medicine: A Prospective Study in Saudi Arabia

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Introduction & Objectives:

Herbal medicine is a medical system based on the utilization of plants or plant extracts for therapy. The continual increase in global consumption and the trade of herbal medicine has raised safety concerns in many regions. These concerns are mainly linked to microbial contamination, which could spread infections with multi-resistant bacteria in the community, and heavy metal contamination that may lead to cancers or internal organs' toxicity. We aimed to objectively assess the safety of the herbal medicine products sold in the herbal medicine stores in Saudi Arabia.

Materials & Methods:

This study was performed using an experimental design. A total of 47 samples, herbal medicine products sold in local stores in Qassim region, were used in the experiments.** They were** tested for bacterial contamination, alongside 32 samples for heavy metal analysis. Bacterial contamination was determined by the streak plate method and further processed to determine their antimicrobial susceptibility patterns using MicroScan WalkAway96 pulse; heavy metals were determined using a spectrometer instrument**.**

Results:

A total of 58 microorganisms were isolated. All samples were found to be contaminated with at least one organism except one sample. The majority of the isolated** bacterial species wer**e** gram negative bacteria, such as Klebsiella spp., Pseudomonas spp. and *E. coli*., which could be of fecal origin and may lead to pneumonia, skin, or internal infections. Furthermore,** most of the gram-positive bacteria were found to be multi-drug resistant. Moreover, for heavy metals, all samples had levels exceeding the regulatory limits.

Conclusion:

This study demonstrated the presence of bacteria and heavy metals in samples of herbal medicines. Using these contaminated products may spread resistant infections, metal toxicities, or even cancers in the community.

Abstract N°: 2577

Evaluation of a digital, cost-effective, realistic, self-printed 3D skin model for suturing and biopsy training for medical students in dermatological teaching

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Introduction & Objectives:

This project involves the development of an inhouse-printed 3D skin model for practicing skin biopsies and suturing for medical students due to a lack of cost-effective and yet realistic simulators. Foam pads, fruit or commercially available skin models all come with drawbacks regarding realism or costs. The aim was to develop a cost-effective, sustainable, and realistic training model. This led to the creation of a custom-made 3D-printed model made of silicone. Due to the low price, every course participant could be equipped with a customized, reusable model that offers a more realistic skin feel and allows more intensive training, taking into account both educational and economical aspects.

Materials & Methods:

First, an area of a colleague's face was digitized using a hand-held 3D scanner and digitally altered by adding two tumorous lesions of different sizes on the cheek and nose. The negative mold of the 3D model was then printed using a commercially available FDM printer and 33 models were molded with skin-colored silicone, leading to only about 2€ of material costs per model. The model was evaluated by 58 3rd semester students. They were instructed on skin examination techniques in a 45-minute online unit in a blended learning format, e.g. with videos on how to prepare and perform skin biopsies and types of sutures. Then they were taught how to perform a skin biopsy, including single button suturing, for 90 minutes using a prior foam model, fresh fruit (bananas and oranges) and the newly printed 3D skin models. After this course, they were interviewed using a questionnaire. The OSCE examination results were compared with those of the students from the previous year.

Results:

The results of the 58 participating students show that the 3D skin model was the most effective. 94.8 % of participants agreed fully or partially that the 3D-model is "very realistic to real anatomy" and 94.8 % found it totally or partially "a realistic way to practice skin biopsies". In comparison, fruit and foam models were rated as less realistic and effective. 96.6% of students felt completely or somewhat more confident performing such a procedure on a patient for the first time after practicing on the 3D model. All participants were absolutely or partially in favor of 3D skin model practice becoming an integral part of dermatology and surgery training in medical studies. In the Objective Structured Clinical Evaluations (OSCEs) of the years 2022/2023 (training without 3D model) and 2023/2024 (training with 3D model), there were no significant differences in the students' examination performance (p = 0.694).

Conclusion:

These data underline the potential of custom inhouse-printed 3D-models offering a cost-effective and realistic

way to prepare medical students for practical procedures before the first procedure on the patient.

Abstract N°: 2615

Advancing Dermatology Board Exam Preparation: Assessing GPT-4's Capabilities in Generating High-Quality Examination Content: An explorational study

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Introduction & Objectives:

Previous studies have explored AI's role in medical education, including an assessment of ChatGPT 3.5's ability to create examination content for the American Board of Dermatology Applied Exam using CME articles from JAAD1 . Of the 40 multiple-choice questions analyzed, 16(40%) were accurate and appropriately complex. Extending this research, our exploratory study evaluates ChatGPT-4's capabilities in generating suitable multiple-choice questions for the Israeli dermatology board examinations.

Materials & Methods:

ChatGPT-4 generated 413 multiple-choice questions in 12 thematic areas: Cutaneous Vasculitis, Acne Vulgaris, Rosacea, Dermatologic Manifestations of Systemic Diseases, Ichthyoses, Darier and Hailey–Hailey Disease, Alopecias, Mycobacterial Infections, Human Papillomaviruses, cutaneous B-Cell Lymphomas , Cutaneous T-Cell Lymphoma, and Biopsy Techniques. These questions were all based on the content of the syllabus for the Israeli board dermatology exam. Eight board-certified dermatology experts with experience in writing questions for board exams and/or recent or current members in the Israeli board committee reviewed the questions. Each thematic questionnaire was reviewed by two reviewers. These questions were evaluated for their accuracy, relevance to Israeli board exam standards, and educational value. Reviewers assessed each question's suitability in terms of the required knowledge comprehension, clarity, and structure. The extensive review process involved individual assessments and mutual consultations, aimed at reconciling differences in scoring and arriving at a unified, consensus-driven judgment.

Results:

The study revealed variations in ChatGPT-4's performance across different subjects, with notable disparities in the initial assessments by reviewers before reaching a consensus. A higher proportion of questions meeting the high standards necessary for effective exam preparation were observed in the topics of B-Cell Lymphoma and Dermatologic Surgery (63%-65%), while lower proportions were observed in Acne, Rosacea, and Vasculitis (14%-15%). Across 19 reviews, the reviewers noted that ChatGPT-4 would have helped save time in generating questions and expressed willingness to use it for future question writing.

Conclusion:

This analysis highlights ChatGPT-4's enhanced understanding of complex medical terminologies, contextual

comprehension, and its ability to create compelling distractor options. The study reinforces the indispensable role of human expertise in formulating complex clinical scenarios and ethical considerations. ChatGPT-4 emerges as a supplementary tool for Israeli dermatology board exam preparation, yet the findings emphasize that AI, despite its advancements, cannot replace the nuanced judgment and knowledge of experienced medical educators.

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Histological and Clinical Signs of Skin Pre-Aging Vary Across Fitzpatrick Skin Phototypes

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Introduction & Objectives:

Pre-aging changes in the skin can begin as early as 20 years of age due to genetics, lifestyle and external aggressors. Skin phototype is one of the factors that strongly affects the speed of skin aging. A single-centre clinical trial was conducted to evaluate and compare the phenotypic skin changes and the concept of pre-aging across different age groups and all skin phototypes.

Materials & Methods:

180 females, ages 18-50 and Fitzpatrick Skin Phototypes (FSP) I-VI completed the study. Participants were evaluated by expert clinical grading, instrumental assessment including imaging, elasticity, TEWL and hydration, consumer self-assessment and collection of biopsies. For analysis purposes participants were grouped into three sets, FSP I+II, FSP III+IV and FSP V+VI.

Results:

Subjects with FSP I-IV, clinical grading demonstrated that wrinkles, fine lines, and sallowness were observed the most, starting in the twenties for the lightest skin phototype, FSP I+II. In the latter, this was correlated instrumentally with a significant drop in elasticity after age 25 via cutometer. For FSP III+IV significant change in elasticity was observed after age 31. Other noticeable signs for these two groups were skin tone unevenness, pigmentation and dark circles.

For FSP V+VI, pigmentation, dark circles, skin tone unevenness and roughness were most noticed by clinical grading, and remained unchanged with increasing age. A nonsignificant decrease in elasticity was noted in this group as well. Additionally, some minor differences in skin barrier and hydration were observed among all groups but none significantly changed with age. Data analysis of an all-parameters combined clinical grading score suggested a significant increase in skin aging around age 25 for FSP I+II subjects, a slower rate of changes for FSP III+IV ones starting around age 31, and after age 36 for FSP V+VI participants.

Histological analysis of clinical biopsy showed skin collagen started decreasing progressively at around age 25, at a rate of ~3-5%/decade, with faster decline observed in lighter skin types. Collagen loss correlated with observed clinical and instrumental changes in attributes such as fine lines and wrinkles. Despite experiencing noticeable skin changes, consumer perception revealed that younger consumers in their twenties in all groups did not associate their specific skin changes with signs of "aging", which is more directly linked to deep wrinkles and sagging.

Conclusion: Pre-aging skin changes take place as early as the mid-twenties and are more pronounced in lighter skin types. The changes that occur early in the pre-aging process are not associated with aged skin in this population. Education and increased awareness of the process of skin pre-aging and proactive use of appropriate skincare might better protect and preserve the skin of young consumers for healthier skin aging and help reduce the impact of deeper aging effects.

Abstract N°: 2709

Assessing the point prevalence of Miliaria Crystallina (prickly heat) among pediatric patients: Considering the impact of global warming

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Introduction & Objectives:

Global warming presents a significant environmental challenge, affecting various aspects of human health. Among its impacts, skin disorders have gained attention, with Miliaria Crystallina (prickly heat) being particularly notable. This research aims to assess the point prevalence of Miliaria Crystallina among pediatric patients during the hottest months of the year, determine its incidence rate, identify associated demographic and environmental factors, and evaluate the severity and distribution of the condition.

Materials & Methods:

A cross-sectional observational design was employed. Data included the prevalence of Miliaria Crystallina, demographic factors (age, gender), environmental factors (temperature, humidity), and clinical characteristics (lesion severity, distribution). Chi-square tests and logistic regression were used for data analysis. Data were collected over January, February, and March of 2024, with a total of 1440 admissions to the pediatric ward. Out of these, 278 patients were diagnosed with Miliaria Crystallina. Daily temperature and the number of diagnosed cases were recorded, alongside severity and demographic information.

Results:

Among the diagnosed patients, 135 had mild severity, 108 had moderate severity, and 32 had severe severity. The age distribution revealed that 204 patients were between 0-6 years, 43 were 7-12 years, and 26 were 13-14 years old. The point prevalence of Miliaria Crystallina was notably high in this study, indicating a considerable burden among pediatric populations. The data suggest a correlation between rising temperatures and the incidence of Miliaria Crystallina.

Conclusion:

The findings underscore the significant impact of global climate change on dermatological conditions, particularly among vulnerable populations such as pediatric patients. Understanding the prevalence, severity, and associated factors of Miliaria Crystallina is crucial for developing effective preventive and management strategies, especially in the context of ongoing environmental changes. Further research is warranted to explore additional factors contributing to the condition and to implement targeted interventions to mitigate its effects.

Abstract N°: 2733

Experiences of dermatologists regarding teledermatology before, during, and after the COVID-19 pandemic: is it really preferable now?

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Experiences of dermatologists regarding teledermatology before, during, and after the COVID-19 pandemic: is it really preferable now?

Introduction & Objectives:

Teledermatology is used as a good tool to deal with the challenge of managing patients with different skin disorders. In the COVID-19 era, the impact of teledermatology seems to be much more considerable due to the social restrictions. We planned this study to evaluate the experiences of Iranian dermatologists regarding teledermatology before, during and after the COVID-19 pandemic.

Materials & Methods:

In this cross-sectional, an online questionnaire that includes basic demographic data, questions related to communication facilities, the type of diseases, the accuracy of the diagnosis, and the doctors' satisfaction with the teledermatology was sent to Iranian dermatologists.

Results:

Three hundred thirteen dermatologists completed the questionnaire. The mean age was 43.56 ± 9.86 years and 55% were female. 38.9% of the dermatologist did not use teledermatology before the pandemic and 54.5% used teledermatology less than 15 times per month before COVID-19 pandemic. 27.1% were "completely agreed" with this idea that COVID-19 pandemic led them to use teledermatology and 23.2% mentioned "agree" with this idea. Most of the doctors (45.5%) mentioned that the relative accuracy of diagnosis via teledermatology was about 50-70%. In terms of experience about the using biologic drugs, 35.4% had an intermediate experience, 29.0% had a good experience, and 18.5% had a poor experience.

We found that the mean score of dermatologists' satisfaction was 22.82 ± 6.42 which implies an intermediate satisfaction. Most of dermatologists has preferred an in-person visit after the pandemic.

Conclusion:

Teledermatology is a practical and useful method in some extraordinary situations such as COVID-19 pandemic. It can help to restrict disease prevalence and may help to reduce disease burden. Although, it has some limitations including inability to access social media, poor connection, low quality of pictures or videos or inability to performing a good physical exam amination. In-person visits seems to be more acceptable and preferable for dermatologists after COVID-19 pandemic.

Abstract N°: 2777

Weight reduction melts off long standing confluent and reticulated papillomatosis

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Weight reduction melts off long standing confluent and reticulated papillomatosis

Introduction & Objectives:

Confluent and reticulated papillomatosis (CRP) is a puzzling skin disorder, presenting a distinctive clinical picture with scaly papules that intricately coalesce into a reticulated pattern. While the cause of CRP is still unknown it often poses difficulties in diagnosis leading to misidentification or oversight.

The intriguing aspect of CRP lies on its resistance to commonly used treatment methods. However this particular case sheds light on a perspective by revealing a link between CRP and obesity. Our objective is to present a case report of a patient diagnosed with confluent and reticulated papillomatosis, who experienced treatment failures followed by remarkable improvement and clearance of the condition upon weight reduction. Going beyond the understanding of CRP as solely a skin condition this connection prompts us to reconsider the factors involved in the pathogenesis and etiology of this entity.

Materials & Methods:

28 years old obese male with no medical background presented with more than 15 years history of asymptomatic to mildly itchy reticulated hyperpigmented papules and plaques distributed over the neck, chest, abdomen, back and bilateral cubital fossa. Notably, his face and intertriginous areas were spared. The patient reported a history of being treated at various centers with clinical diagnosis of tinea versicolor and confluent reticulated papillomatosis, undergoing multiple courses of oral antifungal and doxycycline capsules along with different topical applications without experiencing any relief. No skin biopsy had been conducted previously, and the patient expressed significant distress regarding his condition. Hence, skin biopsy was done for confirmation of the diagnosis which exhibited mild hyperkeratosis, irregular acanthosis, mild papillomatosis and increase in basal cell pigmentation. The dermis showed a mild perivascular chronic inflammatory infiltrate. Periodic acid-Schiff stain was negative for fungus. These histopathological findings were suggestive of confluent and reticulated papillomatosis(CRP)

Results:

The clinical and histopathological examination confirmed the diagnosis of CRP. However, the patient returned for a follow-up only after 3 months to receive the results of his skin biopsy.

During the initial visit, the patient chooses to defer treatment until the diagnosis was confirmed, despite discussions about initiating a trial of oral isotretinoin. Instead, it was decided that the patient should focus on weight loss while awaiting the biopsy results.

Three months later, during the follow-up appointment, the patient had achieved a remarkable weight loss, dropping from 113kg to 80kg. Notably, this weight reduction coincided with the complete resolution of all his skin lesions, leaving only minimal post-inflammatory hypopigmentation observed on the flanks. Throughout the subsequent three-year follow-up period, the patient successfully maintained his weight loss and remained in remission, with no recurrence of his condition noted.

Conclusion:

Confluent and reticulated papillomatosis is uncommonly encountered dermatosis with a good prognosis. The relationship between weight loss and subsequent clearance of the disease highlights the possible association between obesity and the underlying pathogenesis of CRP. Further studies and observations are recommended in future.

Acute generalized exanthematous pustulosis following a spider bite

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Introduction:

Acute generalized exanthematous pustulosis (AGEP) is an uncommon, severe dermatosis characterized by the sudden development of a diffuse febrile erythema dotted with amicrobial pustules. Over 90% of cases are thought to be caused by drugs. Its occurrence after a spider bite is extremely rare. We report a new case.

Case presentation:

A 43-year-old woman treated for hypothyroidism with levothyrox® for several years presented with an acute erythematopustular rash in a febrile setting. On questioning, the patient reported having been bitten by an insect during an outing to a leisure park 24 hours before the onset of symptoms. There had been no infectious episode or recent medication prior to the clinical presentation. The rash, initially localized to the site of the bite (left flank), rapidly spread to the trunk, limbs and folds, and was covered with millimetric, non-follicular pustules. Biological tests showed moderate hepatic cytolysis (transaminases twice normal). A skin biopsy was performed, rendering typical histological features of AGEP. The patient was treated with general corticosteroid therapy at a dose of 0.5 mg/kg/d. Clinico-biological evolution was rapidly favorable.

Discussion:

AGEP is most often caused by drugs, particularly antibiotics such as β-lactams and macrolides. In our patient, the absence of the causative drug, the fact that she had been bitten by a spider, and the sequence of events, with a 24-hour delay between the bite and the appearance of the rash, which began at the site of the bite before spreading to the entire integument, led us to make the diagnosis of AGEP due to a spider bite. In the literature, a few cases of AGEP have been published following spider bites, especially of the genus Loxosceles. In our case, the spider involved could not be identified.

Conclusion:

Spider bites should be considered as a possible cause of AGEP. However, we have yet to understand the pathophysiological mechanisms involved in this type of reaction.

Heroic actions of dermatologists during the Holocaust

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Introduction & Objectives: The Holocaust – the systematic, state-sponsored murder of six million Jews during the period of National Socialism (1933-1945) – had a seismic impact on dermatology in Europe and beyond. Research on dermatology and the Holocaust has largely focused on Jewish dermatologists who were killed, those who survived, and dermatologists who collaborated with the Nazi regime. A recent study identified five non-Jewish dermatologists – Emanuele Stablum (Italy), Erzsebet Heintz (Hungary), Lubbertus Leopold (Holland), Pandelis Kallinikides (Greece) and Antun Vuletic (Croatia) – who have been awarded the title "Righteous Among the Nations" for saving Jews in the Holocaust. The aim of the present study was to describe their heroic actions.

Materials & Methods: A variety of sources were used to provide information about the five dermatologists. Online medical, history and media databases were searched, and relevant journal articles, other documents, books, websites and video clips were then examined. Copies of materials about the dermatologists held by the archives of Yad Vashem, Israel's Holocaust memorial authority that awards the "Righteous Among the Nations" title, were obtained and inspected. Pertinent documents in languages other than English were translated into English.

Results: Helping Jewish people was extremely dangerous for the dermatologists and their family members, punishable by death. Hiding was the most common method of saving Jews. The day after the round-up of Jews in Rome in 1943, Stablum and colleagues hid several Jews in the dermatology hospital on Monti di Creta Street. The Jews were falsely registered in the hospital as patients with skin conditions and occasionally given medication so that the Nazis would believe they were genuine patients. Heintz hid a close friend from childhood (and several others) in her Budapest apartment, after initial consideration of admitting the friend to hospital with a feigned illness. Leopold hid three people in his home in Enschede and in the evening they were able to help with various chores, including in the dermatology clinic attached to the house. Kallinikides provided safe shelter for a family of four Jews – all strangers – in Thessaloniki after removing them from the ghetto. Vuletic persuaded the Head of the Ustasa puppet state, Ante Pavelic, that during World War II there was a major shortage of doctors to treat syphilis in Bosnia, and convinced him to send 68 Jewish doctors and their families, at risk of being deported to death camps, to Bosnia instead.

Conclusion: Just as we acknowledge eminent dermatologists for research and clinical contributions, it is important to sometimes recognise dermatologists for other reasons. The courage and heroic actions of the five dermatologists warrant recognition, and occupy a special strand of the history of our field.**

Abstract N°: 2965

The Skin Microbiome in Various Cutaneous Diseases: a Systematic Literature Review from 2019 to 2024

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Introduction & Objectives:

The skin hosts millions of bacteria, fungi, and viruses, collectively known as the skin microbiota. Serving as the body's largest organ, the skin is populated by helpful microorganisms and acts as a protective shield against harmful invaders. When this barrier is compromised or when the equilibrium between beneficial and harmful microorganisms is disrupted, it can lead to various skin ailments or even systemic illnesses. Conditions like atopic and seborrheic dermatitis, acne, alopecia areata, psoriasis vulgaris, vitiligo, ichthyosis, systemic lupus erythematosus, chronic wounds, and skin or soft tissue infections can arise due to this imbalance, known as dysbiosis. We aim to summarize studies from 2019-2024 on skin microbiota changes in dermatological diseases.

Materials & Methods:

This systematic review aims to investigate the skin microbiome's alterations in various dermatological diseases compared to the normal microbiome. A comprehensive search strategy was implemented across PubMed database to identify relevant studies published between 2019 and 2024. Inclusion criteria surrounded studies examining the skin microbiome in dermatological diseases, with a focus on comparative analyses, using the terms "((skin microbiome) AND (skin dysbiosis)) AND (skin disease)".

Results:

Overall, 65 articles were found, of which 44 were relevant to the topic. Atopic dermatitis exhibits an excessive presence of Malassezia and S. aureus, alongside a decrease in S. epidermidis levels. Seborrheic dermatitis is characterized by a prevalence of Acinetobacter, Staphylococcus, and Streptococcus on lezional skin, with Cutibacterium being more prominent on non-lesional skin. Additionally, there is an elevated Malassezia restricta/Malassezia globosa ratio and a reduced Cutibacterium/Staphylococcus ratio. Scalp microbiota in alopecia areata shows an overabundance of C. acnes and a decline in S. epidermidis. Psoriasis involves an over-colonization of various Staphylococcus species, S. pyogenes, Candida albicans, and Corynebacterium, accompanied by reduced levels of Malassezia, Propionibacterium, and S. epidermidis. Acne is characterized by an imbalance between C. acnes and S. epidermidis. Vitiligo lesions tend to contain increased levels of Firmicutes spp. Congenital ichthyosis displays dysbiosis marked by reduced C. acnes and Malassezia throughout the body, specific elevations of Staphylococcus and Corynebacterium genera, and the presence of Malassezia sloofiae in patients with congenital ichthyosis erythroderma (CIE) and lamellar ichthyosis (LI), along with sporadic occurrences of Trichophyton in CIE, LI, and epidermolytic ichthyosis. Systemic lupus erythematosus is associated with an abundance of Staphylococcus spp. and Corynebacterium, alongside a scarcity of Cutibacterium. Chronic wounds and skin or soft tissue infections often exhibit excessive levels of S. aureus, P. aeruginosa, or C. acnes.

Conclusion:

The latest findings indicate that bacterial, fungal, and viral species exhibit altered expression levels in various dermatoses compared to healthy skin. Despite progress in identifying variations in the skin microbiome, it remains uncertain whether these microbiome changes actively contribute to skin diseases or are simply a result of the

inflammatory conditions within the skin.

Abstract N°: 2981

Terra Firme-Forme Dermatosis – a case report

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Introduction & Objectives:

Terra firme-forme dermatosis (TFFD) is a little-known disease of unknown etiology. It was first reported by Duncan et al, in 1987 and received a nick name "Duncan's dirty disease".

TFFD is presented with asymptomatic brown to dark plaques resembling dirty skin, mostly in children. Lesions are either solitaire (neck and trunk commonly involved) or rarely, multiple lesions are present. Cleaning with soap and water is ineffective; alcohol swab removes the lesions.

Case report:

A Caucasian, 15-year-old girl referred to a dermatologist. She has been treated by endocrinologist for her small stature and hypothyroidism. She presented with diseminated dark brown patches and plaques on her neck, maleolar and umbilical region. Her endocrinologist asked for a skin biopsy. She reported that the lesions appeared two years earlier, with periodically partial removal of some lesions but also with their reappearance. She was treated with topical antifungal and antibiotic ointments, urea creams without improvement. Swab of 70% alcohol gently removed lesions at examination. She continued with few repeated alcohol swabs at home until complete resolution of all lesions. In the follow-up period of twelve months she did not experienced new skin lesions.

Conclusion:

TFFD is thought to be a disorder of keratinisation. Adhesion between keratinocytes is prolonged, with retention of melanin, sebum, and microorganisms, causing the formation of brown patches and plaques. Given the unfamiliarity of this disease, TFFD is speculated to be immensely underdiagnosed, even though a simple diagnostic sign exists (alcohol swab, 70% isopropyl alcohol) and should be used in order to avoid unnecessary procedures (i.e skin biopsy).

Abstract N°: 2988

Implementing a Teledermatology Service in Cox's Bazar: Results of a Pilot to Assess Feasibility and Utilisation

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Introduction & Objectives:

Cox's Bazar, located in Southeast Bangladesh, hosts the world's largest refugee camp, Kutupalong, sheltering approximately 1 million Rohingya refugees displaced by ethnic and religious persecution in Myanmar. The burden of skin disease in low-to-middle-income regions, particularly among refugees, is poorly understood and underestimated. A January 2023 health sector report identified skin disease as the predominant medical complaint, accounting for 29% of cases in Cox's Bazar. A 2019 skin disease needs analysis at the camp revealed fungal infections, dermatitis/eczema, and bacterial infections as the foremost skin diseases. Barriers to dermatological care include geographical isolation, limited access during the monsoon season, and a scarcity of dermatologists. Notably, ubiquitous smartphone ownership among the camp staff presented an opportunity for establishing a teledermatology clinic.

Our aim was to implement a teledermatology pilot service for a primary care clinic in Kutupalong and the United Nations High Commission for Refugees' Hospital that catered to the refugee and host communities repectively.

Materials & Methods:

A "store-and-forward" model of teledermatology was implemented whereby cases were submitted to an electronic platform (MedWeb) by primary care health workers using a mobile application. A local server was installed to support the IT infrastructure. Cases were read remotely by dermatologists who then responded via the platform with a recommended clinical diagnosis and treatment plan. Patients were scheduled to return one week later to receive the recommended clinic diagnosis and treatment. Diagnoses were categorized as per the WHO International Classification of Diseases, 11th edition, into: 'skin infections and infestations', 'inflammatory skin disorders', and 'other skin disorders'.

Results:

In a pilot study of 335 patients with a mean age of 25.8 years (median age 23; age range 0.08–90 years), a total of 382 skin-related recommended clinical diagnoses were identified. The majority of these were infections and infestations, accounting for 54.7% (n=209) of cases, with dermatophyte infections constituting 45.5% (n=95) of these dermatoses. Inflammatory skin disorders represented 21.5% of the recommended diagnoses (n=82), predominantly dermatitis and eczema, which together comprised 51.2% (n=42) of this category. Other notable dermatoses, which made up 23.8% of the recommended diagnoses (n=91), included conditions such as acne vulgaris (n=10), post-inflammatory hyperpigmentation (n=10), and vitiligo (n=7).

Conclusion:

The success of this pilot teledermatology service underscores its feasibility and potential as a sustainable healthcare model. This approach aligns with global trends where teledermatology has proved particularly valuable

in areas with limited healthcare resources, such as in the Bhutanese refugee camp in Nepal. By leveraging technology, we've demonstrated that comprehensive dermatological care can transcend geographical barriers, offering a lifeline to communities in need. Future efforts will be aimed at expanding our service offerings with frequent on-site clinics and educational initiatives on dermatological conditions and biopsy techniques. A critical element of our strategy is forging strong local partnerships, ensuring the project's adaptability and continued resonance with the communities we serve to facilitate sustainable change.

Limitations of Generative Artificial Intelligence Models for Dermatologic Conditions in Skin of Colour

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Introduction & Objectives: Accurate diagnosis of dermatologic conditions across all skin types is an essential competency for dermatologists. Photographs of skin conditions are used extensively in Dermatology training programs and in telemedicine for diagnosis. However, images of conditions in richly pigmented skin are underrepresented in image databases. Diagnostic models such as VisualDx, have been used to assist in the rapid diagnosis of skin conditions. These models are trained on existing image databases and unfortunately exhibit poor diagnostic abilities in skin of colour. To improve dataset diversity, deep learning techniques have been used to generate realistic images of dermatologic conditions in patients with richly pigmented skin. We sought to investigate whether VisualDx performed differently when classifying sixteen dermatologic conditions across different skin phenotypes and whether use of artificial intelligence (AI) generated images of conditions in skin of color further reduces diagnostic accuracy.

Materials & Methods: Our image dataset (n=480) consisted of sixteen common or important conditions: acanthosis nigricans, atopic dermatitis, basal cell carcinoma, hidradenitis suppurativa, keloids, melasma, melanoma, pityriasis rosea, post-inflammatory hyperpigmentation, prurigo nodularis, psoriasis, seborrheic keratosis, squamous cell carcinoma, tinea versicolor, verruca vulgaris and vitiligo. For each condition, three subgroups were curated: "Fitzpatrick I-III", "Fitzpatrick IV-VI", and "AI transformed". The first two subgroups included 10 representative images from publicly available datasets. The "AI Transformed" subgroup included images where each "Fitzpatrick I-III" image was altered by AI to resemble richly pigmented skin. Each image was processed by VisualDx to obtain a differential diagnosis list, and sensitivity and specificity analysis was performed to analyze diagnostic performance.

Results: Across all subgroups, the highest sensitivity was seen in hidradenitis suppurativa, prurigo nodularis, and tinea versicolor (97%), whereas atopic dermatitis, post-inflammatory hyperpigmentation, and basal cell carcinoma demonstrated the lowest sensitivity (23%, 23%, and 26%, respectively). Significantly greater diagnostic sensitivity was noted for all conditions in the Fitzpatrick I-III subgroup ($p < 0.001$) except acanthosis nigricans, melasma, and melanoma, where sensitivity was greater in Fitzpatrick IV-VI. In all conditions, sensitivity and specificity was reduced in AI transformed images compared to the original. Finally, VisualDx demonstrated significantly greater sensitivity for Fitzpatrick IV-VI compared to AI transformed images ($p < 0.001$) in all conditions except keloids and verruca vulgaris.

Conclusion: For the majority of conditions analyzed, VisualDx demonstrated diagnostic bias for images in the "Fitzpatrick I-III" subgroup. This may be due to an underrepresentation of images in skin of colour in the AI training dataset. We can also conclude the AI transformation of images does not improve accuracy for AI diagnostic models and care must be taken to ensure this transformation technique does not further reduce accuracy. These results highlight the importance of expanding image databases to include more images in skin of color. Future training of AI diagnostic tools should be done on more comprehensive databases so that diagnosis can be accurately performed across all skin phototypes.

Abstract N°: 3104

The role of miR-146a-5p and miR-21-5p in cutaneous melanoma as diagnostic and prognostic biomarkers

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Introduction & Objectives: Cutaneous melanoma (CM) is one of the most lethal tumors among skin cancers and its incidence is rising worldwide. Recent data support the role of microRNAs (miRNAs) in melanoma carcinogenesis and their potential use as disease biomarkers.

Materials & Methods: We quantified the expression of miR-146a-5p and miR-21-5p in 170 formalin-fixed paraffin embedded (FFPE) samples of CM, namely 116 superficial spreading melanoma (SSM), 26 nodular melanoma (NM) and 28 lentigo maligna melanoma (LMM). We correlated miRNA expression with specific histopathologic features including Breslow thickness (BT), histological subtype, ulceration and regression status and mitotic index in order to evaluate their association and potential impact on patient overall survival (OS) and time-to-relapse (TTR).

Results: miR-146a-5p and miR-21-5p are significantly higher in NM compared to SSM and LMM subtype. The positive correlation between miR-146a-5p and miR-21-5p expression and BT was confirmed for both miRNAs in SSM. Since a BT ≥0.8 mm is associated with a worse prognosis, we investigate the asso-ciation of miRNA expression and BT ≥ < 0.8 mm in all CMs and CM subtypes. Results confirm that there is a significant difference in miRNA expression in all CMs ($p<0.0001$) and in SSM subtype ($p<0.0001$) in the two prognostic groups. Considering the ulceration status, we assessed that individual miR-21-5p expression was significantly higher in ulcerated CMs. The increased combined expression of the two miRNAs was strongly associated with ulceration ($p=0.0093$) and higher mitotic rate (≥1/mm2) ($p=0.0005$). We did not observe any difference in miRNAs expression when we considered all subtypes together and their regression status. However, stratifying CM based on histological subtypes, individual and combined expression of miR-21-5p and miR-146a-5p were significantly higher in LMMs with regression compared to LMMs without regression. The combined miR-21-5p and miR-146a-5p expression and melanoma prognostic features, including subtype, BT, mitotic rate, ulceration, and regression were used in univariate analysis, alone or in combination, to test their association with OS and for TTR. We demonstrated that the combination of two-miRNA expression and prognostic features (BT and ulceration) can better differentiate cutaneous melanoma prognostic groups, considering OS and TTR clinical outcomes. Specifically, miRNA expression can further stratify prognostic groups among patients with BT≥0.8 mm but without ulceration. Our findings provide further insights into the characterization of CM with specific prognostic features.

Conclusion: Our study confirms the clinical usefulness of testing miR-146a-5p and miR-21-5p expression in CM and its role in identifying patients with a favorable prognosis among those with adverse prognostic factors, including tumor depth and ulceration that are relevant in CM prognosis.

Abstract N°: 3116

Turning back time using Dihydromyricetin to reverse signs of aging - a new dimension in anti-aging based on epigenetic patterns

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Introduction & Objectives:

Epigenetic patterns encode skin´s biological age, which can be measured by AI-based algorithms called age clocks. The DNA methylation patterns alter with one´s age, impacted by lifestyle and environmental factors, and are correlated with downregulation of certain skin relevant genes, leading to impaired tissue functionality and ultimately visible signs of aging. The active Epicelline® (Dihydromyricetin) has been shown to reactivate skin's relevant genes making skin cells act younger, turning back the skin´s age clocks and thus offering an innovative approach in anti-aging.

In our in vivo studies, we investigated a new formulation with the epigenetic active Epicelline® for its capability to reverse multiple signs of aging for a younger-looking and rejuvenated skin

Materials & Methods:

To assess signs of aging such as lines, wrinkles, firmness, facial contours and skin evenness, we tested the product with 43 subjects applying twice daily for 4 weeks. Self-grading, instrumental measurement and imaging by PRIMOS were performed at baseline and after 4 weeks. Additionally, questionnaires were completed at the end of the study.

The test product´s tolerability was determined in a study with 33 subjects applying the product twice daily for 2 weeks. Additionally, questionnaires for self-assessment were used. Dermatological assessments were conducted at the beginning and the end of the study. A user survey was conducted with 160 volunteers over 4 weeks to assess product performance using a questionnaire.

Results:

Investigated signs of aging showed significant improvement after 4 weeks with self-grading on a 10-point scale. Lines, fine and deep wrinkles and skin evenness improved. Skin looked firmer and facial contours sharpened. 84 % of subjects confirmed a rejuvenated skin. Instrumental measurement of wrinkles showed significant reduction in volume, length and area of wrinkles.

Very good tolerability was confirmed by dermatological assessment. The formula was highly suitable for all skin types even for sensitive skin. Subjects perceived the sensory properties to be outstanding in self-assessment.

In a 4-week survey, 98 % of consumers confirmed that signs of aging were reversed, skin aging visibly slowed down and skin was rejuvenated. In addition, 99 % saw that skin was transformed and firmer. 97 % confirmed they felt in control of skin aging and 98 % confirmed younger-looking skin.

Conclusion:

A new and very well tolerated formula with the epigenetic active Epicelline® (Dihydromyricetin) visibly improved

multiple signs of aging such as fine lines, wrinkles, facial contours, firmness and evenness, resulting in significantly rejuvenated and younger-looking skin. Optimizing the epigenetic patterns offers an innovative approach to reverse signs of aging turning back the age clock.

Zinc deficiency in adults: cause of severe acrodermatitis

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Introduction & Objectives: Zinc is found in higher concentrations in the epidermis than the dermis and has a significant role to play in maintaining its integrity. Zinc deficiency presenting as acral dermatitis is often seen in children, while in adults its often misdiagnosed. Risk for inadequate zinc intake is estimated to be around 17% globally. Acquired or inherited zinc deficiency in adults and children presents as gastrointestinal symptoms, cutaneous involvement and infections. Once diagnosed there is quick response to oral zinc replacement.

Materials & Methods: We present two cases of** moderate to severe acral dermatitis. They presented with scaly itchy erythematous to skin-colored plaques distributed over acral area, extensor surface of arms, legs, gluteal region, perineal area, periumbilical area and mid back. Both the patients were on antitubercular therapy along with pyridoxine supplementation for 3-4 months and developed skin lesion in last 2-4 weeks. There were no gastrointestinal symptoms and no response to oral and topical steroids was seen. On further investigations zinc levels were found to be low and one patient also had increased sugar levels.

Results: Based on clinical manifestation of acral dermatitis not responding to steroid, low zinc levels in patients of chronic disease diagnosis of acrodermatitis due to zinc deficiency was made. Patient was started on zinc supplementation with significant improvement in 2-3 weeks.

Conclusion: Zinc deficiency in adults is not so uncommon, especially in those with chronic disorders. Low levels of zinc can occure due to various causes like gastrointestinal diseases, inadequate intake, total parenteral nutrition etc. Timely diagnosis can reduce the morbidity in such patients.

Abstract N°: 3189

The Role of AI-Generated Clinical Image Descriptions in Enhancing Teledermatology consultation documentation: A cross sectional comparative study

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Introduction & Objectives:

The performance of commercial vision-language AI models, including ChatGPT, in dermatology has been extensively investigated. However, the practical use of the content generated by AI remains to be explored. One such benefit is the use of clinical image descriptions and their integration into Electronic Medical Record (EMR) during teledermatology consultations. This study aims to evaluate the ability of dermatologists to establish diagnoses based on clinical image descriptions generated by ChatGPT-4.

Materials & Methods:

Our cross-sectional study evaluated images from teledermatology consultations randomly selected between December 2023 and February 2024. During each consultation, the teledermatologist also documented the description of the clinical image. These images were securely analyzed by ChatGPT-4, which generated descriptions. Each description was analyzed by two certified, experienced dermatologists who were tasked to generate differential diagnoses (DD) based solely on the descriptions. Each reviewer generated DD to both ChatGPT-4 and teldermatologists' descriptions. Additionally, ChatGPT-4 was instructed to make a diagnosis from its own image description. The diagnoses given by the reviewer, as well as the diagnosis generated by ChatGPT-4, were then compared with the original diagnosis by the teledermatologist. Concordance rates for diagnoses based on the teledermatologist's and ChatGPT-4's descriptions were calculated. Diagnoses concordance was classified as 'Yes' ('Top1' for exact matches, 'Top3' for one of the top three), 'No', or 'Partial' for a similar diagnosis. The effectiveness of each type of description in facilitating accurate dermatological diagnoses was assesed.

Results:

A total of 130 image descriptions were analyzed from 57 males (43.8%) and 73 females (56.1%), with ages ranging from newborns to 93 years. The average length of image descriptions generated by ChatGPT-4 was 74.9 ± 33.8 words, compared to an average of 7.2 ± 2.7 words for descriptions provided by teledermatologists.

For Top-1 complete match, ChatGPT-4 achieved a concordance rate of 63.1%. In comparison, reviewers achieved rates ranging from 31.5% to 70.0% when using ChatGPT-4's descriptions, and 43.1% to 65.4% when using the teledermatologists' descriptions. For Top-3 concordance, ChatGPT-4 achieved a rate of 77.7%, whereas reviewers achieved rates ranging from 58.5% to 86.2% based on ChatGPT-4's descriptions and from 55.4% to 85.4% based on teledermatologist's descriptions.

The Cohen's Kappa value for agreement between ChatGPT-4 and the reviewers was between 0.474 and 0.564 ($p < 0.001$). The Kappa value for agreement between reviewers diagnosing based on ChatGPT-4's descriptions and

those based on the teledermatologist's descriptions ranged from 0.279 to 0.464 (p < 0.001)

Conclusion:

Our study demonstrated that Top-1 concordance rates exceeded 50% when based on descriptions provided by ChatGPT-4. Furthermore, the inter-reviewer agreement ranged from fair to moderate (Cohen's Kappa 0.279-0.464) when comparing the concordance of diagnoses derived from ChatGPT-4's descriptions with those based on the teledermatologist's descriptions. These findings underscore the potential for integrating AI-generated image descriptions into the Electronic Medical Records (EMR) for teledermatology consultations.

Nevus Unius Lateris- A Rare Case Report

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Introduction & Objectives: Epidermal verrucous nevus is a commonly encountered clinical feature, but its rare manifestation as nevus unius lateris, with a generalized linear distribution, is noteworthy. There have been approximately 200 reported cases worldwide, yet the exact pathogenesis remains elusive. Clinically, these lesions present as contiguous papillomatous, verrucous plaques arranged linearly along the Blaschko lines and are often accompanied by musculoskeletal, neurological, visual, and auditory abnormalities, either present at birth or emerging later in life. Some cases exist where patients only experience symptoms related to traumatic injury to the lesions, without additional manifestations. Treatment primarily focuses on managing associated comorbidities, as attempts to remove extensive nevi can lead to unsatisfactory cosmetic outcomes. Here, we present a case report of an 11-year-old female patient diagnosed with nevus unius lateris but without any accompanying comorbidities, due to its rarity.

Materials & Methods: A 11-year-old female of Indian descent presented with verrucous hyperpigmented growths on the lateral aspect of her right leg, medial aspect of right thigh and right side of the groin, while sparing the face, neck, trunk and mucous membranes. These lesions appeared at birth and progressively enlarged and thickened over time. The patient had an unremarkable personal medical history, but her mother had a circumscribed epidermal verrucous nevus on her left forearm. Early in life, the patient underwent routine blood and urine tests, neonatal and hearing screenings, brain CT scans without contrast, and skull X-rays, all of which showed no abnormalities. Her psychomotor development was normal throughout childhood. From her early childhood until now, the lesions were itchy. As they grew large, they experienced erosions and traumatic detachment. A recent physical examination revealed no abnormalities other than the previously mentioned lesions.

Results: Given her presenting complaints and detailed clinical history, a diagnosis suggestive of Nevus Unius Lateris was made which was later confirmed with Biopsy.

Conclusion: Isolated nevus unius lateris as a dermatological condition has been seldom documented. It represents a rare congenital dysplasia, often linked to conditions such as epilepsy, growth impairment, brain tumors, and sensory impairments, underscoring the importance of early diagnosis. Therefore, it is crucial to conduct X-rays, CT scans, and blood tests at birth and later stages of life to rule out associated disorders.

Abstract N°: 3279

Periurethral lymphoplasmacytic cell infiltrate in a male-to-female vaginoplasty

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Periurethral lymphoplasmacytic cell infiltrate in a male-to-female vaginoplasty

Authors:

José Manuel Fernández Armenteros, Carmen Gonzalez, Juliette Pérez Manich, Andrea Bauer Alonso, Davinia Fernandez Calvo, Cristina Paret, Yolanda Fortuño

Introduction & Objectives:

Gender-affirming surgery, while transformative, carries risks of complications. The relocation of cutaneous and mucosal structures presents diagnostic and therapeutic challenges for dermatologists. With the rising prevalence of these surgeries, understanding their implications and complications, both short and long term, becomes imperative.

Materials & Methods:

A 30-year-old transgender woman with a history of psoriasis and psoriatic arthritis presented to the Dermatology ward with genital discomfort. She was receiving ixekizumab since May 2023 with good response. She went under a gender-affirming surgery in 2022 and was on hormonal replacement therapy (estradiol valerate and norgestrel).

Genital symptoms started a few months after the gender assignment surgery. She was treated with topical antifungals without improvement. Physical examination revealed a shiny ecchymotic plaque in the reconstructed periurethral area. There were no clear signs of genital psoriasis.

Results:

Biopsy findings included epithelial acanthosis with reactive atypia, focal parakeratosis and neutrophilic infiltrate without fungal structures. Focal areas of erosion and a moderate stromal lymphoplasmacytic infiltrate with foci of epithelial exocytosis were observed. Immunochemistry revealed negative p16, wild-type p53 pattern and normal Ki67 positivity in the basal layer.

Taking into account the periurethral lymphoplasmacytic infiltrate, two differential diagnoses were considered: an infiltrate of plasma cells similar to Zoon's balanitis (with few plasma cells) versus urethral endothelial changes associated with exteriorization of the area (the vaginoplasty for male to female transition typically includes formation of the neoclitoris from the glans penis and exteriorization of the urethra).

Treatment with clobetasol propionate was prescribed with improvement in the discomfort although the ecchymotic plaque is still present.

Conclusion:

In gender-affirming surgery patients, the change in the location of the different anatomical structures entails an

extra point of difficulty when diagnosing dermatological entities. In this case, a rare complication of a gender-affirming surgery is reported highlighting the need for its knowledge to avoid diagnostic errors.

Abstract N°: 3282

Hemosiderotic Dermatofibroma: Uncommon Presentation and Diagnostic Challenges

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Introduction & Objectives:

Dermatofibroma is a common soft tissue lesion due to the proliferation of benign spindle cells within the dermis, which is triggered most frequently by arthropod assault and foliculitis. It can occur in all age groups, but it usually appears in patients between 20 to 40 years of age, with a female predominance. While typically benign and asymptomatic, certain variants such as hemosiderotic dermatofibromas remain rare and diagnostically challenging.

Materials & Methods:

We report a case of a 21-year-old female who presented with a well-demarcated cutaneous tumor, located at the left subclavicular region. The lesion exhibited a round-oval shape, measuring 2/1.5 cm, a brownish-purple hue, and slight elevation. Notably, the lesion featured a central ulceration extending into the subcutaneous tissue, without fibrinous deposits or granulation tissue, accompanied by significant local bleeding. Remarkably, the lesion had initially appeared eight years ago, as a reddish-purple flat lesion with a depressed center, which remained asymptomatic until the recent development of the central ulceration. Dermoscopic examination revealed many criteria suggesting a diagnosis of cavernous hemangioma, such as homogeneous red-blue areas, red dots, and a central ulceration along with crusts. The clinical and dermoscopic diagnosis for this cutaneous tumor was cavernous hemangioma. The patient was referred to a plastic surgery department with a recommendation for excision and histopathological examination of the tumor.

Results:

Histopathological examination revealed an ulcerated hemosiderotic dermatofibroma, characterized by hyperplastic epidermis and a dermal tumor proliferation exhibiting a storiform pattern composed of histiocytoid and spindle cells. Notably, cytological atypia was absent, with occasional Touton giant cells and numerous siderophages observed within the lesion. The histopathological examination did not reveal any suggestive changes for a cavernous hemangioma, contrary to expectations.

Conclusion:

Dermatofibromas are benign, firm, asymptomatic tumors that mostly develop on the lower legs. Clinicians should maintain a high index of suspicion for uncommon variants of dermatofibromas, ensuring timely intervention and optimal patient outcomes. Hemosiderotic dermatofibromas may appear as firm, reddish-brown nodules or plaques on the skin and can sometimes present with ulceration or bleeding. Therefore, ulceration can mislead the clinician when it comes to diagnosis and can take the form of a more serious pathology that requires more complex therapeutic interventions. The recognition of hemosiderotic dermatofibromas in clinical practice contributes to expanding our understanding of the spectrum of cutaneous fibrous proliferations and guides tailored therapeutic approaches.

Evidence of the use of Dermatology Life Quality Index (DLQI) in Routine Clinical Practice: A systematic Review

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Introduction & Objectives: Despite many anecdotal reports of use of quality of life instruments in routine clinical use in dermatology, evidence of such use has not been collated. The most widely used measure embedded in clinical guidelines and registries is the Dermatology Life Quality Index (DLQI): this study aimed to identify evidence of the use of the DLQI in routine clinical practice.

Materials & Methods: The study followed PRISMA guidelines and the protocol was registered with PROSPERO. Medline, Embase, Scopus and Web of Science databases were systematically searched for articles describing studies using the DLQI in routine clinical practice. Studies were excluded if participants were less than 16 years and if there were pre-determined treatment interventions as in a clinical trial.

Results: 2,718 publications were screened and 301 articles including 77,317 patients from 42 different countries and 28 different languages reporting on 98 different diseases, met the inclusion criteria. 124 (41.2%) of the studies were reported as retrospective, 62 (20.6%) were observational, 53 (17.6%) stated that DLQI data were retrieved from patient records, 29 (9.6%) as "real life", 39 (13%) reported "real world data", and 42 (14%) used consecutive patient recruitment. 256 (88.3%) studies used the DLQI for the reported study's purpose and 34 (11.7%) indicated that the DLQI was used routinely without regard to the study. Ninty-five (86.4%) were conducted in a single country, 53 (17.6%) were multicentred studies, 248 (82.4%) conducted at a single site, 94 (31.2%) were conducted in hospitals, 34 (11.3%) specified outpatient clinics, 38 (12.6%) tertiary care, 8 (2.7%) community, 17 (5.6%), other settings and 33 (11.0%) unspecified. The most common diseases in the study settings were psoriasis (100 studies,33.2%), atopic dermatitis (33,11.0%), hidradenitis suppurativa (21,7.0%), urticaria (17,5.6%) and vitiligo (15,5.0%). 82/301 (27.2%) specifically investigated treatment efficacy, 51(16.9%) safety, 9 (3.0%) treatment tolerability, 137(45.5%) quality of life, 12(4.0%) drug survival (tolerability window), 20(6.6%) treatment outcomes, 2(0.7%) drug dosage and 3(1.0%) cost-effectiveness. Thirteen studies used DLQI banding.

Conclusion: Evidence was found of widespread international use of the DLQI in routine settings and in routine clinical practice, informing clinical decisions and monitoring of treatment

Abstract N°: 3370

Quantifying Open Access Publication Trends in the Top Six Dermatology Journals

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Introduction & Objectives:

Open access in scientific literature is the concept that peer-reviewed research should be free to access by anyone, anywhere. In 2020, ~60% of general scientific publications were behind a paywall (Heidbach et al., 2022), inaccessible to those in low-resource settings. The top six dermatology journals utilize a hybrid open access model. Hybrid journals operate on a subscription paywall business model but allow individual articles to be published open access (free to read by anyone) for an extra fee. These fees, called article processing charges (APCs), are usually charged to authors, unless covered by their institutions. We undertook a bibliometric analysis to evaluate recent trends in open access publishing within dermatology literature.

Materials & Methods:

We assessed the top six dermatology journals based on cited impact factor:*Journal of the American Academy of Dermatology, JAMA Dermatology, British Journal of Dermatology, Journal of the European Academy of Dermatology and Venereology, American Journal of Clinical Dermatology, and the Journal of Investigative Dermatology.* Using Clarivate's Web of Science Core Collection database, we searched for publications from Jan. 1 2018 to Dec. 3 2023 and then removed meeting abstracts. We further extracted publications from authors from countries classified as Low, Lower Middle, and Upper Middle by World Bank 2022 economic status. Each publication was assessed for open access status and subtype. The data was analyzed using Microsoft Excel and Stata.

Results:

There were 19,502 publications after meeting abstracts were removed. Of these, 38.1% were published as hybrid open access. This metric has stayed relatively consistent over the time period studied, ranging from 30.4%-43.1% each year. A small proportion of all publications (12.2%) included either corresponding authors or co-authors from low- and middle-income countries (LMIC). The open access status of this subgroup of articles written by LMIC authors was similar to that of articles written by authors from high-income countries, ranging from 29.1%-43.8% over the six-year period. The subset of open access articles written by LMIC authors accounted for only 4.4% of all articles published in the six-year period. Article processing charges for these journals ranged from $3400 USD to $5290 USD. Only one out of the six journals evaluated offered discounts or waivers for LMIC author publications.

Conclusion:

Of all dermatology literature published in the top six dermatology journals in the study period, the majority (61.9%) remains behind a paywall and is therefore difficult to access by readers in LMIC countries. Readers can potentially use services such as Research4Life to access materials, but uptake is low due to stringent classification and registration criteria. Very few open access publications were authored by LMIC authors in these high impact journals. An APC for a single publication costs thousands of US dollars, which can be as much as the annual research budget for an academic dermatology department in lower income countries. Some journals do reduce APC for authors from LMIC, however this is only for fully open access journals, not hybrid journals. It is important to invest in infrastructure and initiatives that support open access, such as transformative open access agreements, in order to democratize knowledge and enhance information exchange thus promoting equal access to impactful dermatological literature globally.

Abstract N°: 3388

Implementing a Clinical Decision Support System for Dermatology in Tanzania: Lessons Learned from a Hands-On Training Experience

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Introduction & Objectives:

There is a need to address the limited access to educational resources for frontline healthcare workers providing dermatologic care in medically underserved areas globally. Clinical Decision Support Systems are technologies intended to enhance the medical decision-making of healthcare providers. VisualDx is a desktop and mobile-based Clinical Decision Support System that is increasingly used by healthcare professionals in over 400 academic institutions and enterprises in the US for skin diseases. The International Alliance for Global Health Dermatology (GLODERM), a program of the International League of Dermatological Societies, tackles access to skin health challenges through mentorship and collaboration. Through a novel partnership between non-profit and industry with support from CeraVe, GLODERM and VisualDx have collaborated to implement 2,500 free VisualDx licenses and training to healthcare providers in medically underserved areas, including Tanzania.

Materials & Methods:

In January 2024, an annual dermatology conference was held at a dermatology training center in Tanzania, with graduate trainees from 19 countries, who provide dermatology services in much of sub-Saharan Africa. At the conference, GLODERM representatives conducted a one-hour hybrid, immersive training workshop for past graduates on how to adopt VisualDx in everyday use. Before the training workshop, a pre-implementation survey was sent to prospective participants which was required for license distribution. The training workshop was not mandatory for license distribution.

Results:

A total of 154 participants attended the in-person workshop. Before the workshop, 86 participants completed the pre-implementation survey and received licenses. Following the workshop, an additional 184 participants completed the survey including both in-person and online attendees. To date, 270 VisualDx licenses have been granted via the conference network in Tanzania and associated countries, of no financial cost to these low- or middle-income country users. Challenges encountered during the workshop include attendees in different stages of license access, slow internet leading to long download times, and limited technological proficiency. Successes

include high engagement and interest in receiving VisualDx training and access. Completion of the workshop led to an increase in the number of participants who completed the survey required for licenses (86 participants before versus 184 participants after).

Conclusion:

Our experience in Tanzania highlights the existing demand for access to dermatological educational resources, met with eagerness to learn the utilization of new technologies. Through a public-private partnership, we successfully provided a hybrid training for VisualDx that can be used by dermatology providers in Tanzania and elsewhere in sub-Saharan Africa. The next step is implementation science analysis to determine the acceptability, appropriateness, and adoption of the diagnostic support tool. Challenges in implementing technologies originally developed for resource-rich settings must be considered when evaluating uptake in medically underserved areas. It is important to adapt the technologies themselves, include technological training to inform successful adoption, and curate the training for the local environments using transcultural and transnational approaches for increased understanding and uptake.

Abstract N°: 3493

Combination of Retinol and Carnosine Addresses Pre-aging Insights and Delivers Preventative and Aging Treatment Benefits via Antioxidant, Anti-Glycation, and Cellular Activity

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Introduction & Objectives:

Consumers in their 20s are increasingly practicing proactive prevention to defend and protect from visible signs of aging. Understanding fundamental mechanisms of skin aging and ingredient effects relevant to the pre-aging population enables efficacious product design for this consumer.

Skin aging is accelerated by UVA exposure, inducing increased reactive oxygen species (ROS), pro-inflammatory mediators and formation of advanced glycation end products (AGEs). Retinol supports overall skin health and vitality. Response of fibroblast cells from young and old donors to UVA or retinol was assessed and a clinical study was conducted to assess the effect of a new comprehensive retinol serum for diverse populations including younger ages and retinol beginners.

Materials & Methods:

1. Fibroblasts (18 to 60+ years old) were treated either with UVA or retinol. Levels of ROS were measured, and retinol bioactivity was determined. (2) A lightweight retinol serum with carnosine (antioxidant, anti-glycation agent) + a soothing complex was developed. Ex vivo skin explants confirmed the serum's bioactivity and antioxidant ability vs. control. A 14-week clinical study was carried out in 34 Chinese females (36-60 years old) to confirm benefits related to signs of facial aging. Non-invasive instruments, imaging, clinical grading, and self-evaluation were performed at 0, 1 and 14 weeks.

Results:

Fibroblasts from younger age groups showed (1) lower endogenous baseline ROS levels, (2) higher UV-induced ROS generation (increased vulnerability), and (3) stronger response to retinol treatment than older age groups. Retinol serum treatment demonstrated (1) a significant reduction ($p < 0.01$) in UV induced ROS and (2) a significant increase ($p < 0.05$) in retinol bioactivity ex vivo compared to control. Controlled use of the retinol serum provided significant improvement ($p < 0.05$) in wrinkles, hydration, elasticity, firmness, and Glycation level at 1 and 14 weeks vs. baseline. All subjects agreed that the retinol serum was non-irritating to skin after 14 weeks of use.

Conclusion:

Young cells are more vulnerable to UVA exposure, but also more responsive to retinol treatment demonstrating the need for proactive prevention beginning in the 20s. The enhanced retinol serum with antioxidant, anti-glycation agents and a soothing complex demonstrated significant antioxidant, anti-glycation, and clinical anti-aging benefits delivering broad-spectrum preventative as well as anti-aging solution for diverse populations including younger ages and retinol beginners.

Abstract N°: 3571

Habits of sun care in colombian physicians

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Introduction & Objectives:

Increasing evidence on the impact of solar ultraviolet radiation on the skin (photoaging, skin cancers, pigmentary disorders) demonstrates the need to develop preventive activities that minimize the deleterious effects of sun exposure. Currently, there are recommendations according to skin phototype, age and dermatoses. However, the population's sun protection practices are still inadequate. A study showed that most physicians do not routinely discuss sun protection with their patients.

Materials & Methods:

A cross-sectional study was performed during February 2024 to April 2024, in a dermatological center of Bogotá-Colombia, which was conducted to investigate the suncare habits among Colombian physicians. The participants were approached through online invitations, were provided informed consent and their confidentiality was strictly maintained. Data were collected using a questionnaire designed for this study and was analyzed using Microsoft Excel.

Results:

A total of 75 responses were obtained, the mean age was 32.63, 80% female, 50% worked as general physicians, 14.9% specialists, and 9.5% medical students. The phototype 3 was the most frequent (41.9%). The Andean region had 84 % (n=63) of participants, followed by the Caribbean 9.3% (n=7). We found that 81.1% (n=60) use sunscreen, 47.3% (n=35) sunglasses and hats, 44.6% (n=33) avoided the sun during noon hours, and 6.8% (n=5) did not use any protection. Taking into account the use of sunscreen, 47.3% applied sunscreen twice a day and 37.8% only once a day.

Conclusion:

Colombia is characterized by the Andes mountain range, one of the areas with the highest levels of exposure to UV radiation, which is represented in our study with an Andean population of 62%, in addition to a strong mixing with all skin phototypes. We observed considerable good habits in self-care, however, measures must be strengthened to avoid tanning, enforce the use of physical barriers, sun care in children, and using sunscreen even when under the shade. Increasing knowledge and reinforcing preventive behaviors among physicians and medical students would improve the photoprotection.

Abstract N°: 3638

Variants of clinical management intertriginous erythrasma

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Introduction & Objectives:

Erythrasma is a superficial bacterial skin infection caused by Corynebacterium minutissimum (which is a part of the skin), but most often affects the military and people with obesity, diabetes, and severe hyperhidrosis. Our goal was to determine the most optimal treatment option for these patients.

Materials & Methods:

The aim of our study was to compare different methods of treatment of intertriginous erythrasma and to assess the period of time after which patients had remission of this disease after using different methods of treatment. The study included 90 male patients over 18 years, who were divided into 3 groups: In group 1 - 23 patients used benzoyl peroxide soap once a day on intertriginous areas. In group 2 - 36 patients used solid deodorants with aluminium chloride once a day on intertriginous areas. In group 3 - 31 patients used benzoyl peroxide soap in combination with aluminium chloride solid deodorants once a day on intertriginous areas. Patients stopped using these treatment options after the onset of remission.

Results:

In group 1, remission occurred after 3 weeks in 65% (15 of 23) patients. In group 2, remission occurred in approximately 9 days in 87% (31 of 36) patients. In group 3, 96% (29 out of 31) of patients were in remission after approximately 5 days.

Conclusion:

Erythrasma is a problem for most patients with comorbidities. Monotherapy with benzoyl peroxide soap or aluminium chloride solid deodorant was as effective as we supposed and patients took a long time to achieve remission. Therefore, in our study, the best and fastest treatment option for 96% of patients was a combination of benzoyl peroxide soap and aluminium chloride solid deodorant.

Abstract N°: 3920

Uncommon Dermatoses of Pregnancy

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Introduction & Objectives:

Pregnancy can be the onset of different dermatological diseases. We report seven rare presentations during pregnancy.

Materials & Methods:

Case 1:

A 30-year-old female with 34 weeks of gestation, presented with widespread urticarial skin lesions on her trunk. Based on the positive results of histopathologic and immunoserologic examinations, she was diagnosed with pemphigoid gestationis. The patient received local therapy with clobetasol cream, tablet chlorpheniramine p.o. with marked improvement of her skin lesions, the patient was followed up regularly. She continued to be on topical therapy and delivered a healthy baby at term.

Cases 2 & 3:

A 32-year-old woman and a 28-year-old woman both in their second trimester presented with an enlarging lesion of the right palm and vulva respectively, with history of bleeding on trauma on and off since one month. Both cases were clinically diagnosed as pyogenic granuloma. Case 2 was managed with local application of salt with marked improvement until delivery. Case 3 was subjected to excision and diagnosis confirmed on histopathology.

Case 4:

A 22-year old primigravida with 08 weeks of gestation presented with electric shock like pain on the left half of her face extending to the left eye and the jaw since 1 year with aggravation on moving face, chewing, or touching the face. Investigations performed prior to conception including EEG, ECG reports and CT scan were normal and she was diagnosed with primary Trigeminal neuralgia. She presented to the skin department with irritant contact dermatitis over the affected areas due to constant rubbing of various over the counter topical analgesics for pain relief. She was started on topical mild steroids for skin lesions and paracetamol 500mg 6hrly with neurology referral.

Case 5:

A 38 years old female with seven months of gestation presented with erythematous plaque over left breast with underlying firm, indurated, non-tender palpable mass with inverted nipple for six months. Histopathology from the breast lesion was suggestive of Paget's disease. Immunohistochemistry for human epidermal growth factor was positive. A diagnosis of Paget's disease in pregnancy was made and elective cesarean section was performed at eight months gestation with subsequent excision of the tumour by the oncosurgeon.

Case 6:

A 18 year-old primigravida with 16 weeks of gestation, presented with multiple large ulcerations with vulvar

oedema of 1 week duration. Serological tests showed reactive VDRL (1:64) and TPHA. Based on the history, physical examination and serological tests the patient was diagnosed with primary syphilis in pregnancy. She was given three weekly doses of Benzathine Penicillin G injection of 2.4 million units intramuscularly.

Case 7:

A 23 year-old woman with 24 weeks of gestation presented with a malar rash, painful erythematous plaques with targetoid lesions on palms and soles and oral ulcers. Serological tests showed positive antinuclear antibodies, negative antiphospholipid antibodies.

Skin biopsy confirmed the diagnosis of Systemic lupus erythematosus (SLE) in pregnancy, managed with topical steroids & sunscreen, tablet hydroxychloroquine and tablet prednisolone in tapering doses.

Conclusion: Management of dermatologic diseases during pregnancy might be challenging as it requires special attention to both mother and fetus.

Abstract N°: 3991

Echoes of Affliction: Unraveling the Divergent Paths of Kyrle and Rheumatoid Arthritis

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Introduction & Objectives: First described at the dawn of the 20th century, hyperkeratosis follicularis et parafollicularis in cutem penetrans, commonly referred to as Kyrle disease (KD), is a rare dermatological condition within the spectrum of acquired perforating dermatoses. It is commonly associated with various systemic conditions such as diabetes mellitus, renal and liver diseases.

Materials & Methods: In this report, we present the case of a female with a prolonged history of rheumatoid arthritis (RA) who developed hyperkeratotic nodules and papules, several surrounding follicular regions, some coalescing into plaques, approximately five months after the initiation of biologic therapy for RA.

Results: A 59-year-old patient was admitted for evaluation and management of erythematous, hyperpigmented and hyperkeratotic papules, predominantly distributed across the submammary region, abdominal wall, buttocks and the supero-internal aspect of the thighs. Extensive medical history revealed a constellation of comorbidities, including cystic bronchiectasis, polynodular goiter, hepatic hemangioma and a five-year history of RA with positive rheumatoid factor (RF) and anti-cyclic citrullinated peptide antibodies, corresponding to stage II as per the American College of Rheumatology 1987 criteria. No significant family history was reported. Following initiation of a Janus kinase (JAK) inhibitor for RA in 2019, the patient subsequently developed acneiform lesions across the face, abdominal wall, buttocks and submammary region, attributed to secondary acne emerging post-treatment, along with folliculitis. The initial management approach consisted of dermatocosmetics application and topical antibiotic therapy, which failed to yield noticeable improvements. Following this, therapeutic interventions progressed through various biologic agents, culminating in the administration of a monoclonal antibody targeting the IL-6 receptor alongside a disease-modifying anti-rheumatic drug, which has been consistently administered up to the current time. However, persistent lesions with intermittent remissions and exacerbations prompted referral to our dermatology department in 2024, where a meticulous physical examination, comprehensive laboratory investigations, and histopathological analysis established the diagnosis of KD. Management strategies prioritized symptomatic relief and lesion resolution, incorporating topical corticosteroids, keratolytic agents and phototherapy sessions.

Conclusion: KD stands as a distinct dermatological entity often associated with various conditions such as diabetes mellitus, renal and liver diseases. However, no such associations were observed in our patient. Despite RA's known inclination for extra-articular manifestations like rheumatoid nodules and vasculitis, direct associations with KD remain elusive, lacking specific mention in existing literature. Our case prompts further inquiry into whether this association denotes a causal link or a coincidental co-occurrence. Moreover, the lack of response to various RA-specific therapies highlights the independent nature of KD within this clinical context. Interdisciplinary collaboration between dermatologists and rheumatologists is crucial. Further studies are warranted in order to elucidate the possible underlying pathogenic mechanisms and refine management strategies tailored to patients presenting both diseases.

Abstract N°: 4027

Dermatological Impacts of Anabolic Steroids and Hormones: A Narrative Review

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Introduction & Objectives:

The use of anabolic steroids and other hormones in bodybuilding and by the general population has become a common practice. Its use is motivated by improvement in sports and athletic performance, as well as aesthetic reasons. This work analyses the dermatological impacts of the use of these hormones, highlighting the skin side effects such as acne, abscesses, hirsutism, alopecia, premature aging, and exacerbation of psoriasis. It also addresses the challenges faced by dermatologists in diagnosing and treating patients who use these substances. Finally, it discusses prevention and education strategies to mitigate the dermatological risks associated with the use of anabolic steroids and hormones by the population.

This study seeks to offer a comprehensive understanding of the dermatological effects of the use of anabolic steroids. By analysing the prevalence of these substances and the different influences that lead to their use, we hope to contribute to the scientific literature and provide valuable information for healthcare professionals and educators, with an emphasis on the dermatological effects of these substances.

Materials & Methods:

PubMed database search using the following keywords: Adverse effects of anabolic steroids; Anabolic Steroids; Acne; Cutaneous Abscesses; Alopecia; Premature Aging; Bodybuilding; Cutaneous Effects; Hormonal Therapy; Dermatological Complications; Testosterone Therapy.

Results:

Acne vulgaris has proven to be a common effect, persisting even after the discontinuation of anabolic steroid use. Acne fulminans, a more severe and rare form, has also been associated with anabolic steroid use, with the potential to arise from the initial doses and even after discontinuation of use.

Changes in hair, such as hirsutism and exacerbation of androgenetic alopecia, have been observed in patients. It is noteworthy that doubts still remain regarding the effectiveness in these individuals of procedures and medications used in the standard treatment of these changes. Exacerbation of psoriasis by anabolic steroids was identified as an adverse event in a patient with the disease, indicating that these drugs should be included in the conversation with the patient about exacerbating factors. Additionally, premature aging was addressed, highlighting the reduction of subcutaneous fat where fillers have a promising role in treatment.

Cutaneous abscesses are a serious complication, associated with intramuscular administration of anabolic steroids, often due to lack of hygiene and inadequate administration technique. It is noteworthy the lack of studies identifying the prevalent microbiota in these.

Conclusion:

In recent years, the use of anabolic steroids has become increasingly common. Drugs that were once primarily known only to athletes are now used by the general population for aesthetic purposes. Their use is associated with a variety of dermatological adverse events and therefore should be known to specialists.

In summary, the use of anabolic steroids and non-steroidal anabolic agents can trigger a series of dermatological adverse events, ranging from common conditions such as acne to more serious complications such as cutaneous abscesses and acne fulminans. Therapeutic approach should involve discontinuation of the causative substance, when possible, and the application of specific treatments for each condition, taking into consideration the risks associated with the use of these substances.

Abstract N°: 4052

Festive Dermatoses.

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Introduction & Objectives:

India's festivals bring people together, but the sale of adulterated merchandise can compromise individual security. "Festive Dermatoses" are skin conditions resulting from festival-related activities, and behavioral factors are a crucial risk factor. This paper focuses on the epidemiology, etiology, and impact of Festive Dermatoses, with a focus on cases during Holi and Diwali.

Materials and Methods:

This study draws upon observational data collected from clinical cases encountered during the festivals of Holi and Diwali. Cases were identified based on presentations to a dermatology clinic in central India. Detailed history, clinical examination, and relevant investigations were conducted to assess the nature and severity of Festive Dermatoses. Special emphasis was placed on elucidating the circumstances leading to dermatological injuries, including experimental activities undertaken during festival celebrations.

Results:

Analysis of the collected data revealed a notable incidence of Festive Dermatoses, particularly among the younger population engaged in experimental activities during Holi and Diwali. Case presentations included severe irritant contact dermatitis, burns, and other traumatic injuries resulting from mishandling of fireworks and chemical substances. Notably, a significant proportion of cases involved unsupervised experimental behaviour, highlighting a potential risk factor for Festive Dermatoses.

Conclusion:

The findings underscore the urgent need for heightened awareness and preventive measures to mitigate the risk of Festive Dermatoses during cultural celebrations. By recognizing the role of behavioral factors in predisposing individuals to dermatological injuries, healthcare professionals can play a pivotal role in promoting safe festive practices. The coined term "Festive Dermatoses" serves as a unifying framework for understanding and addressing these conditions, with implications for global dermatological practice. Collaborative efforts are essential to raise awareness, facilitate data sharing, and implement targeted interventions aimed at safeguarding public health during cultural festivities worldwide.

Abstract N°: 4063

plantar angioleiomyoma: a case report of a painful tumor

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Introduction & Objectives:

Plantar angioleiomyoma is a rare benign tumor originating from vascular smooth muscle, predominantly affecting middle-aged women. Despite its rarity, it can present as painful nodules in the lower limbs, often mimicking other dermatological conditions. The objective of this study is to present a case report of plantar angioleiomyoma, along with a brief literature review, to enhance understanding and recognition of this uncommon entity.

Materials & Methods:

We describe the case of a 73-year-old female patient presenting with painful nodules in the medial portion of the left plantar arch. Clinical evaluation, ultrasound with Doppler, incisional biopsy, histopathological examination, and immunohistochemical analysis were performed. Additionally, a literature review was conducted to provide context and insights into the diagnosis and management of plantar angioleiomyoma.

Results:

Ultrasound with Doppler revealed fusiform hypoechoic nodules with echogenic beams, suggestive of vascular involvement. MRI demonstrated the intimate relationship of the nodules with the plantar fascia, aiding in surgical planning. Histopathological examination of the biopsy specimens confirmed the diagnosis of angioleiomyoma, characterized by a circumscribed, encapsulated nodule composed of spindle cells with vascular structures. Immunohistochemical analysis revealed positive staining for smooth muscle actin, further supporting the diagnosis. The patient opted for conservative management and continues to be monitored multidisciplinarily for symptom management and recurrence surveillance.

Conclusion:

Plantar angioleiomyoma, though rare, warrants consideration in the differential diagnosis of painful nodules in the lower limbs, particularly in older individuals. While its clinical presentation may be nonspecific, a combination of clinical evaluation, histopathological examination, and immunohistochemical analysis is essential for accurate diagnosis and appropriate management. Increased awareness of this condition among healthcare professionals can facilitate timely recognition and optimal treatment outcomes for affected patients.

Abstract N°: 4101

Global Skin Health Inequities: The Implications of Homelessness on Skin Disease

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Introduction & Objectives:

Public health challenges associated with homelessness are substantial, complex and necessitate attention from the Global Health Dermatology community. Overcrowding, inadequate hygiene, and psychiatric disorders perpetuate the burden of skin disease within this cohort. Healthcare barriers and treatment disparities for common skin disorders among homeless adults (HA) hinder timely and appropriate care. Global Health Dermatology initiatives advocate for equitable access to care, regardless of demographics and socioeconomic status. This scoping review summarises available literature on dermatologic conditions among HA, delineating risk factors, complications, and proposing strategies to improve healthcare delivery.

Materials & Methods:

A literature review was performed using the terms inclusive of 'homeless', 'housing instability', 'skin disease', 'derm' on PubMed, MEDLINE and EMBASE databases. Only articles in English were chosen

Results:

The prevalence of dermatologic conditions in HA ranged from 16.6% to 53.5%. Common skin diseases include psoriasis, atopic dermatitis, seborrhoeic dermatitis, acne, scabies, and skin infections. No studies to date have compared the prevalence and severity of these cutaneous diseases in HA to the general population. Moreover, skin cancer risk and related mortality in HA require further research.

Conclusion:

Clinicians and public health practitioners must prioritise skin health in HA. Evidence-based interventions are needed to provide safe dermatologic healthcare. Recommendations include: reducing barriers to care and increasing skin checks during emergency medicine admissions. Implementing training programs at community outreach organisations to identify risks associated with damp clothing (fungal infections), provide access to treatment and storing creams, and education on the influence of alcohol and drugs on skin disease and treatment limitations (methotrexate, ciclosporin).

Abstract N°: 4127

Pachydermodactyly: A retrospective case report

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Introduction & Objectives:

Pachydermodactyly (PDD) is a rare, benign cutaneous fibromatosis characterized by asymptomatic progressive swelling of periarticular soft tissues over the lateral aspects of the proximal interphalangeal (PIP) joints, most commonly of both hands.

The etiology of PDD is not fully understood; however, repetitive minor trauma, obsessive-compulsive disorders and hormone dysfunction are believed to be important precipitating factors in genetically susceptible individuals.

PDD usually affects otherwise healthy young males with the average age of 16 years; the male-to-female ratio is approximately 4:1.

The differential diagnosis includes knuckle pad, juvenile digital fibromatosis, rheumatoid arthritis, juvenile idiopathic arthritis, acromegaly, etc.

Materials & Methods:

We present a case of a 24 -year-old male patient who was evaluated 8 years ago due to painless, progressive PIP joints swelling that involved the 2nd and 3rd fingers of both hands. The patient had no other symptoms. He reported that he had been playing basketball since the age of seven. Family history was unremarkable.

Physical examination performed at the time revealed symmetrical soft tissue swelling of the 2nd and 3rd fingers on both hands, thickening at the level of the PIP joints and hyperkeratotic skin. The range of joint motion was normal. The X-ray of the hands showed soft tissue swelling around the 2nd and 3rd PIP joints without a loss of joint space or bony erosion. Articular ultrasonography showed skin thickening over the 2nd and 3rd PIP joints with no power Doppler signal and no joint abnormality. No skin biopsy was performed.

A preliminary diagnosis of PDD was made, and the patient was referred to pediatric rheumatology for further evaluation. Laboratory examinations, including inflammatory markers and autoimmune panel, were all negative; therefore, inflammatory diseases were excluded, and PDD diagnosis was confirmed. As a treatment, avoidance of mechanical stimulation was recommended.

Eight years later, the patient noticed no significant change in the appearance of his hands, although he stopped playing basketball after the PDD diagnosis was made.

However, at present-day, in addition to persisting skin thickening around the 2nd and 3rd PIP joints, he complained of dry scaling skin on the dorsal fingers and cracking of skin on the affected PIP joints.

Results:

Examination revealed nontender thickening of the 2nd and 3rd PIP joints with hyperpigmentation and lichenification. A punch biopsy showed epidermal hyperkeratosis and acanthosis, thickened dermis with collagen accumulation. Laboratory tests were within normal limits.

Conclusion:

A diagnosis of PDD in our patient was made based on the typical clinical appearance, laboratory findings and radiological manifestations.

There is no effective medical treatment for PDD; findings may regress or remain stable for years, as is the case with our patient.

Although PDD is a rare and benign condition, clinicians should recognize and consider it a potential differential diagnosis of rheumatologic diseases in order to avoid unnecessary investigation and treatment.

Abstract N°: 4138

Antiquity to 21st Century – The Progression of Skin Lightening Practices and Perceptions

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Introduction & Objectives:

Skin lightening (SL) is deeply rooted in complex historical, cultural, and economic dynamics dating back to 200 BCE. The Ancient Egyptians, Romans, and Greeks used a variety of methods to incur SL, commonly honey with olive oil. Other methods include: white lead masks, hydroquinone, cerussa, melenium, chalk dust, and mercury. Through time, the methodology of SL shifted to practices with less adverse effects, such as: niacinamide, alpha-hydroxy acid, steroids, glutathione and lasers. These ingredients are commonly used today.

Dermatologists frequently come face-to-face with SL, manage the associated complications, and combat health consequences. In these circumstances, the question arises- *what are the reasons that push people to skin lightening? What are the roots of this social phenomenon?*

Materials & Methods:

Literature review and narrative synthesis.

Databases searched: MEDLINE, EMBASE, CENTRAL, ClinicalTrials.gov and Web of Science. No limits placed on language or year of publication.

Results:

In antiquity, the practice of SL was seen as a sign of femininity, softness and a tool of seductive charm. Social status and "race" do not appear to have been determining factors in the practice of SL in the ancient world, and did not have the meaning it would acquire in the West from the 16-18th centuries onwards. In the 16-18th centuries, light complexion denoted social prestige, wealth and beauty. Those of higher social class were paler due to an absence of sun exposure compared to labourer counterparts who worked outdoors. Notably, there have been other reasons and historical configurations leading to the placing of social value on a pale skin: for example, the expansion of Islam on the African continent, the Mongol invasions in China, the relationship between the European world and sub-Saharan Africa and the caste system in India.

In the 20th century, the Western world saw a shift in perception of SL to 'protanning', often accredited to Coco Chanel who formed the forefront of trends. However, in the East and South Africa, the SL industry continues to attract consumers. This is likely due to negative psychosomatic influences as a result of colonialism, and 'positive' connotations to lighter skin. For example, literature has shown this to be attributed to greater self-esteem, attractiveness, career opportunities, and smoother skin complexion.

Conclusion:

Overall, as patients with diverse backgrounds present to dermatology clinics, cultural practices (such as SL) and motivations must be considered. Further investigation into socioeconomical and societal factors influencing such behaviours would help elucidate how change can occur. Patients must be fully informed of the treatments and potential side effects. Globally, regulations have been enacted to address the expanding SL market and the harm these practices may cause.

Abstract N°: 4188

The Blazing History of Topical Retinoids

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Introduction & Objectives:

Topical and oral retinoids have revolutionised dermatology, finding application in various dermatological conditions. They have gained approval for the treatment of acne vulgaris, psoriasis, and cutaneous T-cell lymphomas, with off-label uses for conditions such as hyperpigmentation and keratosis pilaris.The efficacy of topical retinoids was first recognized in 1962 by Dr. Stuttgen and Dr. Beer.Following this initial discovery, Dr. Kligman and colleagues conducted a series of experiments in the 1960s, among the first to demonstrate the effectiveness of topical retinoids in treating acne vulgaris. These studies, conducted on inmates at Holmesburg Prison, revealed that skin irritation was a frequent side effect.These early trials, however, often pushed ethical and safety boundaries. We therefore set out to review the literature to better understand this history.

Materials & Methods:

A PubMed literature search was performed as well as review of key secondary sources such as relevant text books.

Results:

The studies were performed on the backs and faces of the inmates, testing minimum and maximum dosage levels of various chemical compounds. Despite subsequent inflammatory reactions, Dr. Kligman reportedly insisted on "*pushing on*". It is reported that he sometimes used such high doses of oral retinoids that even he himself stated that "*I damn near killed people* [before] *I could see a real benefit… Every one of them got sick*"[7] Additionally, occlusion studies caused such tremendous inflammation that the experiments had to be altered.[6] In Kligman and colleagues' first paper they mentioned side effects such as "*a flaming red, chapped, swollen face*" and "*discomfiture about the mouth and angles of the nose.*" But have also stated that the aim of the treatment is to maintain moderate redness and peeling.

Johnson & Johnson™ introduced Retin-A to the market in 1971, leading to significant financial gains and recognition for both the university and Dr. Kligman.[8] However, experiments at Holmesburg Prison were terminated due to noncompliance with updated regulations governing drug studies.[9] Dr. Kligman later explored the photoaging effects of retinoids after discontinuing his experiments on inmates, conducting further research at the University of Pennsylvania on both animals and humans. The introduction of Retin-A as an anti-aging agent was marred with controversy as it was advertised to the markets prior to obtaining FDA approval.

Conclusion:

Acknowledging this uncomfortable history is crucial for dermatology as a speciality to move forward. It teaches us the importance of upholding ethical standards that respect participant rights and ensure scientific integrity. By reflecting on these lessons from the past, we as a scientific community, are committed to raising research ethics and treatment standards, thus fostering better patient trust and care outcomes. This commitment not only honours the legacy of those who suffered but also propels us toward a more ethical and patient centred future in

dermatology.

Abstract N°: 4207

Rosai Dorfman non-Langerhansian histiocytosis: a pure skin localization

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Introduction & Objectives: Rosai Dorfman disease (RDD) is a rare non-Langerhansian histiocytosis of as yet unknown etiology and polymorphous clinical presentation. It mainly affects the lymph nodes of the neck. However, cutaneous involvement occurs in 10% of cases. Isolated cutaneous localization is very rare. We report a novel case of Rosai-Dorfman disease, which is unusual in its pure cutaneous involvement.

Materials & Methods: A 21-year-old man with no particular pathological history was referred to us for multiple papular and macular lesions and nodules on the trunk. The onset was marked by the appearance of papules, which gradually increased in size. Dermatological examination revealed multiple brownish-purple nodules with a smooth, firm surface, slightly tender to palpation, located on the right lumbar region, the right flank, the root of the right thigh and the superior-lateral quadrant of the left buttock, with the presence of satellite papular lesions and a few hyperchromic macules. The rest of the somatic clinical examination and the laboratory work-up were without abnormalities. Histopathology revealed a lymphoplasmacytic and eosinophilic dermal infiltrate with numerous large polygonal histiocytic cells. Immunohistochemistry revealed strong expression of CD68 and PS100, while CD1a was negative. The diagnosis was Rosai Dorfman disease. The extension work-up was negative. Given the multiple nature of the lesions, treatment with methotrexate (15 mg/week) was initiated, with partial regression in a few weeks

Results: Rosai-Dorfman disease (RDD) is a rare non-Langherhansian histiocytosis characterized by tissue accumulation of histiocytes with a specific morphology and phenotype. It was first described by Paul Destombes in 19653. Its most classic clinical feature is the appearance of large cervical adenopathies. It affects children and young adults, with a predilection for males. The cause of the disease remains unknown. Several theories have been put forward, including viral, immune deficiency or genetic mutations. Extra-ganglionic involvement occurs in 43% of cases, of which cutaneous involvement accounts for 16%. Isolated cutaneous involvement is very rare and difficult to diagnose, prompting discussion of other diagnoses such as cutaneous lymphoma. The histological image associated with CD68+ and PS100+ immunostaining and CD1a negativity make the diagnosis. Our case meets the clinical and histological criteria for pure cutaneous Rosai Dorfman disease. Several treatments can be proposed (intralesional or systemic corticosteroid therapy, methotrexate, dapsone, surgery). Prognosis is generally good in the absence of visceral involvement, which should be systematically sought.

Conclusion: RDD is a rare and heterogeneous entity that presents diagnostic and therapeutic challenges, particularly in its multifocal form. Rosai-Dorfman disease is a rare and heterogeneous entity that presents diagnostic and therapeutic challenges, particularly in the presence of a pure cutaneous form. Our case illustrates the importance of the clinical, histological and immunohistochemical correlation necessary for diagnosis.

Beyond the Clinic Walls: Exploring Future Possibilities of Digital Dermatology with AI, Virtual Skin Examinations, Wearable Technologies and Digital Twins.

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Introduction & Objectives: In the last decade there has been significant advances in the application of Artificial Intelligence (AI) for skin image analysis. In experimental settings, AI algorithms have consistently out-performed dermatologists in the classification of melanoma. When applied in a clinical setting, limitations of AI applications in dermatology are evident, particularly when presented with un-trained skin conditions, and the lack of holistic approach in considering a patient's clinical background. However, the rapid progress to date provides insight into the promising potential of AI-assisted skin examinations.

The objective of this presentation is to discuss recent advances in digital dermatology, particularly regarding big data and AI applications for skin health analysis, and how they may translate into future clinical practice.

Materials & Methods: A review of recent literature mixed with perspective insights is used to provide discourse on anticipated and potential shifts in healthcare delivery related to advances in digital technologies in dermatology.

Results: The use of 3D total body photography (3D-TBP) systems, with integrated AI tools for identifying new and changing lesions and lesion risk assessment, is increasing. Installation of these systems in regional areas could greatly increase access to screening in an efficient and cost-effective manner. Screening appointments led by trained melanographers assisted by AI technology, could triage suspicious skin lesions for specialist telehealth review using existing store-and-forward workflow. It is not unforeseeable that these Virtual Skin Examination (VSE) will be added to the repertoire for secondary prevention methods along with Self Skin Examination (SSE) and Clinical Skin Examinations (CSE).

Looking further ahead, we can anticipate how the increasing availability of big data and AI algorithms may drive a digital shift in health management. Similar to the exploration of biomarkers from blood, the increasing use of digital devices is producing digital markers that may provide insight into disease management and prevention. As wearable sensors become more accurate, usable, and affordable, the capacity for real-time personal health monitoring is increasing. Amalgamating consumer collected health data with existing electronic medical records and 3D-TBP images on a digital twin platform presents inventive opportunities within dermatology. Such technology would empower patients and healthcare providers alike with unprecedented knowledge and tools to promote skin health in a patient-centric and data-driven manner.

Conclusion: As healthcare continues to adapt with technological advancements, proactively anticipating future challenges and possibilities with innovation and flexibility will benefit long-term outcomes for patients and drive sustainable and accessible healthcare services.

Abstract N°: 4381

Development of a Three-Dimensional Spheroid Model with Fibroblasts and Endothelial Cells for Personalized Keloid Therapy

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Introduction & Objectives:

Previous studies on keloids, benign but aggressively expanding fibroproliferative conditions, have been constrained by the lack of an effective *in vitro* or animal model that mirrors the actual *in vivo* environment. Given the complexity and varied nature of keloid pathogenesis, particularly the significant role of endothelial cells, this research assesses the efficacy of a novel three-dimensional (3D) keloid spheroid model that integrates both keloid fibroblasts and endothelial cells.

Materials & Methods:

This study utilized commercial keloid fibroblast lines and human umbilical vein endothelial cells to construct keloid spheroids at different cell ratios to identify the most effective composition. We conducted various analyses, including microscopy and assays to determine cell viability, composition, and growth. Additionally, keloid spheroids developed from cells of three different patients were tested to evaluate their potential as representative *in vitro* models.

Results:

The formation of keloid spheroids using varying proportions of fibroblasts and endothelial cells was successful. Spheroids containing a higher percentage of endothelial cells demonstrated greater viability and enhanced angiogenic capabilities. Variability among the spheroids derived from different patients was observed, likely mirroring individual clinical scenarios. The study identified a fibroblast to endothelial cell ratio of 4:1 as optimal for creating keloid spheroids, based on gene expression and viability tests. Compared to traditional 2D cultures, the patient-derived spheroids exhibited more pronounced keloidal changes at the genetic level.

Conclusion:

The new 3D keloid spheroid model enriched with endothelial cells represents a significant step forward in modeling keloid pathogenesis *in vitro*. This model not only aids in understanding the disease mechanism but also facilitates the development of personalized treatment strategies, crucial for the advancement of precision medicine in this field.

Abstract N°: 4415

The safety, tolerability, and pharmacokinetics of a novel recombinant hyaluronidase: a randomized, double-blinded, placebo-controlled, phase 1 study in healthy volunteers

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Introduction & Objectives: Hyaluronidase has been utilized as an adjuvant to facilitate subcutaneous drug delivery by degrading hyaluronic acid, a viscoelastic gel barrier that impedes bulk fluid flow in the subcutaneous tissue, thus limiting the effectiveness of subcutaneous drug delivery. However, previous animal-derived hyaluronidase may cause safety problems including anaphylaxis, and spread of zoonosis, such as variant Creutzfeldt-Jakob disease. Berahyaluronidase alfa, the active ingredient of a novel recombinant hyaluronidase drug product, is originated from human hyaluronidase PH20. This study aimed to evaluate the safety, tolerability, pharmacokinetics and immunogenicity of a novel recombinant hyaluronidase in healthy adults.

Materials & Methods: In this multicenter, randomized, double-blinded, placebo-controlled phase 1 study, 244 participants received single intradermal (ID) or subcutaneous (SC) injections of the recombinant hyaluronidase or placebo. The study comprised three parts: Part I for drug allergy assessment in ID injections of the recombinant hyaluronidase and placebo, Part II-A for pharmacokinetics evaluation in SC injection of the recombinant hyaluronidase, and Part II-B for safety assessment in SC injection of the recombinant hyaluronidase or placebo. Participants with no drug allergy reaction in Part I proceeded to Part II.

Results: ID injection of the recombinant hyaluronidase exhibited a low incidence of local allergic reaction of 0.4% (1/244), with no significant difference compared to the placebo group. SC injection of the recombinant hyaluronidase led to a higher incidence of treatment emergent adverse events (TEAEs) associated with injection site (16.9% vs. 0%; p < 0.001) compared to the placebo. These TEAEs were mild, self-resolving, and did not require treatment. Systemic TEAEs were less frequent in the recombinant hyaluronidase group without significance (0.7% vs. 5.6%; p = 0.045) compared to the placebo group. No serious adverse events were reported, and there were no anti-drug antibodies detected. Pharmacokinetic analysis indicated minimal systemic absorption.

Conclusion: Both ID and SC of the recombinant hyaluronidase demonstrates excellent tolerability and safety. This novel recombinant hyaluronidase holds the potential to enhance the quality of life of patients by increasing the dispersion and absorption of coadministered subcutaneous drugs.

Abstract N°: 4509

A case report on Urticaria Pigmentosa progressing to Systemic Mastocytosis

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Introduction & Objectives: Mastocytosis is a condition caused by an accumulation of mast cells in the skin and/or internal organs. Urticaria pigmentosa is the most common form of the group of cutaneous mastocytoses (it is represented by 90% of the cutaneous forms). Half of the cases of urticaria pigmentosa are associated with organic involvement and progress to systemic mastocytosis. This report recognizes the challenges experienced during the diagnosis and management of urticaria pigmentosa and its transition into systemic mastocytosis in adult patient.

Materials & Methods: : Urticaria Pigmentosa in a 71-year old patient was first diagnosed clinically in 2014 and afterwards was confirmed by two subsequent pathohistological findings. A number of haematological analyses, RTG scans, CT scans, MRI scans, Doppler ultrasound exams etc. were conducted in order to monitor the condition regularly. Treatment with systemic antihistamines and corticosteroids was launched upon admission. In 2016, a tyrosine kinase inhibitor (TKI) was initiated.

Results: After careful review of all medical findings, these results were found: in 2014, the present skin lesions were few, the complete blood count indicated normal parameters, the tryptase levels in serum were elevated at 55cmg/L (N<11.4), the CT scans of abdomen, retroperitoneum and pelvis displayed no signs of pathological accumulation. The pathohistological findings were identified immunochemically by the presence of T lymphocytes (CD3+, CD4+, CD8+), lymphocytes (CD20+) and histiocytes (CD68+, MAC387). In addition, an intense expression for mast cell tryptase was found. Two years later, the patient complained of pruritus and malaise without further change in clinical and medical analysis. The patient was diagnosed with systemic mastocytosis - increased occurrence of cutaneous skin lesions with positive Darier's sign. In 2017, the therapy with TKI was discontinued – the patient proceeded to admit systemic antihistamines and corticosteroids. The tryptase levels in serum were elevated at 45mcg/L. A year later, the patient complained of pain in the lumbar spine – MRI finding was initiated. The results were in addition to spondyloarthrosis with discopathy. In 2019, a CT scan of abdomen and lungs detected sings of structural changes. At this period, the patient was diagnosed with AFF – INR over 4.0 (N<1.0). In addition to the previous therapy, the patient was also prescribed an anticoagulant. In present time, the levels of the tryptase in serum are 62.7cmg/L and the most recent CT scans and vascular doppler showed no significant changes.

Conclusion: Over the course of the last 10 years of the patient's life, we can conclude that his condition was stable due to the therapeutic approach which was individual and depended largely on the clinical expression of the disease, as well as the therapy response. This report aims to better understand this rare medical condition.

Abstract N°: 4584

Prediction of cutaneous melanoma risk using machine learning methods trained on national registry data from the Swedish adult population

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Introduction & Objectives:

Incidence rates of cutaneous melanoma (CM) has increased substantially over the past 60 years. This rise has contributed to higher expenses and a growing burden on healthcare systems. Countries with universal healthcare usually have a developed set of national health and population registries. Data from these registries could potentially be used for computational phenotyping to increase the ability to predict the risk for development of predefined diseases including CM.

The objective of this study was to train machine learning (ML) models on historic data from several Swedish health and population registries to predict whether an individual developed CM during a five-year period.

Materials & Methods:

Registry data from the adult (≥18 yrs) population of Sweden between 4 July 2005 and 31 December 2019 was obtained. Registry data between 4 July 2005 and 31 December 2014 (the index date) was used to predict whether an individual developed CM in the period of 1 January 2015 to 31 December 2019. Patients with any migration events in the observation period were excluded.

Registry data was obtained from Statistics Sweden and the National Board of Health and Welfare. Predictors included age, sex, region of birth, foreign or Swedish background, education level, civil status, disposable income, 3455 ICD-10 codes (first three characters) from the national patient registry, 1959 full ATC codes from the national prescribed drug register, and 385 full ICD-10 codes from the cancer registry.

Overall, 5,993,047 individuals were included and randomized to a training set (32,505 patients with CM and 5,026,682 controls), a hold-out validation set (3,000 patients with CM and 463,930 controls), and a test set (3,000 patients with CM and 463,930 controls).

The ML methods employed were logistic regression, gradient boosting, and random forests, these being standard ML methods that are well understood and widely used. The hyperparameters were varied and the final set of hyperparameters was selected on the best validation performance. Finally, the best performing model of each type was evaluated on the test set.

Results:

The gradient boosting algorithm yielded an area under the receiver operating characteristics curve (AUC) of 0.729 (95% CI, 0.722-0.737), while the logistic regression and random forests models gave an AUC of 0.720 (95% CI, 0.713-0.728) and 0.707 (95% CI, 0.699-0.715), respectively.

Conclusion:

The models used in this study performed at least as well as previous results based on various cohorts from Sweden (not the entire adult population). Adding time-dependent data and other ML architectures such as neural networks could potentially increase model performance further. Finally, adding interpretability of models will also gain insight into what predictors affect the outcome the most.

Abstract N°: 4620

Clinical and Subclinical Treatment Effects of Microwave Thermolysis and Botulinum Toxin A for Axillary Hyperhidrosis – A Randomized Controlled Trial

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Introduction & Objectives:

Microwave thermolysis (MWT) is a newer energy-based treatment for axillary hyperhidrosis, while Botulinum Toxin A (BTX) is widely considered the standard treatment. BTX is temporarily effective, but MWT may provide an alternative approach that can offer a sustained effect. The two treatments have not previously been directly compared in a controlled setting. This study aimed to compare the clinical and subclinical effects of MWT and BTX for axillary hyperhidrosis.

Materials & Methods:

A prospective, randomized, within-person controlled trial, with a baseline treatment of MWT in one axilla and BTX in the contralateral, was carried out. A substudy of image-based and histological evaluation of subclinical effects was conducted 6 months after treatment (n=8) while clinical follow-up (FU) was conducted at both 6- and 12-months after treatment (n=30).** Clinical outcomes included Patient-Reported Outcome Measures (PROMs) for sweat (HDSS:1-4) and odor (OS:1-10). Subclinical outcomes in the substudy were based on qualitative assessment of histological samples (4mm) and Line-field Confocal Optical Coherence Tomography (LC-OCT, ~500 mm) images.

Results:

At baseline, patients reported significant axillary sweat (HDSS medians 3, IQR:3-4) and odor (OS medians 6.5, IQR:4-8) bilaterally. Subclinically, sweat glands, ducts and pores were identified in all axillae with histology or LC-OCT.

At 6-month FU, sweat was reduced (HDSS medians 2, IQR:2-2, $p<0.0001$) on both sides significantly and equally ($\Delta p=0.4142$). Correspondingly, odor reduction was reported both after MWT (OS median 2.5, IQR:2-5, $p=0.0002$) and BTX (OS median 3, IQR:2-5, $p=0.0018$) with no difference ($\Delta p=0.6826$). Subclinically, histology showed sweat gland atrophy and surrounding fibrosis after MWT while no structural changes were seen after BTX. LC-OCT could identify obstructed pores and atrophic sweat ducts after MWT, while these features appeared unchanged after BTX.

At 12-month FU, patients reported sustained sweat reduction on both sides (BTX: HDSS median 2, IQR:2-2, $p=0.0009$; MWT: HDSS median 2, IQR:1-2, $p=0.0010$) with no statistical difference ($\Delta p=0.0833$). Long-term odor reduction also persisted (BTX: OS median 3, IQR:2-6, $p=0.0152$; MWT: OS median 2, IQR:1-4, $p=0.0007$), and showed a subtle difference favoring MWT ($\Delta p=0.0497$).

Conclusion:

This trial compared the clinical and subclinical effects of MWT and BTX for axillary hyperhidrosis. Patients experienced significant sweat and odor reduction following both treatments at 6- and 12-month FU, but sustained odor reduction was superior for MWT. Subclinically, structural tissue changes with atrophic sweat glands and

ducts after MWT were seen on histology and LC-OCT, while no tissue changes were detected after BTX.

Abstract N°: 4632

Wearable Integration in Clinical Studies

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Introduction & Objectives:

In a time where technology drives clinical progress, merging wearable devices with study-specific applications presents new opportunities. Explore the narrative of integrating wearables with an ePRO app, tailored to gather UV data every two minutes. Targeting elderly patients with Actinic Keratosis, this integration aims to gather crucial data and empower patients with UV radiation knowledge, crucial for slowing their condition's progression.

Materials & Methods:

Wearable sensors, compact and sophisticated, monitor various physiological and environmental parameters in real-time, reducing recall bias and enhancing data reliability. They support decentralized clinical trials, allowing data collection in natural settings and minimizing participant travel.

These devices inform users of ultraviolet radiation levels and promote awareness of sun exposure, offering personalized alerts based on skin type. They aid in protocol compliance and enable ongoing data monitoring for centralized analysis, facilitating intervention efficacy assessment.

Top of Form

Bottom of Form

Results:

The materials and methods employed underscored the efficacy of wearable sensors in real-time monitoring, thus minimizing recall bias and increasing the reliability of patient-reported outcomes. Moreover, the adoption of wearables facilitated decentralized clinical trials, enhancing patient comfort and participation by allowing data collection in natural living environments.

Wearable sensors, characterized by their compact yet sophisticated design, continuously monitor a wide range of physiological and environmental parameters, including ultraviolet radiation index (UVI) and accumulated exposure. This heightened awareness of sun exposure, coupled with personalized alerts based on skin type, not only fosters protocol compliance but also promotes patient engagement in managing their condition.

The results of the study reflect a significant improvement in patient-reported outcome compliance, particularly among sites utilizing electronic methods compared to traditional paper-based approaches. Furthermore, the high patient retention rates observed among those using the wearable sensor underscore its value in fostering patient adherence and engagement throughout the study duration.

Conclusion:

The integration of wearable devices with study-specific applications has demonstrated remarkable potential in advancing clinical studies, particularly in the realm of dermatology. By merging wearable technology with ePRO applications tailored for the elderly cohort diagnosed with Actinic Keratosis, researchers have not only succeeded in collecting vital UV data at a granular level but have also empowered patients with essential knowledge on UV

radiation.

In conclusion, the integration of wearable technology in clinical studies represents a pivotal advancement in dermatological research, offering both researchers and patients a novel avenue for data collection, intervention monitoring, and patient empowerment. As technology continues to evolve, the potential for wearables to revolutionize clinical research and patient care remains boundless.

Abstract N°: 4684

Cyber dermatoses: internet challenges as diagnostic and therapeutic dilemmas in modern dermatology

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Introduction & Objectives:

Internet challenges present on social media platforms, such as the "Salt and Ice Challenge" or "Deodorant Challenge", are becoming increasingly popular among both young people and adults, offering not only entertainment but also potential risks to the skin health. The dermatological lesions present as the consequences of this internet challenges may cause diagnostic and therapeutic dilemmas. The aim of this review is to examine the dermatological consequences of participation in internet challenges such as the "Salt and Ice Challenge", "Eraser Challenge", "Fire Art", „Hot Water Challenge" or "Deodorant Challenge" among both adults and children, and to describe the dermatological implications associated with them.

Materials & Methods:

We performed review of literature in EMBASE, MEDLINE and Google Scholar databases from inception until April 2024, including keywords such as „cyber dermatoses", „digital dermatoses",

"Salt and Ice Challenge", "Eraser Challenge", "Fire Art", „Hot Water Challenge" or "Deodorant Challenge". 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 or without any concomitant reported treatment methods, published in English from the database inception until April 2024. After applying inclusion and exclusion criteria, results were identified and given further analysis with additional manual research and a classification of cyber dermatoses according to type, age, methods of treatment was created.

Results:

From the reviewed papers and described clinical cases, we observed a variety of dermatoses associated with different internet challenges, such as chemical and freezing burns, skin irritation, allergic reactions and skin damage. These occurred due to skin contact with irritants, mechanical damage to the skin, or overexposure to extreme temperatures.

Conclusion:

Participation in online challenges can lead to a variety of dermatoses in both adult and pediatric populations. The effects of the aforementioned challenges require an individual diagnostic and therapeutic approach. Safety education and awareness of the potential risks and consequences for the skin are key in the prevention of dermatological complications associated with such activities imitated from online sources.

Management of Giant Post-Mastectomy Keloid: A Case Report

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Management of Giant Post-Mastectomy Keloid: A Case Report

Introduction & Objectives:

Keloids are abnormal scar formations characterized by excessive collagen deposition, often posing significant challenges in clinical management. We herein present the case of a 65-year-old woman diagnosed with mammary neoplasm who underwent total mastectomy, subsequently developing a giant exophytic keloid at the scar site. The aim of this report is to outline the therapeutic approach and results obtained from using intralesional corticosteroid injections in managing this exophytic keloid.

Materials & Methods:

A comprehensive assessment of the patient's medical history and keloid characteristics was conducted, including detailed clinical examination and documentation of the keloid's dimensions, morphology and associated symptoms. Intralesional injections of triamcinolone (10 mg/site) were administered monthly over a period of three months. Treatment response was assessed through serial photography and clinical evaluations, concentrating on alterations in keloid size, consistency, and associated symptomatology.

Results:

The patient presented with a giant exophytic keloid measuring 20 cm in length with irregular, lobulated contours, and palpable induration. The keloid exhibited areas of telangiectasia, exudative erosions, and sero-hemorrhagic crusts, predominantly located on the right hemithorax. Following three monthly intralesional injections of triamcinolone, a visible improvement in keloid appearance was observed. Reduction in size, flattening, and softening of the keloid were noted, along with the resolution of exudative changes and crust formation.

Conclusion:

Intralesional injections of triamcinolone represent a viable therapeutic option for the management of keloids. This case report demonstrates the effectiveness of triamcinolone injections in achieving significant amelioration of keloid appearance and associated symptoms. Further research is needed to elucidate optimal treatment regimens and long-term outcomes in the management of exophytic keloids following breast surgery.

Abstract N°: 4828

Is There More to Acrokeratoelastoidosis Than Meets the Eye? A Rare Dermatological Disorder from Saudi Arabia with Global Implications

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Title: **Is There More to Acrokeratoelastoidosis Than Meets the Eye? A Rare Dermatological Disorder from Saudi Arabia with Global Implications**

Introduction & Objectives:

Acrokeratoelastoidosis (AKE) is a rare form of palmoplantar keratoderma that was first described in 1953 by the Brazilian dermatologist Oswaldo Costa. It manifests as round to oval warty shaped, yellowish to skin-colored papules at the sides of both hands and feet. Onset is usually before the second or the third decade of life and the course is chronic. Both sporadic and familial forms of the disease have been reported. The reported familial cases were mostly autosomal dominant and linkage with chromosome 2 has been proposed3. The pathogenesis and the etiological factors of AKE are still unknown 1,4,5. Herein we provide a comprehensive and updated literature review of AKE from the first reported case in 1953.

Materials & Methods:

The patient underwent a comprehensive dermatological examination to assess the distinct keratotic papules on her feet, with particular attention to potential lesions on other body parts. A biopsy was taken and staining was performed using Hematoxylin and Eosin (H&E) and Elastin to evaluate the structure and integrity of elastic fibers critical for diagnosing Acrokeratoelastoidosis. Ethical approval for this study was obtained from the institutional review board, and written informed consent was secured from the patient for the biopsy and use of her medical information in academic research and publication, ensuring compliance with the ethical standards of the Declaration of Helsinki.

Results:

A 32-year-old Saudi female presented to our dermatology clinic at King Abdul-Aziz university hospital with asymptomatic skin lesions at the borders of her feet. The lesions were noticed by the patient 8 years ago and have not progressed since then. There was no family history of similar skin lesions, but one of her 4 sons has an elastic fibers disorder known as cutis laxa syndrome type ARCL1A, and the other 2 sons have eczema. The patient is otherwise healthy and has no history of exposure to possible precipitating factors.

Upon examination, there were multiple, slightly raised, skin-colored to yellowish-brown keratotic papules. These were distributed symmetrically along the medial side of the feet at the junction between the plantar and the dorsal surface and under the lateral malleolus. A single papule at the middle of the right Achilles tendon area was present. The lesions were more palpable than visible. Nails were not involved and hands examination showed no similar skin lesions (figure 1). Histopathological examination demonstrates an epidermis with marked hyperkeratosis (figure 2A). Elastin stain shows fragmentation and loss of elastic fibers in the dermis "Elastorrhexis" (figure 2B).

Conclusion:

AKE is among the rare dermatological disorders and the number of reported cases or studies are limited. The disorder initially thought to be limited to the affected skin, but recent evidence shows the possibility of a more generalized elastic tissue involvement. AKE should be differentiated from other clinically similar and related dermatological conditions like; Focal acral hyperkeratosis (AKE), degenerative collagenous plaques of the hands (DCPH), or keratosis elastosis marginalis (KEM). Histologically, elastorrhexis is characteristic and the hallmark that should be used in differentiating it from other similar skin conditions.

Head and neck dermatofibromas. A 20-year single institutional experience

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Introduction & Objectives:

Dermatofibroma, also called fibrous histiocytoma, is a benign tumor composed of a mixture of fibroblastic and histiocytic cells. Clinically, lesions present as firm, solitary often illdefined nodules o papules, usually less than 2 cm in diameter, with a red or brown hue, and may be asymptomatic, mildly painful or associated with pruritus. Histologically, facial dermatofibroma is composed of an admixture of CD68-positive histiocytoid cells and alpha-smooth muscle actin positive spindleshaped myofibroblasts.

Rarity of head and neck dermatofibromas may have a role in the low number of cases that includes the diagnosis of dermatofibroma before the histological study in this location. Whether dermatological ultrasound helps guide the diagnosis has not been studied.

Besides, in recent years, cases of facial dermatofibromas have been published that tend to infiltrate deeper structures and have an increase in the rate of local recurrence compared to other dermatofibromas. Consequently, it has been suggested that facial dermatofibromas must be removed with wider surgical margins. However, not all authors find this association.

Materials & Methods:

Descriptive retrospective study of the clinicopathologic features of dermatofibromas diagnosed on head and neck in the Dermatology department of Hospital Universitario de Fuenlabrada between 2004 and 2023.

Results:

Forty cases were found on head and neck (16 on the face, 3 on the scalp, 20 on neck) in 39 patients out of a total of 2466 total dermatofibromas. 29 patients (74%) were women and the mean age was 41 years (11-73 years). The mean duration time was 7 months and the mean clinical size was 7mm (3-15mm). The most common symptom was mild discomfort or pain (41%) and 41% were asymptomatic. The most common suspected clinical diagnosis was epidermoid cyst (47.5%) and the diagnosis of dermatofibroma was included in the differential diagnosis in only one lesion on the face and 8 on the neck. None of the skin ultrasound performed redirected the diagnosis to dermatofibroma. The special histological subtype most frequently found was aneurysmal (3 lesions). The excision edges were free of lesion in 16/40 lesions. Given the benign nature of the lesions, follow-up was not performed.

Conclusion:

In accordance with previous literature, dermatofibromas in this location are rare and the clinical suspicion index for dermatofibroma is low in the head and neck, especially on facial location. Ultrasound has not shown to help clinical diagnosis in our series. We have not found cases with deep involvement or aggressive behavior as described in the literature.

Abstract N°: 4901

Coexistence of Anogenital Lichen Sclerosus and Morphea in a Woman

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Introduction & Objectives:

Lichen sclerosus and localized scleroderma are connective tissue diseases with unknown etiology. Genetic factors, such as predisposing HLA alleles, and environmental factors, such as infection with Borrelia burgdorferi, are thought to play a role. Coexistence of lichen sclerosus and localized scleroderma has been rarely reported in the literature.

Materials & Methods:

A 77-year-old woman with a 3-year history of painful genital lesions and appearance of skin lesions several months ago is presented.

Results:

The genital lesions were previously diagnosed as vulvar leukoplakia and surgical excision was proposed by a gynecologist, but the patient refused the intervention. Dermatological examination found erythema and erosions on labia minora and a well demarcated, whitish patch with erythematous border in the anogenital area; bilateral, erythematous, indurated plaques on the anterior surface of the elbows and inguinal regions, and oval, ivory white plaques with light violaceous periphery on the right abdominal and hip regions. Antibodies to Borrelia burgdorferi were not detected. Biopsies were taken of the perigenital lesion and of the abdominal plaque. Histopathological examination confirmed the clinical diagnosis of lichen sclerosus and morphea, respectively.

Conclusion:

The presented case of anogenital lichen sclerosus and subsequent occurrence of morphea supports the likely common etiologic factors.

Abstract N°: 4917

Exploring the cross talk between mast cells and nerve fibers in photoaging in re-innervated skin ex vivo

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Introduction & Objectives:

Photoaging, induced by prolonged and excessive sun exposure, can result into degeneration and abnormal accumulation of elastic fibers known as solar elastosis. Mast cell numbers are elevated in these elastotic skin areas and contribute to their formation by releasing factors that are involved in extracellular matrix remodelling. As sun-exposed skin is characterized by hyper-innervation and a modulatory role of nerve fibres on mast cell function is widely appreciated, we hypothesized that their cross-talk may be involved in the formation of elastotic skin areas. We therefore set out to investigate whether and how the interaction between these two players may enhance solar elastosis using the organ culture of healthy human skin re-innervated with *in vitro* differentiated human iPSCs-derived sensory neurons.

Materials & Methods:

To this end, skin punches were obtained from four healthy donors and cultured in the presence of absence of *in vitro* differentiated sensory neurons for seven days. Subsequently, the skin punches were irradiated with UV-B rather than UVA+UVB to mimic sun exposure but prevent direct mast cell activation. Afterwards, quantitative (immuno-)histomorphometry was performed to analyse mast cell degranulation based on the number of tryptase released granules, elastin and fibrillin I expression, and dermal fibre architecture.

Results:

UV-B irradiation induced mast cell degranulation in non-innervated skin samples, yet more prominently and significantly in experimentally re-innervated skin ex vivo. Additionally, UV-B irradiation led to an increased protein expression of elastin and fibrillin-I in the papillary dermis, which was accompanied by a more heterogeneous, rough and disorganized fibre architecture, especially in skin samples in which cutaneous sensory nerve fibres were present.

Conclusion:

These preliminary results suggest that epidermal innervation may exacerbate mast cell activation and degranulation, followed by accumulation of dysfunctional elastic dermal fibres during sun exposure. Although additional factors may influence the process of solar elastosis formation, targeting the interaction between mast cells and nerve fibres holds the potential to prevent and modulate photoaging induced dermal damage.

Utilization Rates of Dermatology Screening Certification Services by Nail Technicians Within a Metropolitan United States City

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Introduction & Objectives: Nail technicians may serve as a valuable tool in the early detection of skin cancer through their high-frequency exposure to the hands, feet, and nails. Despite the availability of dermatologist-created platforms that offer certification in skin cancer screening, it is unknown if these resources are routinely utilized by nail technicians. We conducted a pilot study to determine nail technicians' certification status in skin cancer screening and to assess awareness and interest in existing certification programs among this special population within a metropolitan city in the United States.

Materials & Methods: 144 nail salons corresponding to the zip codes of interest were invited via phone call to participate in the study and excluded after 3 contact attempts. Nail technicians from the identified salons were asked to complete a questionnaire pertaining to comfort identifying skin lesions, awareness of certification resources, and current certification status. Survey responses were analyzed via frequency reporting and Likert scoring for applicable questions.

Results: A total of 36 nail technicians responded to the survey. When asked if they had ever experienced concern regarding a client's skin, most respondents responded "Yes" (n=25; 71.4%). Although technicians expressed confidence in identifying skin lesions (3.48) and reporting skin concerns to their clients (4.08), only three respondents (8.3%) were certified in screening for melanoma. Of those certified, two reported learning about their selected certification opportunity via cosmetology school. Most technicians (n=28; 87.5%) were unaware of melanoma screening certification opportunities. When asked about interest in learning more about certification opportunities, 14 (50%) technicians responded "Yes" and 13 (46.4%) responded "Maybe."

Conclusion: Our findings suggest that currently available skin-cancer screening certification courses are underutilized by nail technicians. Despite this, most respondents expressed an interest in these certification opportunities and reported confidence in sharing skin-related concerns with their clients, suggesting an opportunity for increased screening education in this population. Barriers to obtaining certification may include lack of awareness about available courses, financial barriers, and limited access to training resources. Respondents that were certified identified cosmetology schools as the primary avenue of educating technicians about certification opportunities. Future studies aim to explore the potential benefits of establishing partnerships between cosmetology schools and certification programs to increase awareness and certification accessibility among nail technicians with the end goal of increasing early detection of skin cancers on the hands, feet, and nails.

Abstract N°: 5147

Trigeminal Trophic Syndrome: a case report

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Introduction & Objectives:

Trigeminal trophic syndrome is a cutaneous dysesthesia syndrome consisting of a rare-self induced process caused by the trigeminal nerve injury. This cutaneous dysesthesia syndrome is characterized by the triad of clinical symptoms, including trigeminal anesthesia, paraesthesia and skin ulceration caused by self manipulation.

Materials & Methods:

An 81-year-old woman presented on admission an ulceration on the right helix of 2 months duration. The dermatological examination revealed an ulceration with minimal fibrin deposits, measuring 4/1 cm at the right helix and a smaller one, 0,4/0,4 cm, at the auditory canal. She also presented right hemifacial atrophy and right ear atrophy.

Results:

A neurological examination indicated sensory polyneuropathy with discrete tremor of the limbs and hearing loss.** Laboratory tests showed hyperuricemia, anemia, impaired kidney function, and leukocyturia. Borrelia, Herpes simplex and Varicella-Zoster antibodies (IgG) were positive. The histopathological examination was suggestive of a trigeminal trophic syndrome, without any signs of malignancy or granulomatous diseases. .

Thus, trigeminal trophic syndrome was diagnosed. The patient underwent topical treatment consisting of disinfection, antibiotic ointment and a non-adhesive, non-medicated ointment dressing. The systemic treatment consisted of an anticonvulsant medication. The patient was advised to avoid scratching or rubbing the affected area. At the one-month follow-up, the evolution was favorable with the improvement of the hemifacial atrophy and ear ulceration.

Conclusion:

Although trigeminal trophic syndrome is rarely encountered, this diagnosis should be suspected when there is unilateral facial ulceration involving the dermatome of the trigeminal nerve. The accurate diagnosis of the disease is crucial for the optimal management and prevention of the disease progression.

Abstract N°: 5166

A study to compare nerve conduction studies between tuberculoid pole and lepromatous pole

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Introduction & Objectives: leprosy is a chronic granulomatous disease primarily affects skin and peripheral nerves. Nerve conduction studies are objective method to assess nerve involvement and is not subject to inter and intra observer variation.

We aimed to compare nerve conduction studies between lepromatous pole and tuberculoid pole of leprosy

Materials & Methods: Cross-sectional observational study conducted over a span of 19 months. Thirty patients of > 18 years of age of leprosy 15 in each pole were enrolled and a complete demographic details and clinical examination including sensory system examination were done. Nerve conduction studies were conducted in neuroelectrphysiology lab.

Results:

Most of patients belonged to 20-29 years age in both the group and the duration of disease is 1 to 5 years. There was male predominance in both the groups, 66.7% and 73.3%. Presenting complaints in tuberculoid pole were erythematous plaques (86.7%) and sensory loss (93.3%) and in lepromatous pole, erythematous plaques (80%) and nodules (40%) with sensory loss in only 46.7% patients.

In tuberculoid pole the lesional sensory loss is seen in 73.3% and in lepromatous pole glove and stocking anesthesia (40%). Ulnar nerve was the most commonly involve nerve in both the poles.

All the patients in tuberculoid pole belonged to BT leprosy and in lepromatous pole 60% patients belonged to LL and 40% belonged to BL leprosy.
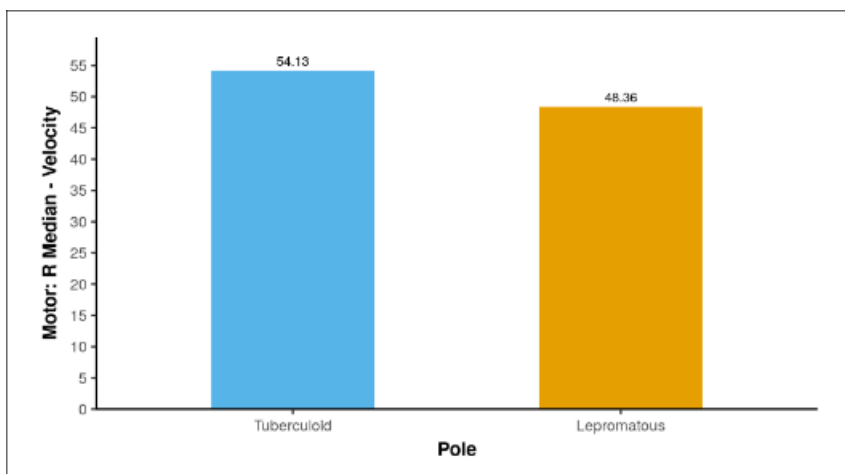
Nerve conduction studies:

Abnormal in only 3 (20%) patients in tuberculoid pole whereas, 14 (93.3%) patients in lepromatous pole, which was statistically significant (p=<0.001).
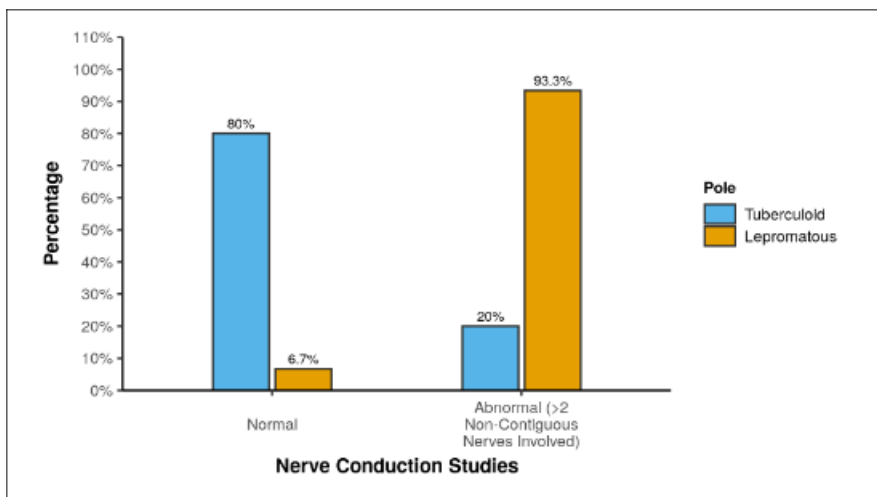
Median nerve motor conduction studies:

There was no statistically significant difference found in right and left median latency and amplitude and left medial velocity. But, on comparing right median nerve velocity of patients in tuberculoid pole and lepromatous pole statistically significant (p=0.022) difference was seen.
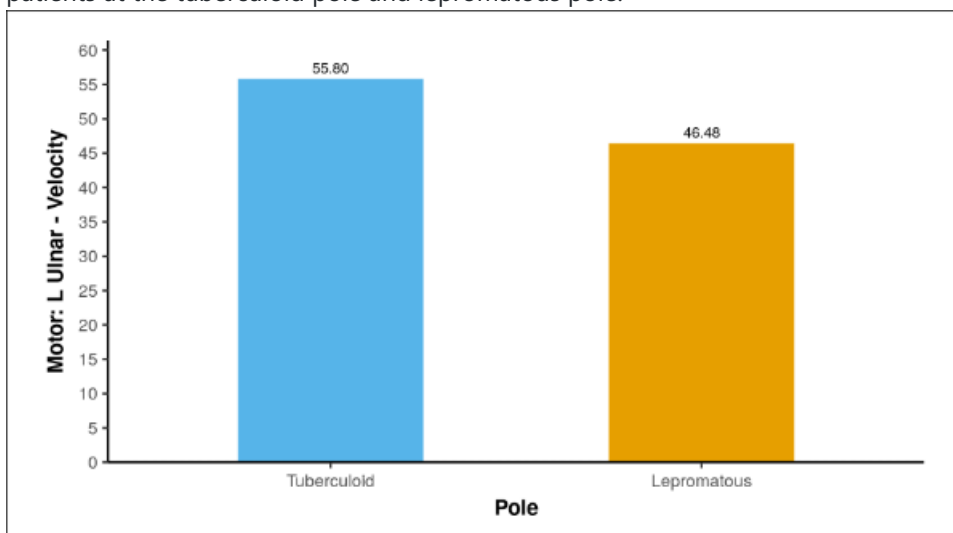

Median nerve sensory conduction studies:

Statistically significant differences were observed in sensory nerve conduction studies of the median nerve when comparing patients at the tuberculoid pole and lepromatous pole.

Ulnar nerve motor conduction studies:

Motor nerve conduction studies of the ulnar nerve, a statistically significant difference was observed between patients at the tuberculoid pole and lepromatous pole.

Ulnar nerve sensory conduction study:

On comparing sensory nerve conduction studies of ulnar nerve, statistically significant difference was found between tuberculoid pole and lepromatous pole patients in right ulnar amplitude (p=0.032).

Peroneal and tibial nerve motor conduction studies:

On comparing motor nerve conduction studies of peroneal nerve, statistically significant difference was found between tuberculoid pole and lepromatous pole patients in bilateral peroneal and tibial amplitude and velocity.

Sural nerve sensory conduction studies:

Five right sural nerves and 2 left sural nerves were non-recordable in tuberculoid pole and 11 patients showed non recordable sural nerves bilaterally in lepromatous pole.

Conclusion:

Nerve conduction studies can be a very useful tool to differentiate between tuberculoid pole and lepromatous pole, especially in case of pure neuritic leprosy. Clinical diagnosis remains the most used method.

Limitations:

- Small sample size
- Requirement of specialized equipment

Idiopathic facial erythema - a case report and diagnostic challenges

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Introduction & Objectives:

Facial erythema is a condition characterized by temporary or permanent redness of the skin of the face. Although it is usually benign, it could be a sign of an underlying systemic disease. The erythema is typically caused by increased blood flow to the superficial capillaries with prominent telangiectasias. It can be localized to specific areas such as the cheeks or nose, or it can affect the entire face. The condition may be associated with rosacea, lupus, allergic reactions or hereditary factors.

We present an uncommon clinical case of a therapy-resistant facial erythema with a chronic course of progression.

Materials & Methods:

A 43-year-old Caucasian female was admitted to the Department of Dermatology and Venereology at Alexandrovska University Hospital with an 18-year history of several gradually enlarging slightly pruritic erythematous macules with various sizes ranging up to 45x40mm on the buccal regions. Additionally, the redness intensifies after alcohol consumption or sun exposure. The patient has no systemic complaints. She had undergone therapy with topical ultrapotent corticosteroid Clobetasol propionate 0.5% for several months with no improvement of the lesions.

Results:

Dermatoscopy of the lesions revealed arborizing vessels and vascular polygons corresponding to telangiectasias and dilated follicular openings. A standardised skin surface biopsy (SSSB) showed no presence of Demodex. The routine laboratory investigations were within normal ranges. Immunohistochemical staining revealed no changes in ANA, anti-Ro/SSA, anti-Smith (SM); anti- RNP; and anti-PL antibodies. Phototesting with UVA and UVB irradiation using a standardized protocol for photosensitivity was also negative.

Differential diagnoses included lupus erythematosus cutaneus acutus, rosacea erythematosa, photoallergic or phototoxic reactions, hereditary hemorrhagic telangiectasia (HHT), alcohol abuse, among others.

Conclusion:

Facial erythema can be a diagnostic challenge due to its broad range of potential causes. The treatment mostly depends on its etiology, therefore, multiple treatment modalities are possible.

We demonstrated a case report of a facial erythema which, at present, does not meet any diagnostic criteria and should be further observed with subsequent follow-up examinations.

To conclude, facial erythema remains a diagnostic and therapeutic challenge to clinicians due to the vast etiological possibilities and aggravating factors encountered in routine practice.

Virtual Patient Presentation using Augmented Reality in Dermatological Teaching

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[1]University Hospital Augsburg, Department of Dermatology and Allergology, Augsburg, Germany, [2]University of Augsburg, Institute of Mathematics, Augsburg, Germany, [3]University Hospital Augsburg, Institute of Digital Medicine, Augsburg, Germany

Introduction & Objectives:

The visual dermatological examination of patients is one of the most important tasks in our field. Dermatology trainees must master this crucial skill as most skin conditions are visually diagnosed, guiding further steps, especially with rare diseases like autoimmune bullous diseases demanding swift treatment. Patients with serious diseases such as bullous pemphigoid are often not only frail, which can make the examination stressful when many students are present, but this disease is also extremely rare and cannot be planned in the curriculum. We tried to counter these limitations with implementing 3D technologies and presented and evaluated a real patient as a virtual avatar in an augmented reality setting in student lessons.

Materials & Methods:

An 84 year old male patient suffering from an acute outbreak of bullous pemphigoid was scanned three-dimensionally using photogrammetry and presented to medical students using an augmented reality tool available on mobile devices as part of the dermatology group teaching 'diagnostics and treatment planning" in the 9th semester, creating an immersive learning experience with the virtual patient being projected in the real classroom. Their experiences were quantified by means of a questionnaire.

Results:

35 students responded to the questionnaire containing seven items. Apart from technical aspects of the novel technology, we enquired if the 3D recordings were beneficial to the students' learning experience, which 88.6% fully or partially agreed on and 80% of participants stated that they would like to have more contact with 3D visualization and printing techniques in medical studies.

Our assumption that this form of presentation is less stressful for the patient in the eyes of the students was fully or partially agreed upon by 91.4% and 97.1% fully or partially agreed that the use of 3D scanning and augmented reality in dermatology teaching is a good way to examine patients who would otherwise not be encountered.

Conclusion:

3D technologies can offer widespread enhancements in dermatological routines. This project shows the potential for incorporating 3D scanning technologies in documentation and presentation of skin diseases in dermatological teaching and can both reduce the perceived burden on patients associated with exposure to students and enable students to come into contact with rare diseases that are rarely encountered in teaching with real patients.

Abstract N°: 5315

Learn to diagnose and treat tattoo complications

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Introduction & Objectives: Tattoos remain popular. The number of tattoo reactions, particularly in cosmetic tattoos, has risen despite stricter EU legislation concerning suspect ink content and improved hygiene practice. These tattoo complications can prove a challenge to practitioners or dermatologists who are little prepared.

Materials & Methods: The "Tattoo Clinic" in the dermatology department at Bispebjerg University Hospital, Denmark was established to gather knowledge and expertise in diagnosing and treating tattoo reactions. Patients with tattoo reactions are referred to the clinic from all regions in the country.

Results: From 2008-2024, more than 1500 reactions have been diagnosed and treated. Reactions recorded were infection, allergy, papulo-nodular pattern sometimes related to sarcoidosis, neurosensitivity, tattooist-related complications from pigment overdose or needle trauma and problems related to previous treatments. Tattoo reaction triggering systemic sarcoidosis is observed. Treatments are determined by type of reaction. Treatment consists of antibiotics, steroid creme/injection, prednisone, modern biologics, and dermatome-shaving and laser.

Conclusion: Dermatologists are encouraged to be updated on diagnosis and treatment of tattoo reactions. Reaction can impair quality of life for the sufferers.

Abstract N°: 5533

Melkersson-Rosenthal syndrome ：A case of male with early onset

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Introduction: Melkersson-Rosenthal syndrome (MRS) is a rare disorder characterized by the triad of granulomatous cheilitis, fissured tongue, and facial paralysis. It is uncommon for all three symptoms to manifest simultaneously, and they may appear at different times in the patient's course. The most prevalent symptom is swelling of the lips and face.

Results: We present a case of an 18-year-old male patient who experienced recurrent facial palsy with lip skew 15 years ago. Persistent upper lip swelling emerged 5 years ago, initially responding to hormone therapy but subsequently recurring. This lip swelling significantly impacts his daily life. Previous medical history: No known contact history, trauma, or infections. Family history: The patient's mother and grandfather had a history of furrowed tongue. Allergy history: No reported allergies or drug sensitivities. Physical examination revealed obvious diffuse swelling of the upper lip with a smooth surface; no significant swelling was observed in the lower lip. Several longitudinal and staggered grooves were visible on the back of the tongue, varying in depth and length. A deep groove was present at its center along with multiple irregular secondary trenches where filamentous papillae were absent from their bottoms and lateral walls; furthermore, irregularity was noted along the lingual margin. Laboratory examination results showed no suspicious mutations upon genetic testing targeting FATP1 gene (officially known as SLC27A1 gene). Genes associated with hereditary angioedema (ANGPT1, CPN1, DNASE1L3, F12, HS3ST6,KIT,KNG1 MYOF PLCG2 PLG SERPING1 SPINK5 XPNPEP2) were also analyzed without any abnormalities detected. Given recurrent facial paralysis accompanied by lip swelling and furrowed tongue presentation in this patient's clinical course, Melkersson-Rosenthal syndrome was diagnosed.

Conclusion: According to the literature, the complete triad is observed in only 8% to 45% of patients. The most prevalent manifestation entails persistent facial swelling, primarily affecting the lips. In this case, the patient exhibited recurrent facial paralysis, lip swelling, and a furrowed tongue in the course of his illness. It has been reported that MRS typically manifests between the ages of 20 and 40. In this case, the patient developed the disease at an early age.

Outcomes in resected stage III/IV melanoma patients treated with adjuvant targeted therapy or anti-PD1 agents: a four-year analysis

Gabriele Roccuzzo[1], Paolo Fava[1], Eleonora Bongiovanni[1], Umberto Santaniello[1], Chiara Astrua[1], Matteo Giovanni Brizio[1], Giovanni Cavaliere[1], Valentina Pala[1], Simone Ribero[1], Pietro Quaglino[1]

[1]University of Turin, Section of Dermatology, Medical Sciences, Italy

Introduction & Objectives: Adjuvant therapy has become the standard of care for fully resected stage III-IV melanoma. This retrospective study focuses on real-world outcomes, safety profiles, and recurrence patterns of melanoma patients receiving adjuvant therapy at a melanoma-specialized tertiary referral center.

Materials & Methods: A retrospective analysis of melanoma patients treated with adjuvant therapy at a University-based Dermatologic Clinic, from September 2017 to April 2024 was conducted.

Results: Overall, 163 patients were analyzed. 82 patients (50.3%) received dabrafenib + trametinib (TT), while 81 (49.7%) had anti-PD-1 adjuvant therapy (63 nivolumab, 18 pembrolizumab). Among 86 BRAF-mutant melanoma patients, 94.2% received TT. The cumulative RFS rate over a 48-month period was 54.9% (95% CI, 45.0% to 63.7%). This breaks down to 55.6% (95% CI, 42.0% to 67.2%) in the TT group and 55.4% (95% CI, 41.9% to 67.0%) in the IT group (p=0.532). Regarding the 48-month DMFS rate, it stood at 58.4% (95% CI, 48.0% to 67.3%) for the entire cohort. More specifically, within the TT group, the rate was 58.2% (95% CI, 44.1% to 69.9%) while it reached 59.8% (95% CI, 45.5% to 71.5%) in the IT group (p=0.761). At last, the overall 48-month OS rate was calculated as 66.5% (95% CI, 55.5% to 75.3%). This further breaks down into 62.4% (95% CI, 44.6% to 75.9%) in the TT group and 69.5% (95% CI, 55.0% to 80.1%) in the IT group. Consistently, there were no statistically significant differences between the two treatment categories (p=0.889) or the three drug types (p=0.989). Overall, 123 patients (75.7%) completed the one-year cycle of adjuvant treatment, whereas 17 patients (10.4%) interrupted the therapy beforehand due to disease progression and 21 patients (12.9%) due to adverse event. Whilst temporary therapy suspension was more common in TT-treated patients compared to IT-treated ones (68.3% vs 13.6%, p<0.001), therapy discontinuation secondary to adverse events was comparable in both groups (11.1% vs 14.8%, respectively, p=0.464). In total, 38 patients (23.3%) died, 19 of them received TT and 19 IT (16 nivolumab, 3 pembrolizumab).

Conclusion: Predictors of relapse included mitoses (HR: 1.07, 95% CI: 1.01-1.13, p=0.028), lymphovascular invasion (HR: 2.37, 95% CI: 1.17-4.79, p=0.017), ulceration (HR: 2.79, 95% CI: 1.39-5.63, p=0.004), and positive sentinel lymph nodes (HR: 1.44, 95% CI: 1.04-2.01, p=0.027). Overall, the proportion of BRAF-mutated patients receiving IT stood at 7.4%, notably lower than what was observed in clinical trials, confirming the trend to administer adjuvant TT to this subset of patients in Italy. These results confirm the real-life effectiveness and safety of adjuvant regimens yet underscore the need for further research to explore biomarker-based predictors for relapse and to assess the translation of improved RFS into long-term OS benefit.

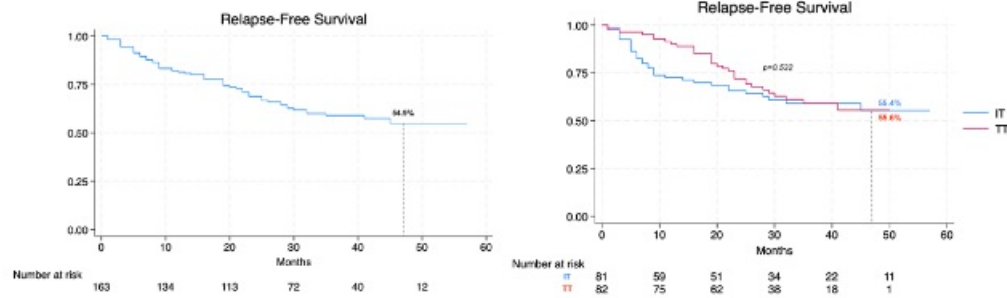**Figure 1.** *Relapse-Free-Survival at 48 months*

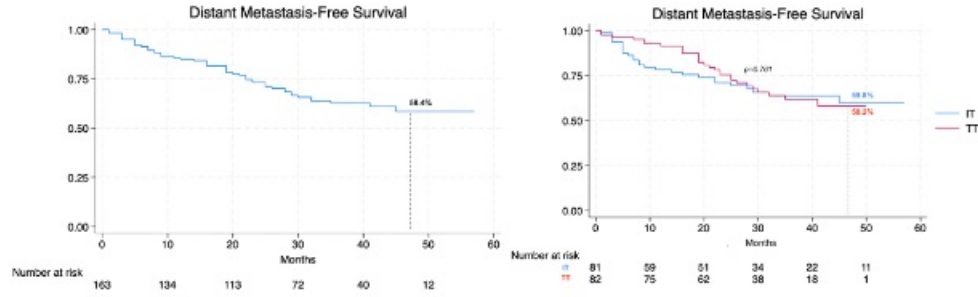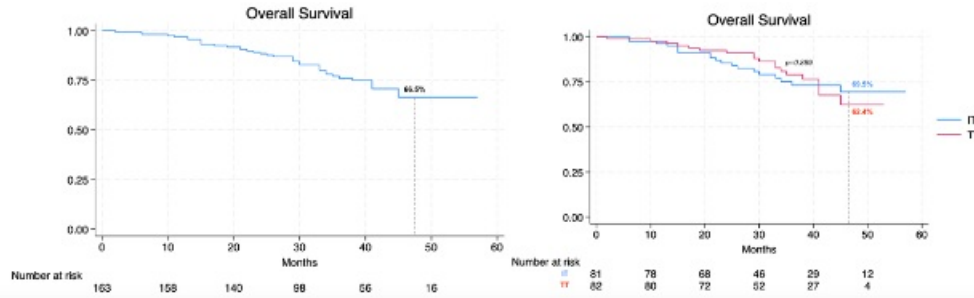**Figure 2.** *Distant-Metastasis-Free-Survival at 48 months*

Figure 3. *Overall-Survival at 48 months*

Abstract N°: 5684

ulcer of Lipshutz: A rare cause of genital ulceration

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Introduction & Objectives:

Acute genital ulcers are painful & distressing. Lipschutz ulcer {LU} is also known as ulcus vulvae acutum is a rare & under diagnosed entity presenting as an acute painful vulvar ulcer in young, virgin women. Due to a lack of awareness, misdiagnosis can lead to unnecessary diagnostic testing and treatment. Furthermore, the extensive workup may cause undue distress for the patient if a label is placed regarding sexually transmitted diseases, inflammatory diseases, or sexual abuse. An effort should be made to emphasize the fact that no evidence exists to suggest a relationship between Lipschütz ulcers and sexually transmitted infections

Materials & Methods: A 21 year old unmarried female nursing staff presented with a complaint of disappearing genital part with painful ulcers in genital area. Patient gave a history of high grade fever 2 days prior to the genital ulcers. She was admitted in a ward with sore throat & high grade fever followed by severely painful ulcer on Labia minora. Patient denied history of sexual exposure. There was no history of similar lesions in the past. There was no history of any drug intake or trauma to the site prior to the onset or the joint pain associated with it.** On examination vulva was swollen & erythematous. Multiple Ulcers were seen on both the sides of Labia minora almost symmetrical in position. An ulcer on left side was large 4 cm x 1.5 cm and extended upto introitus and on right side there were 2 to 3 ulcers each measuring 1 cm x 1 cm. The ulcers were extremely tender to touch and had sharp edges with necrotic base and covered with slough. Nevertheless, the patient didn't present other clinical, extra-genital signs (no neurologic, cutaneous, ocular or gastrointestinal symptoms).

Results: Thus, Diagnosis of Lipchutz ulcer was made after excluding all other causes of genital ulceration.

Conclusion: Lipschütz ulcers should be included in the differential diagnosis for genital ulcers. Furthermore, increased awareness of this entity is needed to allow for proper management and to avoid unnecessary workups and incorrect treatment that may be costly and distressing for the patient.

Abstract N°: 5743

Vulvar toxicity in women receiving active cancer treatment

María Córdoba García-Rayo[1], Daniel Vírseda González[1], Noelia Medrano Martínez[1], Luis Jiménez Briones[1], Belén Rodríguez Sánchez[1], Jorge Martín-Nieto González[1], Marina de la Puente Alonso[1], Luis Angel Zamarro Díaz[1], Speranza Luisa Anedda[1], Ricardo Suárez Fernández[2], Ana Pulido Pérez[2], Lucía Barchino Ortiz[2]

[1]Servicio de Dermatología, Hospital Gregorio Marañón, Madrid, [2]Instituto de Investigación Sanitaria Gregorio Marañón, IiSGM, Hospital Gregorio Marañon, Madrid

Introduction & Objectives:

To describe the clinical and demographic characteristics of patients on active cancer treatment who present with predominantly vulvar skin toxicity.

Materials & Methods:

A single-centre, retrospective, observational study was conducted to review hospital dermatology consultations of patients undergoing active cancer treatment with predominantly vulvar involvement over a 3-year period (2021-2023). Patients were excluded if they had toxicity elsewhere on the skin surface, lesions secondary to graft-versus-host disease, concomitant inflammatory skin conditions such as vulvar lichen sclerosus, infections, or patients with possible aggravating factors of anogenital pathology such as acute or chronic diarrhoea.

Results:

Data from 18 women with a mean age of 56.3 years (32-74 years) were included, of whom 14 (77.7%) were admitted to the Haematology service (Bone Marrow Transplant Unit) and 3 (16.6%) to the Oncology department. The oncological treatments involved were: conventional chemotherapy with alkylating agents in 13/18 patients (72.2%), adjuvant drugs such as the antiviral foscarnet in 9/18 (50%) and tyrosine kinase inhibitors in one patient (5.55%). The lesions presented were mostly erythema and ulcers in 14/18 (77.7%), the most common location being the labia majora (38.8%) and the least common the vulvar vestibule (16.6%). Topical corticosteroids were used in 61.1% of patients.

Conclusion:

Vulvar toxicity due to oncological treatments is a frequently underdiagnosed entity. This condition causes a significant deterioration in patients' quality of life and is sometimes a limiting factor for the continuation of cancer treatment or adjuvant drugs. In addition, the long-term functional and sexual complications must be considered. In conclusion, we consider it necessary to carry out an anamnesis aimed at diagnosing cutaneous toxicity in the vulvar region establishing early treatment.

Efficacy and Safety of Combination of Pulsed Dye Laser Followed by Triamcinolone Acetonide (Intralesional) and Triamcinolone Acetonide and 5-Fluorouracil (Intralesional) in the Treatment of Keloid – A Study on 50 Cases

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Introduction & Objectives: Keloid scars are cosmetically disfiguring benign fibrous outgrowths which have been treated in many ways, with varying success. A wide variety of treatments, all in current usage, indicate that no treatment has been shown to be markedly superior to the others. This study was done using pulsed dye laser followed by intralesional steroid injection and a combination of intralesional steroid injection and 5-fluorouracil (TAC+ 5FU) in the treatment of keloid. The aim of this study was to determine the effectiveness of the PDL in combination with intralesional triamcinolone acetonide (PDL+ TAC) over TAC+ 5FU in the treatment of keloid and to elucidate possible side effects and complications for both treatment modalities.

Materials & Methods: Primarily 50 patients were selected and randomized into two groups. 25 patients belong to Group A were treated with PDL+ TAC on the same seating. 25 patients belong to Group B were treated with TAC+ 5FU. The initial dose per injection site for Group A were 40 mg/ml and subsequent doses were titrated after assessment of lesion. Group B patients received TAC(40 mg/ml) and 5 FU(50 mg/ml) in a ratio of 1:9.

Results: The results of the cases of both group A and group B were evaluated at baseline and weeks 4, 8 & 12. PDL facilitates steroid injection by making the keloid edematous and therefore softer causing less pain at injection site whereas TAC+ 5 FU have the complaints of more pain. Again mean sizes of keloids of the group A (PDL + Triamcinolone) drops relatively rapid than group B (TAC+ 5 FU) from baseline to 12th weeks. Moreover, VSS score drop rate of Group B (TAC+ 5 FU) was found slower than that of group A (PDL + Triamcinolone). The difference was found for safety scores as skin ulceration was found in 4 cases in Group B.

Conclusion: PDL followed by intralesional triamcinolone acetonide injection was found beneficial with an excellent outcome over combination of intralesional triamcinolone acetonide injection and 5-fluorouracil in the treatment of keloid.

Abstract N°: 5864

Angiolymphoid hyperplasia with eosinophilia: a diagnostic trap

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Introduction & Objectives: Angiolymphoid hyperplasia with eosinophilia is a rare benign vasoproliferative disease, it presents a difficult issue of diagnosis because of its rarity and similarity with other disorders especially Kimura disease

Materials & Methods: it is about a 73-year-old man who presented to our dermatology department with a complain of multiple nodules for 2 months that were located on the temporal area on both sides in addition to a solitary nodule in the left axilla.

The patient denied any history of head trauma and had no other medical conditions.

No relevant genetic history in the family

On physical examination: numerous erythematous indurated round nodules measuring approximately 0.5–3 cm were found on the temporal area on both sides in addition to a solitary nodule in the left axilla. All lesions were asymptomatic. No enlarged superficial lymph nodes were observed.

The following differential diagnosis have been established: Angiolymphoid hyperplasia with eosinophilia

- **Kimura's disease**

- **Jessner lymphocytic infiltrate**

- **Sarcoidosis**

- **Foreign body granuloma**

- **Lymphocytoma cutis**

- **B-cell lymphoma**

- **Facial granuloma**

Results:

Skin biopsy was done and it revealed Dermal proliferation of blood vessels, lined by plump endothelium with hobnail appearance. Inflammatory infiltration lymphocyte, histocyte and numerous eosinophils. And it was compatible with Angiolymphoid hyperplasia with eosinophilia.

Conclusion: Angiolymphoid hyperplasia with eosinophilia is a rare benign vasoproliferative disease. Clinically characterized by solitary or multiple red to brown papules or nodules seen in the third and fourth decade with a slight female predominance. usually appears in head and neck region, frequently in the auricular area and usually measures about 2-3 cm in size

The etiology of ALHE remains unknown, because it is not clear if it is primarily vascular neoplasm, a

lymphoproliferative process or a heterogeneous group of entities.

Trauma, infections and hyperestrogenic conditions are considered to be the likely causes.

The main differential diagnosis is Kimura disease, and Their relationship has always been debated, we discuss in this presentation the essential features of the two entities and how to differentiate between them

Abstract N°: 5880

Effectiveness of a Telehealth Educational Program on Knowledge about Skin Aging and Skin Care Practices among Individuals aged above Forty-five Years

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Introduction & Objectives:

Aging is an inevitable, continuous degenerative process that affects all the body systems among all the individuals. With the increased life expectancy, the desire to look youthful and younger has increased. The skin aging exposome consists of the internal and external factors, as well as their interactions, that have an impact on the life of the individual from conception till death. It also includes the reaction of the body to these factors that cause both biological and clinical skin aging signs. We can summarize also this definition by saying that skin aging exposome refers to the risk factors for skin aging. So this study aims to develop, implement and evaluate the effectiveness of a telehealth educational program on the knowledge about skin aging and skin care practices among individuals aged above forty-five years in social clubs in Alexandria; Egypt.

Materials & Methods:

The current study was conducted in the sporting/social clubs and the syndicate social clubs in Alexandria; Egypt.

Phase 1: A cross-sectional study design was used. Individuals aged above forty-five years were included. Those with a history of recent cosmetic procedures (within 1 year), having skin diseases or suffering from chronic diseases with secondary skin manifestations were excluded.

A pre-designed structured interview questionnaire was used to collect the following data: socio-demographic data, medical history, personal habits and lifestyle habits related to skin aging, participants' knowledge regarding skin aging and participants' adherence to skin care practices.

Phase 2: it is the intervention phase. Participants with the least skin knowledge score were selected. They were included in the study till the sample size for this phase was completed. They were then divided randomly into intervention and control groups. The intervention program was evaluated immediately after finishing it and 3 months later.

Results:

The study sample included 360 individuals: 82 males (22.8%) and 278 females (77.2%). Their age ranged from 46 to 83 years; with a mean age of 55.46±7.98. The majority of the study sample (93.9%) had poor-fair level of knowledge and only 6.1% of them had a good level of knowledge. Nearly one third (31.9%) of the study sample mentioned that they never followed a skin care regimen while 22.3% mentioned that they followed a daily regimen.

After the intervention program, There was a significant improvement in the level of knowledge among the intervention group. Mean score of total knowledge increased from 9.98±3.49 to 20.57±4.24 in post-intervention 1 assessment then 20.47±4.27 in post-intervention 2 assessment. Among the control group, the level of knowledge did not differ from the initial assessment (9.71±3.00) till post-intervention 2 assessment (9.23±2.40).

Mean score of total adherence increased from 4.02±2.12 to 7.42±2.73 in the post-intervention 1 assessment then

to 7.27±2.51 in post-intervention 2 assessment. Among the control group, the level of adherence did not differ from the initial assessment (3.89±2.69) till the second post-intervention assessment (3.75±2.68).

Conclusion:

The telehealth intervention program proved its efficacy as there was a statistically significant difference between the intervention and control groups regarding both knowledge on skin aging and its risk factors and also the adherence to a skin care regimen that improves skin aging signs.

Ethnic disparity in the availability of dermocosmetic products tailored to the photoprotection, hair care and facial makeup needs of the Afro-descendant population.

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Introduction & Objectives:

This city* stands out as the second in Latin America with the largest Afro-descendant population (26.2%), who constantly seek products for specific hair type, skin color and photoprotection. This pursuit often leads to the acquisition of inadequate products that fail to meet their unique needs, posing the potential risk of adverse effects, impacting self-esteem, sense of identity, and quality of life.

The aim of this study was to characterize the availability of dermocosmetic products designed for photoprotection, hair care and facial makeup, for the Afro-descendant population within dermatological stores in this specific city.

*The city is not identified following the instructions to submit the abstract.

Materials & Methods:

Descriptive cross-sectional observational study, encompassing all dermocosmetic product stores in the city, during the final quarter of 2023.

Results:

Eight establishments were assessed, no stores carried tinted sunscreens tailored to skin phototype (SP) V-VI, those available were deemed appropriate for SP ranging I to IV. Only 1 store stocked products specifically for Afro-textured/curly hair, 4 out of 8 stores offered facial makeup, the darkest shade of tinted foundations corresponded to suitable tones for individuals with SP IV. Moreover, the representation of Afro-descendant individuals in the advertising materials of 6 out 8 establishments was conspicuously absent.

Conclusion:

This study reveals a conspicuous gap in the availability of dermocosmetic products tailored to the specific needs of photoprotection, hair care, and facial makeup for the Afro-descendant population. Urgent attention is warranted to address this ethnic concern through comprehensive research on a global scale. Such endeavors are essential to highlight the imperative of diversifying the range of dermocosmetics offerings, thereby fostering inclusivity, and addressing the unique dermatological needs of this population comprehensively.

Abstract N°: 5910

Management of the stretch marks prevention in pregnant women with a dermo-cosmetic dry oil

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Introduction & Objectives:

Stretch marks represent one of the most undesirable and common physiological skin changes that occur during pregnancy, usually range from 50 up to 90% according to the literature. The abdomen, breasts, thighs, and hips are the most impacted due to mechanical stretching of the skin in association with hormonal factors. Several studies have shown that improving collagen production, skin elasticity and skin hydration can help in the prevention or the improvement of stretch marks. The aim of this study was to evaluate the interest and the tolerance in pregnant women of a dermo-cosmetic dry oil designed for preventing stretch marks.

Materials & Methods:

First, the moisturizing properties of the dry oil was assessed during 24hr using a corneometer on the arm of 10 women (in average 40 years old). Second, the immediate effect on suppleness was evaluated by measuring the skin suppleness (Uf = maximal amplitude, Ue = instant extensibility) after 30min with a cutometer vs. untreated area on the abdomen of 10 women (in average 26 years old). Third, in an open intra-individual study under dermatological control, 31 pregnant women (in average 25 years old, 14 weeks of gestation and phototype IV 90% and III 10%) were included without stretch marks on the abdomen at day 0 (D0) but presenting a highly prone to developing them (family history, presence on other body areas). They applied the dry oil once or twice daily for 112 days on the abdomen, hips, thighs, and buttocks by circular massages. The Davey's clinical scoring was used to determinate the striae severity (0 to 8), a cutometer for the skin biomechanical properties, and a self-assessment questionnaire for subjective evaluation, after 56 and 112 days of use, in parallel with the tolerance by the investigator.

Results:

The dry oil presented a significant hydration increase up to 41% after 2hr ($p<0.001$) and 15% at 24hr ($p<0.05$) compared to untreated area. In addition, the skin suppleness was significantly improved by increasing Uf and Ue, +4.6% ($p<0.05$) and +6.7% ($p<0.05$) respectively, compared to untreated area. Moreover, only 3 subjects developed stretch marks during the clinical study, out of 31 included after 112 days of use, associated with a mean Davey's clinical scoring of 0.31. At D112, 89% of the subjects present no stretch marks, 4% mild and 7% severe stretch marks. In addition, the skin elasticity (Ur/Ue) was significantly improved at D56 (+4.92%, $p<0.001$) and D112 (+10.25%, $p<0.001$) compared to D0. The product was very appreciated by many subjects for its immediate efficacy especially in term of skin texture, smoothing effect, and moisturizing properties. They also appreciated the product for its effect after 112 days of use with skin regained long lastingly its softness, skin was long lastingly nourished, moisturized, sublimated, regained long lastingly its comfort, suppleness, and texture was long lastingly refined and smoothed. 96% of subjects agreed that the product was an ultra-nourishing oil and were satisfied with the appearance of their skin. During the study, the product was very-well tolerated by the subjects.

Conclusion:

This study shows that this dry oil has a preventive effect of the stretch marks appearance in pregnant women

(compared to literature data), especially by improving skin elasticity and it was very-well tolerated. In accordance to the ecobiological approach, consisting in acting on the root causes (lack of lipids) as well as the visible signs (dry skin), it provides a long-lasting efficacy.

Abstract N°: 5983

Melkersson-Rosenthal syndrome improvement with intralesional corticosteroids and doxycycline

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[1]dermatology, [2]pathology

Introduction & Objectives: Melkersson–Rosenthal syndrome (MRS) is a rare disorder clinically characterized by the triad of persistent or recurrent orofacial edema, relapsing peripheral facial paralysis and fissured tongue. The treatment of MRS remains challenging because of the unclear etiopathogenesis.

We describe a 32-year-old woman who responded to combination treatment with doxycycline and intra-lesional betamethasone injections.

Materials & Methods:

Results: A 32-year-old woman presented a 5-year history of painless swollen upper lip. Swelling was initially intermittent then became permanent. The patient did not have any systemic complaints and there was no history of trauma, infection, or similar case in the family. Her physical examination revealed a diffuse swelling of upper lip, a fissured tongue and left seventh nerve paralysis. No clinical sign of intestinal or pulmonary disease was present and laboratory findings were all within normal range. Reviewing his past history, she had multiple recurrent similar episodes 5 years prior with a spontaneously favorable evolution of symptoms. Skin punch biopsy on the upper lip showed Non caseating epithelioid granuloma which was compatible with granulomatous cheilitis. A diagnosis of Melkersson-Rosenthal syndrome (MRS) was accepted.

Intralesional injections of betamethasone 7mg/ml (7 mg/month for six months) and oral Doxycycline (100mg daily for six months) were prescribed. Betamethasone was used because of non-availability of triamcinolone in our country. An important improvement of cheilitis was observed after four months of treatment, facial palsy showed a limited improvement, but the fissured tongue showed no improvement.

Conclusion: Various therapeutic methods were described but there are no controlled studies on the available treatments. MRS is a rare neuro-mucocutaneous disorder that presents as orofacial swelling, facial palsy, and fissured tongue and can be oligosymptomatic or monosymptomatic. It has been postulated to be associated with genetic, allergic, infectious, and immunologic factors, but none have been proven. The management of patients with MRS remains a challenge since no single therapeutic approach has been universally successful. It may include systemic or intralesional steroids, antibiotics, clofazimin, acetylsalicylclic acid, chloroquine, dapsone and recently immunobiological therapy. We have opted for doxycycline as an agent given its safety profile, its anti-inflammatory effects, and its in vitro ability to inhibit granuloma formation by inhibition of protein kinase C. In the few cases reported in the literature, the combination steroid and cycline therapy was used with good short-term results. This combination also helps to avoid the high risk of side-effects of long-term systemic corticosteroid usage. We conclude that Intralesional betamethasone, along with oral doxycycline, may be used if triamcinolone acetonide is not available. More studies should be conducted to clarify the causes and define an optimal therapeutic algorithm.

Abstract N°: 5986

Nasopharyngeal Carcinoma Diagnosed Five Months after Presentation of Wells Syndrome: A Case Report and Literature Review

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Introduction & Objectives:

Eosinophilic cellulitis (Wells syndrome), initially called 'granulomatous dermatitis with eosinophilia,' was first described by Wells in 1971. Etiology and pathogenesis are unknown, but various associated disorders have been documented, including hematological diseases such as chronic lymphocytic leukemia1, non-lymphocytic leukemia, and polycythemia rubra vera. The lesions evolve rapidly over 2-3 days into plagues that resolve spontaneously over 2-8 weeks without scarring. The color of these plaques has been described as blue, green, slate gray, rosy, and violaceous. Only a few cases of Wells syndrome with bullous lesions have been described

Materials & Methods:

A 58-year-old male presented to the emergency department with a 1-month history of papules on the upper limbs, and a half-month history of bullae, erythema, and fever for 4 days. Skin examination revealed scattered erythematous papules on the neck, trunk, and limbs, with edematous erythema on the neck and back, which was firm in texture. Vesicles and bullae were observed on the neck and upper limbs. A skin biopsy specimen was taken from a blister on his right shoulder.

Results:

Hematoxylin-eosin staining of the lesion demonstrated slight thickening of the epidermal spinous layer, intraepidermal blister formation, and subepidermal cleft formation. Edema was observed in the superficial dermis, with abundant eosinophils (Flame figures), few lymphocytes, and neutrophils infiltrating the entire dermis and subcutaneous fat tissue. Direct immunofluorescence was negative for IgG, IgM, IgA, and C3. The patient was diagnosed with Wells syndrome. After 5 months of treatment, the patient developed a painful mass in the left neck. Ultrasound revealed enlarged and abnormal left cervical lymph nodes. Excisional biopsy of the left cervical lymph nodes suggested metastatic squamous cell carcinoma. To identify the primary source of the squamous cell carcinoma, a PET-CT was performed, which showed thickening of the left lateral and posterior superior walls of the nasopharynx, suggestive of nasopharyngeal carcinoma. A biopsy from the left pharyngeal recess revealed atypical cells, consistent with poorly differentiated carcinoma. Considering the clinical and diagnostic findings, the patient was diagnosed with non-keratinizing squamous cell carcinoma of the nasopharynx (stage IVA, T3N3M0). The patient is currently undergoing chemotherapy (cisplatin 60mg IV d1-d2 + paclitaxel 210mg IV d1, q3w) and remains under follow-up.

Conclusion:

In our case, the patient's skin lesions were primarily characterized by vesicles and bullae. Wells syndrome has been previously reported in non-hematological (relatively rare) malignancies: anal squamous cell carcinoma (SCC), nasopharyngeal carcinoma, SCC of the bronchus, colon carcinoma, and metastatic renal cell cancer. In the case we present, the patient developed cervical lymphadenopathy 6 months following the Wells syndrome diagnosis, which was eventually identified as metastatic squamous cell carcinoma stemming from an underlying

nasopharyngeal carcinoma. This case indicates the importance of conducting comprehensive malignancy evaluations, including PET-CT scans, in patients diagnosed with bullous Wells syndrome.

Abstract N°: 6075

Diversity, and Skin of Color and Ethnic Representation in Dermatology Leadership in Canada

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Introduction & Objectives:

As the diversity of Canada's population continues to increase, racial and ethnic representation amongst physicians and medical leadership is crucial for providing high-quality education and care. Dermatology stands out as a specialty where diversity is paramount, especially considering recent evidence highlighting the underrepresentation of skin of color (SoC) in dermatologic education and research. Improving diversity in leadership can also enhance advocacy efforts for inclusive curriculum and learning environments. The study objectives are to survey Canadian dermatologists to evaluate the diversity of dermatology leadership in Canada and collect recommendations for how to to enhance diversity and representation within leadership and educational curricula.

Materials & Methods:

Dermatologists who have held leadership positions in Canada in the past 10 years were invited to respond to a survey via e-mail. An 8-item survey (Figure 1) was developed through consulting the literature and academic dermatologists actively engaged in equity, diversity and inclusion. Descriptive statistics and thematic analysis were used in data analysis. Leadership positions were further split into two categories: 1) Academic, education and/or research institutions , and 2) National, provincial, and regional societies.

Results:

47.3% (52/110) of invited participants completed the survey. Of the respondents, 63.5% identified as White/Caucasian, 63.5% self-reported as Fitzpatrick skin types 1-2, compared to 36.5% with types 3-6. Ethnicities and Fitzpatrick skin type of respondents are summarized in Figure 2.

21 respondents held 'Academic, education or research' roles, 42 held 'National, provincial, and regional societies' roles, and 13 held at least 1 position in both categories. In both categories, the majority of respondents identified as White/Caucasian. Notably, a larger proportion (66.7%) with leadership positions in the 'national, provincial, and regional societies' group as White/Caucasian compared to 52.4% in the 'academic, education or research' group.

57.7% of respondents believed that Indigenous and people of color are not sufficiently represented in dermatology leadership, while 26.9% were unsure. 51.9% believed that SoC was not adequately represented in dermatology undergraduate and postgraduate dermatology curricula or continuous medical education. Numerous themes emerged throughout the recommendations to improve diversity in leadership and education (Table 2).

Conclusion:

Our study suggests that individuals of skin color and ethnic/racial minorities are underrepresented within Canadian dermatology leadership. A subset of Canadian dermatologists acknowledge that diversity in

dermatology leadership and education may be lacking and can be improved. Interestingly, this could be a reflection of the underrepresentation of these groups in medical leadership positions across Canada. A recent study which surveyed 3056 leaders from 135 healthcare institutions throughout Canada revealed that racialized individuals and those with SoC were significantly underrepresentaed. In Ontario, the most populous province in Canada, only 12.7% of leadership positions were held by racialized individuals.

Future efforts from existing dermatology leadership are warranted to implement targeted interventions aimed at enhancing diversity within leadership and education.

Figures

Survey Questions
What leadership roles do you hold (current or previous)?
What race/ethnicity best describes you?
Which best represents your Fitzpatrick skin phototype?
Do you consider yourself to be part of a visible minority group?
Do you believe that Black, Indigenous, and people of color (BIPOC) and other ethnicities and backgrounds are sufficiently represented within dermatology leadership across Canada?
Do you believe diverse skin tones and presentations are adequately represented in dermatology education (i.e., curriculum, textbooks, etc) at the medical school you are currently affiliated with?
Briefly describe any recommendations to improve diversity in dermatology leadership.
Briefly describe any recommendations to improve diversity in dermatology education.

Figure 1. The study survey comprised of eight items.

Ethnicity	Respondents - n (%)
White/Caucasian	n = 33 (63.5%)
Black	n = 1 (1.9%)
East Asian	n = 6 (11.5%)
Indigenous	n = 1 (1.9%)
Latino	n = 0 (0%)
Middle Eastern	n = 2 (3.8%)
South Asian	n = 3 (5.8%)
Southeast Asian	n = 2 (3.8%)
Mixed	n = 2 (3.8%)
Other	n = 1 (1.9%)
Prefer not to answer	n = 1 (1.9%)
Fitzpatrick Phototype	**Respondents - n (%)**
I	2 (3.8%)
II	31 (59.8%)
II	8 (15.4%)
IV	10 (19.2%)
V	1 (1.9%)
VI	0 (0%)

Figure 2. Ethnicities and Fitzpatrick skin type of survey respondents

Themes to enhance diversity and representation within dermatology leadership in Canada
Improve structural support for underrepresented groups in medical school and dermatology residency (e.g. creating scholarships for underrepresented groups)
Enhance EDI education for educators and leaders (e.g. creating comprehensive education programs focused on EDI for educators and leaders to foster deeper understanding and actionable strategies for promoting diversity in leadership).
Promote EDI research and support through funding
Establishing formal mentorship and sponsorship pathways aimed at nurturing underrepresented individuals for leadership roles (e.g. pairing them with experienced mentors, offering networking and advocacy opportunities)
Transparency and fairness in leadership selection. This includes establishing clear criteria for evaluation, actively seeking diverse candidates, and implementing measures to mitigate bias at every stage of the selection process.
Themes to enhance diversity and representation within dermatology education in Canada
Enhance visual representation of dermatological conditions for all Fitzpatrick skin types.
Mandate diversity and inclusion of diverse skin tones, and ethnicities in educational resources.
Promote and support diversity among educators and learners.
Formal curriculum focused on SoC, cultural competency, and sensitivity training.
Harmonization of EDI training and curriculum for both learners and leadership.
Enhance diversity in dermatology research by increasing representation of diverse ethnicities and SoC, particularly in clinical trials.

Figure 2: Summary of themes suggested and recommended to enhance diversity and representation within dermatology leadership and education in Canada. EDI: Equity, Diversity and Inclusion. SoC: Skin of Color.

Abstract N°: 6078

Pyrroloquinoline quinone (PQQ) prevents circadian rhythm disruption-induced fibroblast cell aging by promoting mitochondrial health

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Introduction & Objectives:

Disruption of the human circadian rhythm is increasingly common in developed countries, for instance due to lack of sleep or working night shifts. There is evidence that disruption of circadian rhythms negatively impacts skin health, a.o. via inducing mitochondrial dysfunction. Considering that lifestyle changes might not be feasible for many, it makes sense to consider skincare solutions to mitigate the negative impact of circadian disruption on skin health. We therefore set out to identify skincare ingredients that are suitable for incorporating in a product that addresses the consequences of circadian disruption. Pyrroloquinoline quinone (PQQ) has been previously reported to enhance mitochondrial biogenesis and has recently become available as a skincare ingredient. Hence, we sought to determine whether PQQ can mitigate mitochondrial dysfunction and some of its consqeuences in a human-relevant model of circadian disruption.

Materials & Methods:

PQQ affinity for target proteins associated with circadian rhythm〈CLOCK〈BMAL〈PER1〈PER2〈PER3〈CRY2〈was analyzed using molecular docking techniques. Circadian rhythm disruption was achieved in NHDF by silencing the clock genes CLOCK, BMAL and PER with Si-RNA. Using untreated knockdown NHDF as controls, we assessed the effect of 24-hour exposure to PQQ on cellular morphology, expression of clock genes, collagen production, mitochondrial membrane potential, anti-oxidant protein activity and levels of EPAC1, AMPK (-p), plus cleaved caspase-3. Six replicates were measured in each group for each readout. Data were statistically analyzed with one-way analysis of variance and independent sample equal variance t test. In a separate pilot experiment, we assessed the effect of blue light on CLOCK expression and the ability of PQQ to counteract, if any.

Results:

Exposure to blue light caused the expression of *CLOCK* to decrease, which was rescued by PQQ. In the knockdown cells, there was an increase in collagen production after 24 hours of culture, compared with untreated cells. Knockdown of key circadian genes resulted in reduced cellular survival, impaired collagen synthesis and compromised mitochondrial function. We found that the mitochondrial membrane potential of cells in the knockdown group was restored upon exposure to PQQ. In the treated cells, catalase activity was increased, however there was no change in SOD activity. After 24 hours of culture, compared with untreated cells, the protein level of Epac1 and AMPK phosphorylation level in treated cells had both significantly increased, while the cleaved caspase-3/caspase-3 ratio was significantly lower.

Conclusion:

Circadian dysregulation in NHDF leads to a decrease in collagen synthesis and impaired mitochondrial function. Treatment of NHDF with PQQ seems to counteract the effects of circadian rhythms – it can improve mitochondrial function, restore collagen synthesis and promote cellular survival. The mechanistic basis might be related to the up-regulation of Epac1 protein expression and activation of AMPK signaling

Abstract N°: 6089

Pseudo-Darier Sign Misleadingly Suggesting Mastocytosis: A Case Report

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Introduction & Objectives:

Smooth muscle hamartoma (SMH) is an uncommon, benign proliferative disorder originating from muscle cells. It usually presents at birth or early childhood as a solitary hairy, skin-colored, or mildly hyperpigmented patch or plaque on the trunk and extremities. The diagnosis may be delayed and made in early infancy. The derivation from the arrector pili muscle of the hair explains the associated hypertrichosis. Stimulation of muscle activity (e.g., rubbing of the plaque, cold exposure) may result in transient elevation or increased induration of the affected area or piloerection, referred to as a "Pseudo-Darier Sign". The objective of this report is to describe a case of smooth muscle hamartoma (SMH) initially diagnosed as mastocytosis in a 3-year-old girl and to emphasize the importance of considering SMH in the differential diagnosis of skin lesions presenting with features resembling Darier's sign.

Materials & Methods:

We describe a 3-year-old girl referred to our department from the pediatric unit with a provisional diagnosis of mastocytosis and diagnosed as SMH. Her family reported a brown patch on her lower back since birth, which became raised after baths, and did not require medical attention. The parents noticed hair growth on the patch for the last 3 months, prompting them to consult pediatrics. On dermatological examination, a hyperpigmented patch with fine vellus hairs on the right thoracolumbar region was observed. Rubbing of the lesion did not reveal any change. The history, clinical findings, and the absence of true Darier's sign raised suspicion for a diagnosis of SMH. The elevation after baths described by the family was thought to result from stimulation of the arrector pili muscles due to post-bath chill. The diagnosis was confirmed by immunohistochemical staining.

Results:

The diagnosis of smooth muscle hamartoma (SMH) was confirmed by immunohistochemical staining. She had no cerebral or skeletal abnormalities, and her growth and development were normal.

Conclusion:

In conclusion, attention should be paid to lesional changes that may mimic Darier's sign, and SMH should also be considered in the differential diagnosis. Thus, unnecessary invasive procedures can be avoided.

Abstract N°: 6118

A Refocus on Sunbeds in Australia

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Introduction & Objectives:

Artificial UV radiation from sunbeds is known to increase skin cancer risk, and has been classified as a Class I carcinogen, with the highest evidence for carcinogenicity by the World Health Organisation (WHO).[1] In 2016 Australian policy-makers moved to reform The Radiation Act (2005), electing to ban commercial solariums in Australia. However, sunbeds for personal use remain readily available for purchase online. We aimed to explore if health warnings regarding the harmful effects of sunbeds are displayed by internet retailers.

Materials & Methods:

The websites of four personal-use sunbed retailers with the most prominent online presence in Australia were reviewed. Each website was examined for displays of health warnings and age verification measures.

Results:

Of the websites evaluated in this study, none displayed any type of health warning regarding UV radiation. In addition, when making an online purchase of a sunbed the buyers age was not requested on any website.

Conclusion:

The online sale of personal-use sunbeds in Australia is not subject to the same governance as other known carcinogens. For example, internet tobacco retailers must display certain graphic health warnings, and impose a number of safeguards to ensure that tobacco products are not delivered to persons less than 18 years of age. There is an opportunity to improve the regulation of personal-use sunbeds by online vendors through prescribed health warnings and age verification measures. In 2017, the WHO offered two solutions to mitigate the harmful effects of sunbeds; to ban them entirely, or to restrict and manage the use of sunbeds, providing key health information to consumers, and increased governance particularly in the area regarding minors accessing sunbeds. Overall, key steps have been made to mitigate the negative effects of sunbeds, however, clearer regulation specific to personal-use sunbeds must be implemented by policy-makers, so to lessen the dangerous impact of artificial UV exposure.

Reference:

1 El Ghissassi F, Baan R, Straif K, Grosse Y, Secretan B, Bouvard V, et al. A review of human carcinogens—part D: Radiation. The Lancet Oncology. 2009;10(8):751–2. doi:10.1016/s1470-2045(09)70213-x
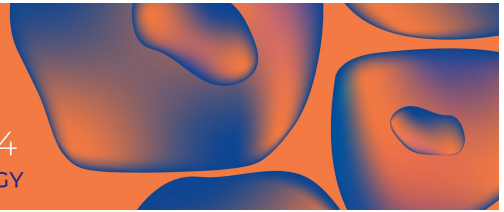
Abstract N°: 6137

Skin's Dirty Secret: Unveiling Tera Firma-Forme dermatitis in Two Clinical Cases

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Introduction & Objectives:

Terra firma-forme dermatosis (TFFD) poses a diagnostic challenge with its distinctive presentation of unwashed-appearing brown to black plaques. Despite its benign nature, TFFD remains relatively obscure in medical literature. This dermatosis primarily affects the face, neck, and trunk, often mimicking other skin conditions. The etiology involves speculated delayed keratinocyte maturation and melanin retention. This article explores TFFD through two cases, aiming to unravel its clinical nuances, diagnostic intricacies, and potential differentials. By doing so, we seek to enhance understanding and recognition of this unique dermatosis in clinical settings.

Case reports:

Case 1:

A 26-year-old female was admitted to the internal medicine department due to chronic joint pain and elevated C-reactive protein levels. During her hospital stay, a few days into the admission, the attending physician observed the presence of discreet brown plaques around her umbilicus. A dermatology consult was sought, leading to the successful removal of the plaques using alcohol.

Case 2:

A 34-year-old male, known for EKBOM syndrome, presented with a history of various self-inflicted lesions and secondary lesions due to pruritus. Notably, multiple brown plaques were observed on his trunk and around the umbilicus. Dermatological assessment revealed these peculiar plaques, consistent with Terra Firma-Forme Dermatosis. Alcohol application successfully removed the plaques, providing a unique insight into the varied clinical scenarios in which TFFD can manifest.

Discussion:

Terra Firma-Forme Dermatosis (TFFD), affectionately named "Duncan's dirty disease" upon its discovery in 1987, presents as brown-blackish plaques, resembling unwashed skin. Predominantly observed in children, particularly on the trunk and neck, TFFD's exact cause remains enigmatic, though abnormal keratinization is implicated. Despite its generally benign nature, TFFD poses diagnostic challenges and may be misdiagnosed. Dermoscopic examination plays a pivotal role in diagnosis, and the distinctive response to rubbing alcohol serves as a confirmatory feature for TFFD. This comprehensive exploration offers valuable insights into the characteristics and diagnostic intricacies of TFFD.

Conclusion:

In brief, Terra Firma-Forme Dermatosis (TFFD), or "Duncan's dirty disease," poses diagnostic challenges despite its benign nature. Recognizing its unique response to rubbing alcohol and distinct dermoscopic features is crucial. This succinct overview contributes to our understanding of TFFD, emphasizing the need for clinical awareness and ongoing research for effective diagnosis and management.

Topical administration of 1% glycopyrronium bromide (GPB) cream is efficient and safe in treatment of primary axillary hyperhidrosis in adolescents – results from Phase II study

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Introduction & Objectives:

Primary axillary hyperhidrosis (PAHH), or excessive sweating due to dysregulation of the sympathetic nervous system and overactivation of cholinergic signalling, usually starts with puberty. PAHH affects patients' quality of life similar like psoriasis or other chronic diseases. Prevalence of hyperhidrosis ranges from 2-16%. In 2022, a cream with 1% glycopyrronium bromide (GPB) was approved in the EU for severe PAHH in adults. Here we investigated whether 1% GPB cream is safe and efficient in adolescents.

Materials & Methods:

Primary objective of this open-label, uncontrolled, multicenter study was to evaluate the safety, local tolerability, and efficacy of 1% GPB cream in adolescents with severe PAHH. Cream was applied once daily for the first 4 weeks (until Day 29) and then flexibly (i.e., application at least twice a week up to once daily, as needed) for the next 4 weeks (until Day 57; end of treatment [EoT]). The frequency of application of the cream was recorded in a subject diary. Efficacy (reduction in sweat production) was assessed by gravimetric measurement (GM) at Baseline (BL), Day 29 and 57. In a subgroup, plasma concentration of GPB was determined at BL, Day 8, and Day 15, to evaluate the safety-relevant systemic exposure based on the pharmacokinetic profile. The study enrolled 42 subjects with severe PAHH, 23 were males and 19 females between 12-17 years.

Results:

Absolute change in logarithmic values of total sweat production assessed by GM from Baseline (mean of absolute values: 296.4 ± 373.9 mg) to Day 29 (71.1 ± 90.2 mg) and Day 57 (65.5 ±107.8 mg) was statistically significant for both time points (2-sided p=0.0004 and p<0.001 respectively). Absolute change of CDLQI and Patient-rated hyperhidrosis severity score was significant after 29 and 57 days of treatment (2-sided p<0.001 for both parameters and time-points). Plasma levels were similar to those measured in adults (mean values 21.5 pg/mL at Day 8 and 28.5 pg/mL at Day 15).

In addition, 1% GPB cream was well tolerated (no local skin reactions) and GPB-related AEs resulted primarily in dry eyes (1 patient, 2.4%) and increased bilirubin (1 patient, 2.4%).

Conclusion:

Consistent with previous results in adults, 1% GPB cream showed very good efficacy with good local tolerability also in adolescents. The cream significantly reduced sweat production and improved quality of life. The 1% GPB cream is thus a safe and effective therapy option for both adolescents and adults with severe PAAH.

Abstract N°: 6314

A case series of atypical leprosy cases

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Introduction & Objectives:

Recurrent reactions in leprosy, encompassing both type 1 and type 2, as well as relapse of the disease, pose significant challenges in management of chronic infectious disease. Despite advancements in treatment and understanding of the immunopathogenesis, recurrent reactions and relapse lead to substantial morbidity and disability. Leprosy relapsed is defined as patients presenting with new clinical signs and symptoms of active disease 3 years after they were adequately treated with standard therapeutic regimen and discharged as cured.

Materials & Methods:

Case	Age/Sex	Present Episode	Past episode	Final Diagnosis and Treatment of present episode
1.	20 years /Male	Sudden onset of painful nodules over back, bilateral upper and lower extremities associated with bilateral pedal edema, fever, severe myalgia with difficulty in walking.	Diagnosis: Lepromatous leprosy (LL) Treatment received : MB MDT 3 years ago.	Skin biopsy : Borderline lepromatous leprosy (BLL) with Erythema nodosum leprosum (ENL). Slit skin smear: 2+ - Creatine phosphokinase (CPK)=3760. Diagnosis : Relapse of borderline lepromatous leprosy with Erythema nodosum leprosum in previously treated case Treatment : MB-MDT

Case	Age/Sex	Present Episode	Past episode	Final Diagnosis and Treatment of present episode
				Oral corticosteroid in tapering dose Oral clofazimine Oral Azathioprine
2.	26years/ Male	Multiple necrotic non healing ulcers over right leg and multiple erythematous nodules over trunk, bilateral extremities associated with nodular infiltration of bilateral ears , joint pain and orchitis since 1 month.	Diagnosis: LL Treatment received: On MB MDT since 8 months	SSS: 1+ Skin biopsy of ulcer: Ulcerative ENL. Total leukocyte count- 18,400 SGOT-112 SGPT-273 Alkaline phosphate-107 USG scrotum- NAD Diagnosis: Necrotic ENL, LL with non-healing ulcer, on treatment Treatment: Intravenous antibiotics followed by oral antibiotics. Oral methotrexate initially and later stopped due to raised liver enzyme levels . Oral Thalidomide Oral corticosteroids MB MDT continued.
		Erythematous		Skin biopsy: ENL Hemoglobin-7.1 Fasting blood

Case	Age/Sex	Present Episode	Past episode	Final Diagnosis and Treatment of present episode
		tender plaque over face and bilateral upper extremities associated with fever ,photophobia and joint pain, bilateral pedal oedema since 8 days. History of similar episodes in past.	Diagnosis: LL	sugars- 1/1
3.	36years/ Female		Treatment received: On MB MDT since 11 months.	Recurrent ENL, LL on treatment. Treatment: Oral corticosteroids Oral clofazimine MB MDT continued
4.	40 years/Male	Erythematous tender annular plaques over bilateral upper extremities, lower extremities, trunk and back since 1 month and non-healing trophic ulcer over right feet.	Diagnosis: BT Hansen's with recurrent type 1 reaction Treatment received: MB MDT 1 year back.	SSS- Negative Skin biopsy was suggestive of type 1 reaction. Diagnosis: Treated case of BT Hansen's with recurrent type 1 reaction and trophic non healing ulcer, previously treated. Treatment: Oral corticosteroids for Type 1 reaction Eye drop timolol 0.1% for non-healing trophic ulcer.

MB MDT- Multibacillary multidrug therapy

Results:

In spite of taking MDT for treatment of leprosy, patient can present with recurrent reaction or relapse of disease after release from treatment. Hence, patient should be educated about this complications after treatment and to ensure follow up of these patients.

Abstract N°: 6336

The use of Non- Conventional Medicines (NCMs) among adult dermatology patients in Northern Tanzania

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Introduction & Objectives:

Non-conventional medicines (NCMs) are common among patients in sub-Saharan Africa (SSA), with significant use reported in dermatological patients. This is due to the chronic, relapsing nature and the unattainability of a complete clinical cure for most dermatological diseases; hence, patients continually explore NCMs in search of a cure. NCM approaches are popular among some patient segments due to the perception that they are "natural" and thus believed to be less likely to be dangerous, less toxic, and cause fewer side effects. However, there needs to be more data on the use of NCMs among dermatological patients, especially in Sub-Saharan Africa (SSA).

This study aimed to ascertain the use of NCMs among adult dermatology patients attending a tertiary facility in Northern Tanzania by exploring specific purposes such as dermatological conditions commonly associated with NCMs use, types of NCMs used, reasons and factors associated with NCMs use.

Materials & Methods:

The study included all dermatology patients above 18 years old seen at a tertiary facility in Northern Tanzania between January and March of 2023. A cross-sectional study was conducted where the participants were interviewed using a structured questionnaire. Data was analyzed using SPSS version 20.

Results:

A total of 414 participants were interviewed; 270 (65.2%) were females, and 144 (34.8%) were males. The age range of participants varied from 18 to 93 years, with a mean age of 43. About 35.5% had used NCMs for dermatological conditions with no significant gender differences.The five most common dermatological diseases of NCM users were acne (64.7%), psoriasis (63.6%), atopic Dermatitis (52.3%), pigmentary disorders (47.8%), and blistering disorders (46.2%). Frequently used NCMs include African traditional medicine (76.0%) and home remedies (43.0%). More than half (69.4%) of the participants did not disclose their use of NCMs. Driving factors for NCM use were mainly peer recommendations (90.5%), affordability (87.1%), and availability (83.0%) of NCMs, while 76.2% felt that NCMs were safer than conventional medicines. Participants with longer disease duration (p<0.01) and those treated with oral and topical conventional medication were more likely to use NCMs.

Conclusion:

There is a significant use of NCMs among dermatology patients in Northern Tanzania. Hence dermatologists and other healthcare providers should be enlightened since they play a critical role in preventing improper use of NCMs. In addition, further studies to investigate the safety and efficacy of NCMs should be conducted for better insight into these NCMs.

Abstract N°: 6411

Exploring the Role of Dermatological Examination in Medicolegal Autopsies: A Descriptive Study

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Introduction & Objectives:

Forensic dermatology, the study of skin, hair, and nails in determining injury causes, is a critical component of medicolegal investigations. Despite its pivotal role, the field lacks comprehensive studies in dermatologic literature. This study aims to address this gap by highlighting the importance of forensic dermatology in medicolegal autopsies, focusing on identifying the deceased, understanding postmortem changes, estimating time of death, and elucidating suspicious deaths.

Materials & Methods:

Conducted from September 2018 to September 2020 at Kasturba Medical College, Manipal, this descriptive study analyzed 68 adult medicolegal autopsy cases. The examination focused on gross morphological skin changes, with histopathological analysis performed in selected cases. Cases were included based on defined criteria, and data were collected meticulously to ensure accuracy.

Results:

Among the 68 cases analyzed, 45 (66.2%) were males, and 23 (33.8%) were females. The causes of death varied, with poisoning (29 cases, 42.6%), hanging (18 cases, 26.5%), burns (11 cases, 16.2%), drowning (6 cases, 8.8%), snakebite envenomation (3 cases, 4.4%), and electrocution (1 case, 1.5%).

In hanging cases (9 cases), histopathological analysis revealed ulcerated epidermis with hemorrhage and inflammation. Additionally, examination of ligature marks provided crucial insights into the force applied during hanging incidents, aiding in reconstructing the events leading to death.

Electrocution cases (1 case) exhibited eroded epidermis with vital reaction. The distinct histopathological findings in electrocution injuries, such as eroded/denuded epidermis, underscored the importance of dermatological examination in identifying specific patterns of injury associated with electrocution.

Poisoning cases (9 cases) demonstrated eroded epidermis with vital reaction. Histopathological analysis of skin samples from poisoning cases revealed characteristic changes indicative of toxic exposure, contributing to the determination of the cause of death.

Drowning cases (3 cases) showed ulcerated epidermis with hemorrhage and inflammation. Detailed examination of skin changes in drowning victims provided valuable information on the circumstances surrounding death, such as the duration of submersion and the presence of struggle marks.

Burn cases (5 cases) presented with eroded epidermis with subepidermal blisters. Histopathological examination of burn injuries revealed distinct patterns of tissue damage, aiding in differentiating between accidental burns and deliberate injuries.

Snakebite envenomation cases (3 cases) displayed epidermal vacuolations and subepidermal blisters with

thermal injury-induced necrosis. The histopathological findings in snakebite envenomation cases highlighted the complex interactions between venom toxins and skin tissues, contributing to forensic diagnosis and management.

Conclusion:

Dermatological examination plays a pivotal role in forensic science, providing crucial evidence for determining the cause and time of death. The findings of this study emphasize the importance of dermatologists' familiarity with forensic terminology and postmortem changes to ensure accurate diagnosis and expert opinion in forensic cases. Further research and integration of forensic dermatology into dermatology literature are essential to enhance understanding and proficiency in this vital field.

Abstract N°: 6450

Cutaneous manifestations in patients with mastocytosis: Data from the Romanian National Registry of Mastocytosis

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Introduction & Objectives:

Mastocytosis is a rare disorder characterized by pathological accumulation of mast cells in tissues, skin being frequently involved. Prevalence of mastocytosis is estimated at 1 per 10.000 persons, with female predominance. Most cases of adult mastocytosis have systemic persistent forms of the disease.

Overall, more than 80% of all patients with mastocytosis exhibit characteristic brown or red skin lesions.

Darier's sign, which is defined by whealing and reddening of lesions upon mechanical stroking or rubbing, is usually demonstrable. Skin lesions in patients with mastocytosis are highly heterogeneous and encompass localized and disseminated forms.

Materials & Methods:

We studied 96 patients with indolent systemic mastocytosis from the Romanian National Registry of Mastocytosis to identify types and prevalence of skin lesions: 33 males and 63 females aged between 20 and 77 years.

C-kit mutation D816V was positive in 80% of patients

Results: Only 15% of the patients studied had no skin involvement. Cutaneous lesions were in most case (77%) maculopapular monomophic and only 4% of patients had diffuse cutaneous mastocytosis. We also identify atypical skin lesions such as telagiectasia macularis perstans in 4% of the patients.

Conclusion:

Maculopapular mastocytosis monomorphic variant with small lesions is the most common cutaneous manifestation of this rare disease encountered in our clinical practice, in adult patients.

Diffuse cutaneous mastocytosis is rarely seen in adults. Telangiectasia macularis perstans is frequently combined with maculopapular skin lesions and is not diagnosed as a separat variant of cutanous mastocytosis.

A case of capillaritis in a patient under treatment with infliximab for Crohn's disease

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Introduction & Objectives: Pigmented purpuric dermatoses (PPDs), such as purpura simplex and inflammatory purpura without vasculitis, belong to a group of chronic, benign, cutaneous disorders with key clinical features petechiae or purpura reflecting erythrocyte extravasation and yellow to brown pigmented patches resulting from hemosiderin deposition within the dermis. Lower extremities are most commonly affected. Palms, soles, genitalia, and mucosa are typically spared. Generalised eruptions are infrequent. Although multiple factors have been proposed as potential contributors to the development of (PPDs) including certain drugs, vaccines, infections, exercise, none of which has been definitively proven. Anti-tumor necrosis factor (Anti-TNF) drugs modulate the inflammation and improve diseases in which TNF-α is mainly involved such as Crohn's disease, psoriasis and certain rheumatological conditions. Among the side effects reported, cutaneous adverse events have also been described such as fungal infections, leukocytoclastic vasculitis, lichenoid or systemic lupus skin rashes.

Herein we describe a case of Schamberg's capillaritis in a patient treated with infliximab for Crohn's disease.

Materials & Methods: A 38-year-old man under treatment with infliximab for Crohn's disease for about three years was referred to the dermatological department due to an asymptomatic cutaneous eruption located on the extremities and the abdominal region. He had noticed the lesions almost one month ago. The patient had no other medical history or drug intake. Physical examination revealed reddish-brown purpuric patches distributed on the upper and lower limbs and the abdomen. Systemic examination was normal as well as his laboratory blood tests. Skin biopsy by punch technique and direct immunofluorescence revealed findings compatible with Shamberg's capillaritis. Treatment with high potency topical corticosteroid was administered with instructions for gradual tapering of the daily dosage within one month-time

Results: After one month of treatment the eruption subsided, without any new lesions. On two-month follow-up visit our patient appeared with remarkable improvement despite being kept on the same treatment regimen for Crohn's disease.

Conclusion: Cutaneous adverse events rank among the most common complications in patients treated with TNF-alpha inhibitors. In most cases, such events are mild and do not require discontinuation of the culprit drug. We encountered a case of a patient with Crohn's disease who developed capillaritis while treated with infliximab. In the literature there are reports of Henoch-Schoenlein purpura in association with Crohn's disease as well as anti-TNF drugs, a case of infliximab induced purpura of Doucas and Kapetanakis and one report of capillaritis related to the use of adalimumab. In our case the patient had a long history of Crohn's disease and had been receiving infliximab only for the last three years therefore we suggest that the appearance of Schamberg capillaritis is attributed to the treatment with infliximab. Small vessel vasculitis seems to be a rare but distinguishable side effect of this pharmaceutical category. Dermatologists should be aware of such adverse reactions since they are key partners in the interdisciplinary management of patients with various systemic diseases requiring treated with TNF-a inhibitors.

Enhancing Treatment Monitoring and Clinical Trials in Dermatology with the Help of AI

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The integration of Artificial Intelligence (AI) in dermatology is transforming treatment response monitoring as well as skin condition tracking, heralding a new era of precision medicine tailored to individual patient needs. AI tools are now being developed to meticulously monitor patient response to dermatological treatments over time. This enables healthcare providers to dynamically adjust treatment plans, ensuring optimized patient outcomes through continual assessment.

Simultaneously, the advent of mobile applications equipped with AI capabilities offers unprecedented convenience for patients and doctors to track changes in various skin conditions in the comfort of their own home. These apps analyze user-uploaded images and provide valuable insights into potential triggers or exacerbating factors, fostering a proactive approach to skin health management.

Moreover, AI proves to be an indispensable tool in clinical trials, notably enhancing documentation and resource development for dermatologists. By standardizing image capture methods and enabling systemic tracking of treatment progress, AI helps build a comprehensive database that aids in comparative studies of treatment efficacy. AI-supported clinical trials streamline the sorting, filling, and analysis of images, making these processes quicker and more cost-effective. This enhancement not only broadens dermatological understanding but also augments the data pool available for refining future treatment approaches. Additionally, AI contributes to saving time and costs while creating a safer setting for both patients and healthcare providers. These AI-driven initiatives provide detailed real-time insights into treatment effectiveness and skin health dynamics in a fraction of the time.

Abstract N°: 6529

A Double-Edged Sword: Addressing the Limitations and Socioeconomic Impact of AI in Dermatology

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As Artificial Intelligence (AI) integrates into medicine and diagnostics, its limitations and potential pitfalls necessitate careful consideration. Key challenges include the lack of human contact in AI interactions, thus alienating older populations less comfortable with new technologies, data biases, privacy & security concerns, system errors as well as its socioeconomic impact.

Additionally, inherent issues like data biases can skew AI diagnostics toward certain demographics, potentially overlooking novel or rare conditions and underrepresented minorities. This necessitates ongoing algorithm refinement and validation to enhance reliability and inclusivity.

Moreover, AI systems are prone to errors such as incorrect scans or image captures influenced by human error, and their reliance may lead to overuse, bypassing critical human oversight. Connectivity issues in rural areas, along with varying levels of digital literacy among various age groups, further restrict accessibility. Privacy concerns, data security, and the need for informed consent also pose significant ethical challenges.

The potential for AI to supplant roles traditionally occupied by research assistants and other personnel prompts significant socioeconomic and professional considerations. As AI progressively automates tasks, particularly those involving intermediary functions, it may disproportionately impact non-specialist positions, potentially reserving employment opportunities predominantly for highly educated/skilled professionals. While most individuals possess smartphones and reliable internet access, those lacking such resources, or in situations where infrastructure fails, are unable to leverage these technological advancements and cannot seamlessly integrate AI into routine medical practice; this is particularly true in many developing nations.

From Pixels to Precision: A Deep Dive into AI's Evolution in Dermatology

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The evolution of Artificial Intelligence (AI) in dermatology has been evolving from basic image recognition for lesion identification to sophisticated tools capable of personalizing treatment plans. This paper reviews AI's journey through its inception, current use, and future potential in dermatology, reflecting on both technological advancements and ongoing challenges.

Initially, AI applications were experimental, focusing mainly on melanoma detection as demonstrated in a pivotal 2017 Stanford study where AI matched the accuracy of 21 board certified dermatologists. Despite these early successes, the integration of AI into everyday clinical practice has been gradual, with significant improvements in diagnostic and treatment precision yet sporadic updates on new advancements.

Presently, AI not only diagnoses but also predicts patients responses, enhancing the personalization of care. However, the adoption of such technologies is still limited by debates over their practical utility and ethical concerns. Looking forward, AI is expected to revolutionize personalized medicine by incorporating biometric analyses to refine treatment effectiveness based on genetic and environmental factors.

Recent reviews reveal significant growth in AI applications, identifying 391 mobile applications in 2023, yet only 41 offer comprehensive medical analysis. Recently, an FDA-cleared, AI-powered, non-invasive point-of-care skin cancer assessment tool has been introduced, potentially revolutionizing early detection.

However, challenges surrounding data privacy, liability, and algorithmic bias continue to hinder widespread adoption. Addressing these issues is crucial to fully realizing AI's potential in transforming dermatological care, underscoring the need for continuous advancements and resolutions.

Searching for skin cancer – what Google has to say

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Introduction & Objectives:

Skin cancer persists as a formidable challenge to cancer control and public health on a global level. Despite prevention strategies, the incidence of melanoma,1 squamous cell carcinoma and basal cell carcinoma2 is increasing rapidly in fair-skinned populations. The success of public health campaigns is heavily reliant on useful data. Internet activity and search programs are one way of capturing meaningful data on the public's interest in certain domains of healthcare.

Materials & Methods:

A retrospective observational study was conducted to examine internet search trends relating to skin cancer. Data was extracted from *Google Trends* for search terms including "skin cancer", "melanoma", "sunbed" and "SPF" between 2013 and 2023 both in Ireland and worldwide.

Results:

Search trends for melanoma and skin cancer rose significantly over the 10 year period in Ireland, however worldwide search trends for both terms showed no statistically significant difference. Internet search trends for unfavourable behaviours such as "tanning" and "sunbed" showed statistically significant increases both in Ireland and worldwide. Favourable behaviours such as "skin check" and "SPF" also increased significantly in both cohorts. Searches for skin cancer were higher in May, June and July when the means of each month were analysed for each year.

Conclusion:

Use of the internet for access to health information is becoming more commonplace, and as healthcare providers engage more modern approaches to patient education, the internet is increasingly recognised as a legitimate source of health information for patients. There is huge potential in harnessing user-dependent data collected from internet sources, which can be used to guide public health decision-making. We have shown that Irish people are using the internet more to understand skin cancer and melanoma. We have also highlighted that interest in skin cancer is highest from May to July. Our findings add to the growing body of information available to focus and reinforce national and global skin cancer prevention efforts.

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Abstract N°: 6621

Trichofolliculoma : A rare adnexal tumor

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Introduction:

Trichofolliculoma (TF) is a rare benign tumor of the hair follicle, usually located on the face or scalp, typically manifesting as an umbilicated papule or dome-shaped nodule centered by an infundibular depression from which emerges a tuft of white hairs.

We present the case of a patient with a TF of the face, demonstrating an atypical clinical presentation.

Case Description:

An 83-year-old man with no prior history consulted due to the presence of a painless pedunculated tumour of the face that had been evolving for 2 years.

Clinical examination revealed a flesh-coloured, soft outgrowth measuring 2 cm, attached by a pedicle on the right cheek, without inflammatory signs or central depression which was in line with the diagnosis of a skin tag. The rest of the clinical examination was unremarkable. Dermoscopy revealed a homogeneous pink background,a few shiny white structures and serpiginous vessels. No emerging tufted white vellus hairs, erosion or ulceration were observed.

Excision without safety margins was performed, and histopathology revealed a cellular proliferation consisting of mature keratinocytes delimiting primary follicles, sometimes arranged in thecal structures made of basaloid cells around secondary follicles. These findings were suggestive of a TF. No atypia or mitotic activity was noted. After one year of follow-up, no reccurrence was observed.

Discussion:

The TF belongs to the group of adnexal tumors of follicular origin, along with follicular basaloid hamartoma, trichoblastoma, pilomatricoma and other rarer benign tumors. Its incidence is higher among middled-aged adults. However, it can occur at any age, with some cases reported in children and the elderly.

First described by Meischer in 1944, TF has a characteristic clinical appearance that facilitates diagnosis. It usually presents as a solitary umbilicated papule or nodule, well circumscribed, measuring less than 1 cm in diameter, with a central pore through which a tuft of white vellus hairs protrudes. It is commonly located on the face or scalp. Although rare cases in the external auditory canal, eyelids, upper lip, nasal fossae, and vulva have been reported.

In cases of atypical clinical presentation, as seen in our patient, differential diagnosis includes several entities such as keratoacanthoma, molluscum contagiosum, trichoepithelioma, sebaceous hyperplasia, or basal cell carcinoma.

Dermoscopically, there are no specific structures for TF. In the literature, a "firework" pattern has been described in a lesion of 4 months, other cases showed a white-pink central area, shiny white structures, and dotted vessels

Histologically, a characteristic finding is a dilated central follicle (primary follicle) with a thick wall, in which secondary follicles open. These secondary follicles show highly variable differentiation, ranging from mature

secondary follicles with hair in the anagen stage to very immature structures.

Surgical excision is the treatment of choice. Although recurrence is rare, the long-term prognosis is excellent. In our case, no recurrence or complications were observed during long-term follow-up.

Conclusion:

TF can mimic several cancers such as basal cell carcinoma, sebaceous carcinoma, or squamous cell carcinoma. Therefore, knowledge of the clinical and dermoscopic polymorphism is imperative for an accurate clinical diagnosis, not forgetting that the definitive diagnosis of certainty is histological

The Role of Natural Supplements in Aesthetic Dermatology: An Evidence-Based Review

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The Role of Natural Supplements in Aesthetic Dermatology: An Evidence-Based Review

Introduction & Objectives:

This study aims to assess the current evidence regarding the efficacy and safety of natural supplements in aesthetic dermatology, specifically their impact on skin health, anti-aging, and dermatological conditions.

Materials & Methods:

A comprehensive search of peer-reviewed articles was conducted across several databases, focusing on studies that investigated the effects of natural supplements on skin appearance, aging, and dermatological issues. Inclusion criteria were set to select studies providing clear methodology, quantifiable outcomes, and safety profiles. The data extraction focused on supplement types, dosages, observed dermatological effects, and adverse reactions.

Results:

The review highlights a variety of natural supplements, including vitamins (e.g., Vitamins C, D, and E), minerals (e.g., zinc, selenium), antioxidants (e.g., resveratrol, flavonoids), and other compounds like omega-3 fatty acids and collagen peptides. These supplements have been linked to various skin benefits, such as improved hydration, elasticity, and texture, and a reduction in signs of aging, inflammation, and hyperpigmentation. The underlying mechanisms for these benefits include enhanced collagen production, neutralization of free radicals, and immune response modulation. Although the results are promising, variability in study methodologies and outcomes leads to some inconsistencies in the data. Most supplements were well-tolerated, but some adverse effects highlight the need for caution.

Conclusions:

Natural supplements can play a supportive role in aesthetic dermatology, enhancing skin health and managing certain dermatological conditions. However, the evidence varies widely in quality and specificity. More rigorous, standardized clinical trials are necessary to better understand the efficacy, optimal dosages, and safety profiles of these supplements. Dermatologists should consider individual patient needs, existing medical conditions, and potential interactions with other treatments when recommending natural supplements. The integration of natural supplements into aesthetic dermatological practice should be based on a careful evaluation of the scientific evidence and tailored to the specific needs of each patient.

Abstract N°: 6685

Opportunities and Challenges in Artificial Intelligence Skin Image Analyses using Total Body Photography identified in the iToBoS (Intelligent Total Body Scanner) project.

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Introduction & Objectives: The application of AI algorithms for skin lesion classification have reported accuracy on par, and even outperformed expert dermatologists in experimental settings. While reported algorithm performance is promising, they do not represent a real-world clinical approach, and often lack clinical transferability. Majority of algorithms reported to date have been trained on dermoscopy images of single lesions and fail to incorporate any clinical background information into the decision process. As the use of total body photography (TBP) in dermatology clinics increases, the exploration of applying AI technology to skin monitoring software offers opportunities in providing intra-patient assessment as opposed to single lesion analysis.

The objective of the European Horizon 2020 funded iToBoS (Intelligent Total Body Scanner) project is to develop an AI diagnostic platform using 3D-TBP for the early detection of melanoma.

Materials & Methods: To produce a comprehensive training dataset for machine learning, 500 patients have been recruited from two clinical sites (Australia and Spain). Study participants undergo temporal TBP, complete a survey on medical and sun behavior history, and provide a genetic sample for melanoma polygenic risk calculation. Anonymized Image datasets are created by cropping TBP images into small 8 cm x 10 cm tiles, deeming them un-identifiable (face and other identifying images are removed). DICOM labels facilitated the inclusion of patient-level metadata to image datasets, and anonymization and masking methods are used to protect patient confidentiality. A two-step annotation process is followed to label image tiles for UV damage and lesion classification for machine learning. Skin phenotype characteristics, such as innate and facultative skin color and naevi distribution are extracted from TBP images. Seperate algorithms are being developed to tackle important challenges, including skin lesion detection, segmentation and classification, and for temporal images, 3D mapping, and change detection. Further methods are developed to incorporate all risk information and amalgamate individual algorithm output to generate Computer Aided Diagnostic (CAD) tools for integration into TBP software.

Results: The final outcome of the iToBoS project will be the production of a clinical cognitive assistant, capable of incorporating various risk information for a patient. The cognitive assistant will provide lesion classification and risk assessment, as well as patient risk assessment to guide management for skin cancer monitoring.

Conclusion: The potential of AI to incorporate vast amounts of data from various sources to provide objective and predictive insight goes beyond human capacity and is anticipated to compliment clinical decision making. The iToBoS project aims to harness the potential of AI to exploit all available information about a patient to enable personalized monitoring for the early detection of melanoma.

Tendinous Sheath Fibroma in the Sole: Diagnostic Approach and Clinical Considerations

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Introduction & Objectives:

The tendon sheath or tenosynovial fibroma is a benign and rare tumor that usually occurs in extremities, particularly the upper extremities (82%). However, it can occur in any anatomical area that has a tendon sheath. The tumor can present as a subcutaneous growth and may cause pain, especially when it exerts pressure on the soft tissues or adjacent nerves. Although the diagnosis is made clinically, auxiliary studies such as X-rays, ultrasound, or magnetic resonance are suggested due to the low frequency of occurrence. The standard treatment for this condition is excision.

Materials & Methods:

Results:

A 61-year-old woman with a history of systemic arterial hypertension and type 2 diabetes presented with a localized mass on her left sole that, which she first noticed 2 years before. She reported experiencing pain and discomfort while walking for the previous 6 months. During the physical examination, a mass of 1.5x1.5cm was found on the inner edge of the left sole. The mass was subcutaneous, of semi-solid soft consistency. Excisional biopsy was performed, and subsequent anatomopathological analysis revealed a tumor in the soft tissues. The tumor was well-circumscribed and encapsulated. It was composed of large hypocellular lobes, formed by dense and hyalinized fibrous tissue or with fibromyxoid changes. The tumor also had some fibroblast-like cells with elongated nuclei and no atypia, arranged in short fascicles. The diagnosis of fibroma of the tendon sheath was determined, and there was no evidence of malignancy. The patient reported complete resolution of symptoms after the procedure.

Conclusion:

The tendon sheath fibroma is a benign tumor that can originate anywhere in the body where there is a tendon sheath, its clinical presentation is variable depending on the affected body area. The case presented here was highly symptomatic for its location in the sole, which resulted in pain and oppression to wandering, so, although there are conservative therapeutic options such as steroid injection, the excision was found to be the best choice of treatment. Due to the low frequency of this condition, it is considered relevant to describe existing cases, in this way, the different clinical presentations and their relationship with the site of presentation can be disclosed and contribute to the proper determination of the frequency. In particular, the plantar presentation is considered rare, and the diagnosis may be more difficult because of the possible differential diagnoses, among which are plantar fasciitis, plantar fascia fibromatosis, or nodular fasciitis. A recurrence rate of between 11 and 25% has been reported.

Abstract N°: 6744

Predicting Tumor Differentiation in Cutaneous Squamous Cell Carcinoma Using Clinical Close-Up Images and a de novo Convolutional Neural Network

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Introduction & Objectives: Artificial Intelligence is a field that has developed at an extraordinary pace the past decade and is currently implemented in a wide variety of sectors, including dermato-oncology. The rising burden of skin cancer presents a noteworthy challenge for physicians in their daily practice. One of the most frequent tumor types is cutaneous squamous cell carcinoma (cSCC). This tumor exhibits a range of clinical presentations which, intrinsically, may correlate with the histopathological level of differentiation. However, estimation of tumor differentiation by the clinician, in the preoperative setting, is often challenging but is a key component regarding selection of appropriate excision margins and priority to surgery. Consequently, an accurate estimation of tumor differentiation in the preoperative setting has important clinical implications. This study aimed to develop, validate, and test a convolutional neural network (CNN) that predicts tumor differentiation using clinical close-up images.

Materials & Methods: Clinical close-up images of cSCC were collected from our department of dermatology and venereology (single center) during a nine-year period (from 2015 to 2023). All cases were histopathologically verified by a dermatopathologist and were labeled according to their level of differentiation (*i.e.*, poorly differentiated *vs.* well differentiated). Only primary cSCC were included (*i.e.*, no recurring tumors or metastasis). Images with too low quality were excluded. Images were standardized to a set format and were subsequently randomized into three sets; training set (n=1,329), validation set (n=200) and test-set (n=300). A *de novo* CNN consisting of 6 convolutional layers with respective pooling layers following and one fully connected layer was trained and evaluated on the sets of images.

Results: Overall, 1,829 clinical close-up images of cSCC were included in the investigation. Among these 1,254 (69%) and 575 (31%) were well- and poorly differentiated respectively. When evaluated on the test-set, the CNN achieved an area under the receiver operating characteristics curve (AUC) of 0.69 (95% confidence interval, 0.62-0.76).

Conclusion: In this report we demonstrate another application for which CNN may ultimately be utilized in the clinical setting. It is noteworthy that the CNN performed well considering it was merely trained and validated on small data sets. To further evaluate the level of performance of the algorithm, our next aim is to compare the CNN to readers with varying level of experience. We believe preoperative assessment of clinically suspected cSCC in terms of the level of differentiation would be an appealing application and with further research and refinement, it might be feasible as a tool to support clinicians in their daily practice. To attain this, future studies in a prospective clinical setting would be required.

Abstract N°: 6763

Comparative assessment of different parameters to investigate skin physiology under acid as well alkaline provocation in Caucasians and Asians

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Introduction & Objectives:

Different phenomena such as globalization and a variety of refugee crises have led to a much more diverse society in western countries such as Germany. In consequence, volunteers taking part in clinical studies have also a much more diverse ethnic background and the question arises whether different ethnicities have an influence on the results of such studies. In the present study a range of parameters for in vivo investigation of the skin is assessed under the influence of pH active ingredients in Caucasian as well as Asian volunteers.

Materials & Methods:

Overall, 18 Caucasians and 16 Asians were included after informed written consent. Area of investigation were the forearm regions. Skin surface-pH, ammonium ion density, skin hydration, ultrasound echogenicity (50 MHz) and skin surface structure were investigated prior to and after application of a salicylic acid containing preparation as well as after a preparation containing calcium hydroxide as alkaline component. The statistical analysis consisted of the comparison of the values assessed initially between Caucasians and Asians and the comparison of the parameters before and after pH provocations in the two groups.

Results:

The results indicate overall lower skin surface pH values and statistically significant higher ammonium values in the Asian group. There was no statistical difference with regard to skin hydration. Also, the skin of Asian volunteers showed a higher roughness. In both ethnic groups the skin surface pH was decreased due to application of salicylic acid and increased due to application of the alkaline formulation. In the Caucasian group the ammonium values increased significantly after acid treatment and decreased significantly after alkaline treatment. In Asian volunteers, a significant decrease after alkaline treatment could be found only. Moreover, in both groups an increase in smoothness after alkaline treatment was found. In Caucasians alkaline treatment also lead to a decrease in echogenicity of the skin.

Conclusion:

The results indicate differences between Caucasians and Asians both for several absolute values as well as in the skin response to pH active formulations. Among the parameters ammonium ions did show significant results with respect to both parts of the investigation. It can therefore be concluded that besides some structural differences in the upper skin of the volunteers of the two ethnic groups, there might be some differences in ammonium producing biochemical reactions in the stratum corneum or in sweat, which is known to contain ammonium ions of relevant amounts, as well. More studies are required to investigate ethnic differences of the skin and in particular to investigate sources and ways of ammonium ions into the stratum corneum.

Abstract N°: 6772

Impact of a 10% urea-based moisturizer on xerosis in aging skin

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Introduction & Objectives:

Skin senescence leads to a natural decline in hydration and barrier function, contributing to a progressive dry skin or xerosis, which affects approximately 60% of the aging population. This condition is known for symptoms like scaling, itching and cracking, causing discomfort, limited mobility and increased risk of eczema or even infection. Urea-based topical moisturizers are commonly used to address xerotic skin due to their hydrating and barrier strengthening properties.

The objective is to assess the effectiveness and tolerability of a 10% urea-based moisturizer in improving skin health and reducing both the signs and personal burden associated with moderate to severe xerosis in aging skin.

Materials & Methods:

This study is a prospective observational healthcare design with a single-group, open-label setup. Individuals aged 60 to 75 with moderate to severe xerosis (overall dry skin score (ODS) ≥2) on the lower legs were included. The treatment involved applying a 10% urea-based moisturizer twice daily for four weeks. Clinical evaluations were conducted at baseline and follow up (day 28) to measure changes in hydration levels, barrier function, and skin texture. Patient-reported outcomes on skin discomfort, quality of life and perception of xerosis were obtained.

Results:

A total of 59 subjects were recruited (71.2% female, average age 65.2 years). Clinically relevant improvements were observed from baseline to week 4 in skin hydration, as measured by corneometry, which increased from 33.05 (±12.03) to 53.18 (±18.72). There were pronounced reductions in the Xerosis Area and Severity Index (XASI), decreasing from 4.43 (±1.86) to 0.42 (±0.67), and in the affected Body Surface Area (BSA), which dropped from 76.53% (±30.9) to 17.22% (±29.91). Patient-reported outcomes also showed marked improvement in skin discomfort, reducing from 6.2 to 1.1, and in Dermatology Life Quality Index (DLQI), which improved from 3.95 (±3.97) to 0.98 (±1.45). Further analysis between weeks 1 and 4 revealed enhancements in the Patient Benefit Index (PBI) for cosmetics (PBI-k), increasing from 2.80 (±1.02) to 3.27 (±0.84), the effectiveness of the PBI for topical treatment (PBI-TOP), which rose from 3.00 (±0.89) to 3.43 (±0.71), and PBI-TOP product characteristics, which slightly improved from 3.27 (±0.65) to 3.34 (±0.66). Overall, the Patient Benefit Index scores highlighted considerable patient-relevant benefits after 4 weeks of treatment, including not only the alleviation of dryness, roughness, and itchiness but also the enhancement of patient comfort and satisfaction.

Conclusion:

A 10% urea-based moisturizer effectively improves clinical signs and symptoms of xerosis, by optimizing skin hydration, alleviating discomfort and markedly increasing quality of life in the aging population. The product was

well tolerated, with high levels of patient satisfaction and benefits. The formulation is suitable for inclusion in the skincare routine of elderly individuals experiencing xerosis.

Experience, knowledge, habits and attitudes of Emergency Department medical staff regarding teledermatology

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Introduction & Objectives: Research about teledermatology in Emergency Departments is increasing. However, there is negligible data about the perspective and practices of Emergency Department staff regarding the use of teledermatology in that setting. This study aimed to assess the experience, knowledge, habits and attitudes of Emergency Department medical staff in relation to photographing patients' skin conditions and transmitting the photos to dermatologists and dermatology registrars for clinical advice.

Materials & Methods: All medical staff of a major university-affiliated hospital who had worked in the hospital's Emergency Department in 2023 were invited to complete a 21-item questionnaire about teledermatology that had been constructed by the authors. Staff anonymously completed the survey online via the secure software application RedCap. The study was approved by the hospital's Human Research Ethics Committee.

Results: Seventy-nine medical staff, including Emergency Department specialists (N=15), registrars (N=11), senior residents (N=16), residents (N=15) and interns (N=22), completed the questionnaire. Most Emergency Department specialists (87%) and other medical staff (80%) thought that to manage patients effectively it was "very important" to be able to send photos of skin conditions to a dermatologist or dermatology registrar. Respondents took these photos for advice about diagnosis (85%), treatment (72%), and to include in medical records for documentation (34%). A slight majority (53%) believed that sending photos to dermatologists or registrars was "more practical" than in-person consultations by those professionals; 24% were unsure. The vast majority (94%) of medical staff indicated that they obtain informed consent before taking skin photographs; 46% routinely document informed consent has been obtained in the medical record. Only a minority (16%) of respondents had read the hospital policy about taking photos of patients. There were a variety of practices regarding technical aspects of taking skin photos, including lesion centering (practiced by 76%), use of an anatomical landmark (43%) and efforts to optimise lighting (77%).

Conclusion: Although medical staff commonly use medical photographs to communicate with dermatology teams, knowledge and compliance with medicolegal policies and photographic technique are variable. As advances in communication technology become increasingly relevant for the field of emergency medicine, it is important that Emergency Department health professionals use the technology optimally, with due attention to medicolegal issues and technical aspects of medical photography, in the interests of best patient outcomes. Dedicated photography education is recommended for medical staff.

Abstract N°: 6798

modified intralesional acyclovir therapy in management of recalcitrant palmoplantar and ungual warts: a pilot study

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Introduction & Objectives:

Managing palmoplantar and ungual warts is challenging due to the high incidence of recurrence. Acyclovir, a purine nucleoside analogue, is a selective inhibitor of herpes virus. The rationale for using acyclovir in treating warts is that HPV is a DNA virus like herpes viruses and therefore can be sensitive to acyclovir. Also, the local destructive property of acyclovir can add to therapeutic efficacy in the management of warts. This pilot study determines the safety and efficacy of a modified intralesional Acyclovir therapy in palmoplantar and ungual warts.

Materials & Methods:

Thirteen patients aged >18 years with <10 recalcitrant palmoplantar /ungual warts were taken. The study's cohort included 6 women and 7 men, with a mean age of 25 years. A total of 67 warts were treated. Patients who had received any previous treatment within the last four weeks were excluded. Patients received 50mg/ml of intralesional Acyclovir (0.1ml in each wart) once every two weeks till complete clearance or a maximum of five visits. The solution was prepared by diluting 250mg of acyclovir in 4 ml of distilled water and 1 ml of lignocaine. At each subsequent visit, after evaluating the response, the injection was repeated. The patients were reviewed in the 8th week to check for relapse.

Results:

Complete clearance occurred in 69.2% (9/13) of the patients and partial response occurred in 30.7%(4/13) of the total patients. Complete response of warts was achieved in 1(7%), 1(7%), 4(30%) and 3 (23%) patients after 2, 4, 6 and 8 sessions. Another 4(30%) patients showed partial improvement after 6 sessions. The most common adverse effect recorded was injection site tenderness for 2-3 days in 7(53.8%) patients. Maximum response was seen with palmar warts with 86.2% of palmar warts showing complete response. Only partial response was noted in periungual warts with nail matrix damage in 75% of cases. The relapse rate was 15.38%(2/13) at the end of the 8th week.

Conclusion:

Modified intralesional injection of Acyclovir showed a promising response in recalcitrant cases of palmoplantar and ungual warts. It offers a low-cost, effective therapeutic option, especially in cases where other destructive modalities such as bleomycin are contraindicated such as immunosuppression and pregnancy.

The puzzle of red: Unravelling Pityriasis Rubra Pilaris

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Introduction & Objectives:

Pityriasis rubra pilaris is a chronic papulosquamous disorder characterized by keratotic follicular papules, palmoplantar hyperkeratosis and orange-red scaly plaques with sharp borders, which often progresses to erythroderma. The uninvolved skin has distinct areas which are called islands of sparing. It occurs equally among men and women and it has bimodal age distribution, but it can develop at any age.

Materials & Methods:

We report a case of a 48-year-old man who presented for the first time in our department with a generalized eruption consisting of erythematous, violaceous, confluent plaques and patches displaying a polycyclic border, with areas of intense circular desquamation, mildly pruritic, accompanied by a burning sensation, suggestive of superficial vesiculo-pustular lesions. Seven to ten days prior to the onset of the eruption, the patient self-administered nonsteroidal anti-inflammatory drugs (Ibuprofen, Etoricoxib) for arthralgia. Clinically, the diagnosis of post-drug acute generalized pustular psoriasis was established and a biopsy was performed. The patient was treated with topical corticosteroids, with partial improvement. One month later, the patient presented with erythroderma, consisting of confluent follicular papules, with islands of apparently intact skin, accompanied by extensive desquamation and thickened, xerotic palms and soles, suggestive of the diagnosis of pityriasis rubra pilaris. The initial biopsy showed nonspecific changes that did not confirm the suspicion of acute generalized pustular psoriasis, prompting a decision for a rebiopsy to confirm the diagnosis. The patient was treated with Isotretinoin 30 mg/day for 3 months and with Methylprednisolone 32 mg/day, as a bridging therapy with subsequent tapering, for 14 days. After 3 months of treatment with isotretinoin, the patient's skin was remarkably intact. Under local anesthesia with 1% lidocaine, two 4-mm punch biopsies were performed at one month apart, showcasing the diagnostic dilemmas and therapeutic strategies encountered in managing this challenging condition. The tissue samples were sent to the Pathology Department for histopathological examination.

Results:

The first biopsy identified minimal hyperorthokeratosis at the surface, increased suprabasal keratinocyte mitotic activity, focal intraepidermal lymphocytic exocytosis, and moderate fibrosis in the papillary dermis. The diagnosis was perivascular lymphocytic dermatitis. The second biopsy showed moderate confluent hyperparakeratosis, relatively uniform moderate acanthosis with short and thick epidermal ridges, and moderate perivascular lymphocytic inflammatory infiltrate. The histopathological appearance could be interpreted in the context of the diagnosis of pityriasis rubra pilaris.

Conclusion:

Pityriasis rubra pilaris is a relatively rare condition, which can evolve over time in different stages characterized by various clinical features, making it difficult to differentiate based solely on clinical appearance. The histological findings of PRP may overlap with other inflammatory dermatoses, further complicating the diagnostic process.

Due to these factors, it is very important to recognise the characteristic features of the condition, to adapt the therapeutic strategies in time and to be aware of the capacity of this condition to mimic other dermatoses, leading to delay in diagnosis.

Abstract N°: 6846

Dermatology Education in Fiji: Working Toward Self Sustainability

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Introduction & Objectives:

Fiji is an island located in the South Pacific, approximately 16,000km from Europe, and has one of the highest rates of albinism in the world. There are over 300 islands that make up Fiji, with approximately 110 islands inhabited, and a total population of an estimated 900,000. There is currently only one local dermatologist who services Fiji. Our programme aims to train and upskill local Fijian doctors to become more proficient in dermatology through in-person and online lectures, workshops and clinical experience. The programme was developed in 2018, and the first cohort of students commenced the post-graduate diploma of dermatology in 2019.

Materials & Methods:

The Pacific Dermatology Training Centre (PDTC) located in Tamavua-Twomey Hospital in Suva, Fiji is where the majority of training has taken place since 2019. The one year postgraduate diploma of Dermatology is embedded within the four year Master of Medicine in Dermatology course. The programme has been funded through Pacific Dermatology Ltd., an Australian not-for profit organisation, in partnership with Pacific Leprosy Foundation (NZ), Fiji Ministry of Health and Medical Services and Fiji National University, with donations from the Australian community, including dermatologists.

Results:

In 2024, three final year students have commenced clinical experience comprising of rural outreach work in Fiji and clinical placements in Australia in tertiary hospitals to gain further experience before graduation. There has been 13 visiting dermatologists in the past 12 months alone who have volunteered their time to teach at the PDTC. Online learning has been continued, with support from Australian and international dermatologists.

Conclusion:

The limited access to specialist dermatologist care and the high burden of disease in the South Pacific community was a driver for development of the programme, and the past five years has been valuable for understanding the educational needs of doctors training in dermatology in underserved communities, such as Fiji. The aim of the program is to facilitate and support the development of a sustainable education dermatology programme in a low-income country.

Abstract N°: 6855

Lymphocytic Vasculitis and Narrowband UVB Phototherapy

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Introduction & Objectives:

Lymphocytic vasculitis remains a controversial finding histopathologically. It remains largely undefined whether the lymphocytes have an active role in the inflammation. Clinical picture of those with histopathologic findings of lymphocytic vasculitis are also varied which includes inflammatory skin diseases, autoimmune conditions, infections, etc. The objective of this report is to describe a clinical case of an inflammatory skin condition with a pathology of lymphocytic vasculitis and its response to phototherapy

Materials & Methods:

This is a case of a 50/F with a strong family history of Atopy presenting with a chronic eruption multiple grouped erythematous to hyperpigmented papules on the trunk, upper and lower extremities. Clinical impression at this time was Papular Urticaria vs Pityriasis Licehnoides and symptoms were temporarily relieved by series of topical steroids and calcineurin inhibitor, oral antihistamines and tapering schedule of oral steroids. Due to the chronicity of lesions, skin punch biopsy was done which revealed moderately acanthotic epidermis, with foci of exocytosis of lymphocytes and parakeratosis, and dense cuffed perivascular infiltrate of lymphocytes with endothelial cell hyperplasia of blood vessels.

Results

Workup includes normal CBC, Prothrombin time and aPTT, negative ANA titre and an elevated ESR at 48.0. Patient was then subjected to twice weekly Narrowband UVB Cabinet Phototherapy. A total of 13 sessions was given which afforded relief of symptoms.

Conclusion:

Clinical correlation of the case is highly suggestive of Pityriasis Licehnoides as a cause of the lymphocytic vasculitis finding histopathologically. The significant symptomatic relief after a trial of Narrowband UVB (NB-UVB) Cabinet Phototherapy is congruent with available literature that NB-UVB is an effective and well-tolerated treatment option for this condition.

3D photography has high correlation with in-person review in the assessment of cutaneous T-cell lymphoma

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Introduction & Objectives:

Teledermatology has demonstrated efficacy, precision, and cost-effectiveness in managing dermatological conditions. However, there is a lack of literature on the application of 3D photography in evaluating patients with cutaneous neoplasms like cutaneous T-cell lymphoma. This study aims to assess the reliability of using 3D photography to evaluate skin involvement in mycosis fungoides compared to face-to-face clinic assessments.

Materials & Methods:

In this prospective study, individuals diagnosed with mycosis fungoides were enrolled from a single institution over a period of four months. Two dermatologists independently evaluated the extent of skin involvement using the validated Modified Severity-Weighted Assessment Tool (mSWAT) during face-to-face clinic sessions. Subsequently, participants underwent immediate 3D photography. The 3D images were assessed by the same dermatologists at-least two months later. Two additional dermatologists independently reviewed the 3D images on two occasions, spaced at-least two months apart. Intraclass correlation coefficients (ICC) with a 95% confidence interval (CI) were computed to evaluate agreement in mSWAT scores between the two groups of assessors. ICC values falling below 0.5, between 0.5 and 0.75, between 0.75 and 0.9, and exceeding 0.90 within the 95% confidence interval indicate poor, moderate, good, and excellent reliability, respectively.

Results:

Thirteen individuals diagnosed with mycosis fungoides were included in the study. In the face-to-face clinic assessment cohort, the mean mSWAT score was 29.4, with a range of 4 to 100. Conversely, in the virtual assessment cohort, the mean mSWAT score was 32.0, ranging from 0 to 104.5. The intraclass correlation coefficient (ICC) (2,2) between the mSWAT scores obtained from face-to-face clinic assessments and 3D image evaluations was 0.92 (95% CI: 0.83 to 0.97).

Conclusion:

The findings of this study indicate excellent reliability between mSWAT assessments conducted in face-to-face clinic settings and those based on 3D images. However, larger-scale investigations are necessary to establish the validity and feasibility of employing 3D photography for evaluating patients with cutaneous T-cell lymphoma.

Abstract N°: 6893

Coenzyme Q10 Skin Supplements for Elderly Women: A Randomized, Double-Blind, Placebo-Controlled Clinical Trial

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Introduction & Objectives: Coenzyme Q10 (CoQ10) acts by transferring electrons from mitochondrial complexes I and II to III. As its serum levels physiologically diminish with aging, supplementation has become a popular practice, dismissing dermatological efficacy studies. This study investigated the antiaging effects of oral CoQ10 through a randomized, double-blind, placebo-controlled clinical trial.

Materials & Methods: Of the 50 screened participants, 45 women, 60 to 76 years old were randomized into three groups: those taking CoQ10 at 100mg/day, CoQ10 at 200mg/day, and a placebo, for 12 weeks. The study design involved a comprehensive evaluation of the effects of CoQ10 supplementation on various skin parameters. It included assessments related to self-perceived aesthetic improvement, stereophotogrammetry analysis for blood vessels and skin pigmentation, skin elasticity, hydration levels, trans epidermal water loss (TEWL), dermal thickness and density measured by 20-MHz ultrasound, histological analysis using staining techniques to highlight the epidermis (hematoxylin-eosin), collagen (picrosirius), and elastic fibers (Weigert), immunohistochemistry for Nrf2 and p53 proteins, as well as analysis of laboratory parameters for renal, hepatic, and hematological function. Additionally, the study investigated serum cytokine levels, CoQ10 serum levels, gene expression using real-time PCR for metalloproteinases, oxidant, and antioxidant factors in the skin. The study was approved by the Institutional Review Board, registered on the national clinical trials platform, and participants signed informed consent. It was conducted in compliance with the Declaration of Helsinki and the International Conference on Harmonization of Good Clinical Practice.

Results: Oral CoQ10 supplementation showed cutaneous benefits related to facial erythema, hyperpigmentation, viscoelasticity, cellular epidermis area, collagen synthesis, preservation of elastic fibers, antioxidant factor Nrf2 maintenance, and p53 reduction at a daily dose of 200mg. There were no changes in self-perception of global aesthetic improvement, serum cytokines, trans epidermal water loss (TEWL), dermal thickness and density at ultrasound, or the extension of the dermal-epidermal junction. Gene expression for metalloproteinases, proto-oncogenes, and antioxidant factors showed no alterations. No laboratorial changes or adverse effects were observed.

Conclusion: Due to improvements in relevant parameters for aged skin, oral CoQ10 may contribute to skin health in aging as a supplement for elderly people.

Abstract N°: 6990

Investigation of the use of Ora-Pro-nóbis (Pereskia aculeata Mill.) as a natural agent for magnifying photoprotection

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Introduction & Objectives:

The growing concern about the harmful effects of sun exposure and the intense search for natural and effective alternatives to protect the skin has led to investigations into new components that can help and intensify photoprotective and antioxidant properties. Studies indicate that *Pereskia aculeata Mill.* has bioactive compounds with the ability to intensify photoprotective and antioxidant activity, suggesting potential for use in the formulation of photoprotective dermocosmetic products2. The objective of the work is to present the antioxidant and photoprotective potential of Ora-Pro-nóbis (Pereskia aculeata Mill.) extract, which can be an ally in the development of photoprotective formulations.

Materials & Methods:

(Tomiak *et al.,* 2023)2* method was applied to quantify the flavonoids in the glycolic extract, the quantification of flavonoids was carried out spectrophotometrically through a reaction with 5.0% aluminum chloride and reading at 425 nm, using quercetin as a standard, the absorbances were obtained using a spectrophotometer. (Oliveira, 2015)1 method was applied to evaluate the antioxidant capacity, the antioxidant activity was assessed using the (DPPH•) method, which involves the scavenging action of the free radical 2,2-diphenyl-1-picrylhydrazyl.

Results:

The average absorbance value of the extract was 0.806±0.062, with the total flavonoid resulting 0.6125mg EQ/g of dry drug. The antioxidant capacity showed a negative control with an absorbance of 1.05, while the positive control, quercetin, had an average absorbance of 0.115±0.005, with an average antiradical activity of 89.20±0.44% (Table 1).

Table 1. Antiradical activity evaluated in alcoholic extracts with different concentrations.

Extract alcoholic concentration	Antiradical activity
0,25%	17,80%
0,50%	40,95%
1,0%	53,80%
2,0%	82,00%
5,0%	---

Conclusion:

The results demonstrate that the extract glycolic of Pereskia aculeata had a total flavonoid concentration of 0,6125mg EQ/g of dry drug and antiradical activity, evaluated with alcoholic extract, between 17% and 82% in the concentration range of 0.25% to 2.0%. These results suggest that *Pereskia aculeata Mill.* is a promising natural antioxidant product and ex vivo studies must be developed to demonstrate its antioxidant activity and its ability to increase photoprotection, reducing the concentration of physical and chemical filters.

Keywords: antioxidant, photoprotector, *Pereskia acuelata Mill.*

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Reactive Eccrine Syringofibroadenoma: A Case Report of a Rare Disease

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Introduction & Objectives:

Eccrine syringofibroadenoma (ESFA) is a rare adnexal tumor of eccrine ductal differentiation often appears as a solitary, hyperkeratotic nodular lesion with a tendency for the extremities.

Materials & Methods:

Here we report a female patient with verrucous plaques on her foot dorsum who was diagnosed with ESFA after clinical and histopathological analysis.

Results:

A 67-year-old female patient presented to our department with a leg ulcer on her left foot. Her medical history revealed palmoplantar pustular psoriasis, hypertension, type-2 diabetes mellitus, diabetic neuropathy, and diabetic nephropathy. Also, her left toe was amputated secondary to a diabetic foot infection. Her medicines were insulin aspart, insulin detemir, linagliptin, telmisartan, pregabalin, and sertraline. Dermatological examination revealed a sharply demarcated ulcer on the dorsum of her left foot, measuring 5x3 cm in diameter, also multiple, cobblestone-like, flesh-colored nodules on the dorsum of the left foot were observed. In the histopathological analysis of the nodule hyperkeratosis, acanthosis, and multiple anastomosing cords of epithelial cells surrounded by a loose fibrovascular stroma were observed. Based on the clinical and histopathological analysis reactive ESFA diagnosis was made.

Conclusion:

ESFA is an adnexal tumor originating from the eccrine dermal duct or acrosyringium. Multiple anastomosing cords of benign epithelial cells surrounded by a loose fibrovascular stroma can be seen in the histopathological analysis of lesions. ESFA stains positively with epithelial membrane antigen (EMA) and carcinoembryonic antigen (CEA).

ESFA is classified into five subgroups in Starink's classification; solitary ESFA, multiple ESFA, multiple ESFA associated with ectodermal dysplasia syndrome, reactive ESFA, and non-familial unilateral linear ESFA. Reactive ESFA is associated with inflammatory or neoplastic dermatosis and frequently occurs in the acral location. Burn scar, bullous pemphigoid, erosive lichen planus, lymphedema, squamous cell carcinoma, and diabetes mellitus with polyneuropathy and chronic ulcer can trigger reactive changes that may be associated with eccrine duct remodeling or repair. The malignant degeneration of ESFA has been termed as eccrine syringofibrocarcinoma (ESFAC), and the mechanisms of malignant transformation are still unclear. It is recommended that complete excision of ESFA to prevent the risk of malignant degeneration. Our aim in presenting this case is to provide a better understanding of the clinical, histopathological features of a rare disease, ESFA.

Abstract N°: 7100

Eccrine Hidrocystoma: A Hidden Gem on the Ear Helix

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Introduction & Objectives:

Eccrine hidrocystomas are benign cystic lesions originating from eccrine sweat glands, commonly found in older adults.

They occur on the face or scalp, most commonly affecting the eye

Materials & Methods:

This poster presents a case study of a 62-year-old woman with no known comorbidities, who presented with a well-defined subcutaneous lesion located on the right ear helix, that appeared approximately 3 months ago. Clinical examination reveals a round, smooth, dome-shaped subcutaneous lesion covered by normal skin with a diameter of aproximately 5 mm and a firm consistency.

Under local anesthesia with 1% lidocaine, we performed a small incision that revealed colorless gelatinous content. The cyst wall was removed and sent for histopathological examination. The skin was suttured and a sterile dressing was applied.

Results:

The histopatological report revealed the diagnosis of eccrine hidrocystoma, appearing as a cyst with a wall composed of dense fibrous connective tissue with hyaline areas, lined on the inner side by stratified squamous epithelium composed of an outer layer of flattened cells with myoepithelial morphology, overlaid by an inner layer of cuboidal cells with round/oval nuclei situated basally and eosinophilic cytoplasm.

Conclusion:

Eccrine hidrocystomas occurring on the ear helix are considered relatively rare compared to other locations. While eccrine hidrocystomas can develop on various areas of the body, they are more commonly found on the face, particularly around the eyelids. However, cases of eccrine hidrocystomas on the ear helix have been reported in medical literature, albeit less frequently. The rarity of these occurrences underscores the importance of accurate diagnosis and tailored management strategies for such lesions.

Eccrine hidrocystomas can have a tendency to recur after treatment, especially if the underlying eccrine sweat gland dysfunction is not addressed. While treatments such as surgical excision, laser therapy, or topical therapies can effectively remove existing lesions, they may not always prevent the formation of new cysts. Additionally, the recurrence rate can vary depending on factors such as the size, location, and individual characteristics of the patient. Close follow-up and monitoring are essential to detect any recurrence early and initiate appropriate management strategies.

Abstract N°: 7115

Effectiveness of a ceramide-containing body cream in alleviating the signs and symptoms of dry African skin: A randomized, monocentric clinical analysis of hydration and skin barrier function

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Introduction & Objectives:

The prevalence of xerosis among individuals of African descent is well documented in literature, however, its impact on the African population remains an unsolved tension point. Xerosis is associated with reduced skin barrier function, and recent clinical data reaffirms the reduction of key ceramide subclasses in dry African skin compared to normal African skin. This study evaluated the clinical efficacy, impact on skin barrier function, and subject perception of a ceramide-containing body cream, applied twice daily on the legs of African subjects with mild to moderate dry and itchy skin, for 6 consecutive weeks.

Materials & Methods:

An African panel consisting of 56 women, phototype I-VI, ages 18-65, with signs and symptoms of mild to moderate dry and itchy skin were recruited for this study. Clinical evaluation of skin dryness, flakiness, erythema, dullness, and roughness was assessed by a dermatologist at baseline, post-application, day 1, 14 and 42. Hydration and transepidermal water loss (TEWL) were measured with a corneometer and tewameter, respectively, at baseline, D1, D14 and D42. In addition, product tolerance and satisfaction were self-assessed by participants post-application, D1, D14 and D42.

Results:

Statistically significant improvements were observed in all clinically graded attributes at each timepoint for the treated area compared to the baseline evaluation, except for erythema after D1 and dullness after D1 and D14. Instrumental evaluation showed a statistically significant improvement in hydration and reduction in TEWL at each time point compared to baseline. The product was exceptionally well-judged for its cosmetic acceptability and efficacy, with 100% of subjects indicating they would continue to use the test product.

Conclusion:

Results confirm the immediate and long-term efficacy of a ceramide-containing body cream in alleviating the signs and symptoms of dry African skin, thereby emphasizing its relevance in the improvement of skin barrier function in the African population. The test product was well tolerated and well appreciated by the subjects, leading to high satisfaction, and suggesting high compliance.

Abstract N°: 7129

To Be or Not to Be: Acute and Recurrent Pustulosis - A Rare Disease or a Diagnostic Challenge?

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Introduction & Objectives:

Acute and recurrent pustulosis (ARP) is a rare controversial entity, previously described in the literature as both actinic folliculitis and superficial actinic folliculitis. ARP manifests as an episodic pustular eruption, non-microbial, characterized by multiple pustules arranged on an erythematous background. These lesions occur mainly on the face, neck, and anterior thorax, with various triggering factors such as exposure to ultraviolet rays, heat, viral infections, or it can even be idiopathic.

The primary goal of our case report is to enhance awareness and emphasize the importance of establishing precise diagnostic criteria for improving the identification of this often overlooked and underreported condition.

Materials & Methods:

We present the case of a Caucasian female experiencing severe, intermittent pustular eruptions that significantly impact her quality of life.

Results:

A 46-years-old woman was admitted to our dermatology department presenting with multiple monomorphic pustules of small size, located on an erythematous background, pruritic, mainly localized on the bilateral temporal region, forehead, bilateral zygomatic region, anterior cervical region, and anterior thoracic region.

A thorough medical history elucidated that the initial lesions manifested approximately two years ago, with subsequent recurrences happening at a frequency of 3 to 4 times per year. While there was a confirmed history of sun exposure correlating with the flare-ups, not all episodes were attributable to such exposure.

We conducted an exhaustive array of clinical assessments, including bacterial swabs from the pustules, parasitological examinations of the skin for Demodex, Tzanck cytodiagnosis to detect herpes virus, and a skin biopsy was also undertaken as part of our investigative protocol. While all the previous examinations were negative, the skin biopsy revealed a perifollicular neutrophilic infiltrate.

The unique clinical presentation prompted a comprehensive differential diagnosis, which encompassed conditions such as acute generalized exanthematous pustulosis, acute localized exanthematous pustulosis, drug-induced acneiform reaction, subcorneal pustular dermatosis and Ofuji disease.

We've implemented a combination of chemical and physical sun protection methods, coupled with the application of Adapalene gel. This approach has led to positive results in managing acute lesions and has also reduced the frequency of flare-ups.

Conclusion: There have been only 23 reported cases in the literature under various names, primarily due to the diagnostic challenges associated with this condition.

The uniqueness of our case stems from the challenge of diagnosing a condition that initially doesn't seem severe

or disabling but significantly affects the patient's quality of life. One of the most challenging aspects was persuading the patient that the condition could be managed and wasn't medically severe.

Abstract N°: 7157

A Complicated Encounter: Managing Pfeifer-Weber-Christian Disease in Clinical Practice

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Introduction & Objectives:

Pfeifer-Weber-Christian disease (PWCD) is a rare idiophatic entity, characterized by lobular panniculitis involving adipose tissue, alongside systemic manifestations and multi-organ involvement. The hallmark tender nodules typically manifest in the lower extremities and trunk regions.

Materials & Methods:

We present the case of a Caucasian male experiencing painful subcutaneous nodules localized symmetrically on his thighs and legs accompanied by recurrent fever, nausea, and episodes of vomiting.

Results: A 61-year-old male was admitted to our dermatology department, presenting with multiple nodules measuring 1-2 centimeters in diameter, accompanied by systemic manifestations. The lesions were distributed across both thighs and lower legs, displaying various stages of development, ranging from erythematous and edematous to ulcerated and lichenified, along with atrophic scarring.

The lesions initially emerged five years ago, with only one painful nodule localized on the right inner thigh, which spontaneously resolved within weeks. After nearly a year, the condition recurred with increased severity, featuring multiple nodular lesions accompanied by malaise and high fever, prompting the patient to seek care at the local hospital. At that time, the surgical team conducted several biopsies identifying the lesions as abscesses, and treated him solely with antibiotics and painkillers.

We conducted a broad differential diagnosis, which included erythema nodosum, Bazin's erythema induratum, connective tissue disorders, pancreatic and renal diseases, gout, lymphoproliferative neoplasms, and alpha1-antitrypsin deficiency.

Multiple skin biopsies revealed the characteristic histopathological features of this condition. Integrating these findings with the clinical presentation, medical history, and anamnesis ultimately led to the definitive diagnosis of PWCD.

We commenced systemic corticosteroid therapy, with rapid improvement; however, the patient was lost to follow-up. After an year of absence, the patient returned with a large necrotic ulcer localized on the anterior foot, attributed to the application of a hot water bag to alleviate the pain. Immediate referral to surgical services was arranged. Unfortunately, limb amputation was required, and subsequent bone infection culminated in sepsis, ultimately resulting in the patient's demise.

Conclusion:**

PWCD poses a substantial challenge, not only in diagnosis and treatment but also in ongoing patient follow-up. However, prompt diagnosis and timely intervention can lead to favorable outcomes in managing this disease.

The unique aspect of our case lies in the delayed diagnosis and the subsequent challenges the patient faced in

receiving appropriate treatment. We believe that if the diagnosis had been made earlier, the patient would have been more receptive and motivated to undergo treatment. The delay in diagnosis eroded the patient's trust in the healthcare system, impacting their willingness to engage in their care.

Resolution of prurigo pigmentosa on dapsone

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Prurigo pigmentosa (PP), also known as Nagashima´s disease, is a rare inflammatory dermatosis characterized by pruritic erythematous papules or macules on the chest and on the back arranged in a reticular pattern. PP is often misdiagnosed, and therefore many patients are incorrectly treated. A 23-year-old Caucasian patient was admitted to our clinic showing erythematous, itching macules on his chest, back and neck, which he has developed within 6 weeks. His medical and family history was negative for other dermatoses. Moreover, he referred allergy to tetracyclines, and he did not take any drugs at that time. In addition, the patient referred an extreme change in his diet, starting a strict ketogenic diet for weight loss. A previous therapy with topical medium-potency corticosteroids did not lead to any improvement. Histologically, a mild elongation of rete ridges associated with spongiosis, and perivascular infiltration of lymphocytes and eosinophils was observed.

According to the clinical and histological features, a diagnosis of PP was established. The patient was treated with oral dapsone 50 mg twice a day over 12 weeks, showing a complete resolution of the clinical picture. PP is a rare inflammatory dermatosis, which usually affects adolescents and young adults. Although PP has been mainly reported in Asiatic patients, several reports described PP in patients of Caucasian, Hispanic, and African descent. Usually, patients show itchy, erythematous papules or macules on the back, chest, and neck, typically arranged in a reticulated pattern.

The pathogenesis of PP is still unknown, but aggravating factors have been identified, including dietary changes, friction, sweat, ketonuria, and hormonal changes. Furthermore, in the group of patients who reported dietary changes, about 40% showed a strict adherence to a ketogenic diet before the onset of PP. Pregnancy is also considered as an exacerbating factor. In addition, PP has been reported in patients with adult-onset Still disease. In this case, increased interleukin IL-6 expression in PP lesions was reported. Histologically, PP lesions can show several features. The most frequent epidermal changes include orthokeratosis, epidermal hyperplasia, spongiosis, and basal cell vacuolization, while frequent dermal changes are represented by perivascular polymorphonuclear and lymphocyte infiltrate, and papillary dermal edema.

Several clinical differential diagnoses should be considered, including tinea, contact dermatitis, and confluent and reticulated papillomatosis (CARP). However, CARP shows usually hyperkeratotic papillomatous lesions, which are not described in PP. Furthermore, CARP shows histologically neutrophilic exocytosis, interface dermatitis, spongiosis with vesiculation, and dyskeratosis. Tetracyclines are the gold standard therapy. Minocycline as monotherapy or in combination with topical corticosteroids is usually the first-line therapy, while doxycycline as monotherapy represents an alternative therapy. Dapsone represents an alternative therapy in patients with allergy to tetracyclines and it is as effective as tetracyclines in inducing a clinical remission. In addition, modifying patients' dietary habits can be also useful. In conclusion, dermatologists should accurately identify changes in patients' dietary habits in case of pruritic, reticulated rash on the trunk, and consider PP as possible diagnosis.

Abstract N°: 7230

Dermatomyofibroma – Case report

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Introduction & Objectives:

Dermatomyofibroma is the term used since 1991 to describe a rare benign type of cutaneous neoplasia, representing a dermal proliferation derived from fibroblasts and myofibroblasts. The typical clinical presentation is portrayed as a solitary, ill-defined, asymptomatic nodule or plaque, with color raging from normochromic to brown-erythematous, located on the upper part of the trunk, most frequently affecting young women. In atypical cases, it can often be mistaken for malignant tumors, with histopathology and immunohistochemistry being of use for the right diagnosis.

Materials & Methods:

Here, we present the unusual case of a 65-year-old woman who developed multiple violaceous lesions of dermatomyofibroma on the sites of and around post-operative abdominal scars. The lesions were highly symptomatic, the patient describing them as itchy and tender to touch. The diagnosis was made by excluding cutaneous sarcoidosis, keloid scars and granuloma annulare using histopathology, dosing angiotensin-converting enzyme and by performing immunohistochemistry.

Results:

The patient presented to our clinic regarding multiple pruritic erythematous-violaceous elevated plaques, with ill-defined borders and dimensions raging from 1-15 cm, located on the sites of post-surgical abdominal scars. The patient was suffering from other comorbidities, such as diabetes mellitus type 2 – on treatment with insulin and chronic renal failure and had been under close surveillance for leukemia for some time. She had undergone a radical hysterectomy 20 years prior to the presentation.

A skin biopsy specimen was obtained from one of the abdominal lesions for the histopathological examination. Angiotensin-converting enzyme was measured in order to exclude cutaneous sarcoidosis, with negative results. Immunohistochemistry was performed and the diagnosis of dermatomyofibroma was confirmed. A "wait and see" approach was taken.

Conclusion:

Atypical clinical presentations of dermatomyofibroma are possible and help us gather more information on this rare disease. Despite being a rare, benign condition with good prognosis, it is important that we start considering it in the diagnostic process, avoiding unnecessary tests and treatments.

Abstract N°: 7354

Porokeratoma- A rare distinct entity and therapeutic challenge

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Introduction & Objectives:

Porokeratoma as a distinct entity was first reported in 2007 by Walsh et al. Porokeratoma is described as an acanthoma with features of porokeratosis. Although it shares histological features with porokeratosis it is both clinically and histologically considered to be a distinct disease. Porokeratoma typically appears in patients without a personal or familial history of porokeratosis. It presents as a solitary plaque or nodule which tends to be localized to the upper or lower extremities. Histologically the lesion is characterized by acanthosis along with verrucous hyperplasia and multiple coronoid lamellae embedded

throughout the entire horny layer, which contrasts with porokeratosis, where they are present only at the border. Although the etiology remains elusive, immunosuppression is believed to play a role in the

potential development of the disorder. We describe a case of this rare disorder to highlight both the

diagnostic and therapeutic challenges associated with it.

Materials & Methods:

We present a case of a 58-year old man who presented with a sharply demarcated 2,5cm hyperkeratotic verrucous plaque on the right lateral foot which had been present for several years. Past medical history

was notable for chronic hepatitis C infection as well as oligoarthritis which was managed by immunosuppressant therapy, namely oral prednisone, and methotrexate. His family history was unremarkable. The clinical differential diagnosis initially considered was squamous cell carcinoma (SCC).

Results:

An initial shave biopsy revealed multiple cornoid lamella along with a discontinued granular layer underneath and multiple dyskeratotic keratinocytes within the spinous layer. Based on a clinicopathological correlation the diagnosis of porokeratoma was made. Multiple rounds of cryotherapy treatment with liquid nitrogen resulted in a limited response, and treatment was ultimately discontinued due to the development of local irritation and itchiness. A second shave biopsy was performed which re-confirmed the initial diagnosis of porokeratoma. Treatment was then initiated with 5-fluoruracil, to

which the patient noted a slight improvement. Ultimately, a near complete resolution of the lesion was achieved after a 6-week course with tretinoin cream 0,05%.

Conclusion:

Although porokeratoma shares the histological feature of cornoid lamella, it is both clinically and morphologically regarded as distinct from porokeratosis and is often resistant to treatment. As of date, a near complete resolution following treatment with tretinoin 0,05% cream has not

been described.

Abstract N°: 7364

Multiple Eruptive Dermatofibroma (MEDF)

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Introduction & Objectives:

Multiple eruptive dermatofibromas (MEDF) represent a unique variant of dermatofibromas characterized by the eruption of multiple lesions over time. Despite their benign nature, MEDF poses diagnostic challenges due to its dynamic clinical course and lack of precise diagnostic criteria.

Materials & Methods:

Case Presentations: We present three cases of MEDF encountered in our dermatology clinic, each demonstrating characteristic clinical features and histopathological findings. Patients presented with multiple darkly pigmented papular and/or nodular lesions on the lower extremities, with dermoscopic features consistent with MEDF. Histopathological examination confirmed the diagnosis of MEDF, ruling out other differential diagnoses.

Results:

In this case series, we present three cases of MEDF encountered in our dermatology clinic. Through these cases, we aim to elucidate the clinical manifestations, diagnostic challenges, and potential associations of MEDF, contributing to the understanding of this intriguing dermatological condition.

Conclusion:

Our case series highlights the clinical complexity of MEDF and emphasizes the importance of comprehensive clinical evaluations and histopathological confirmation for accurate diagnosis. Further research is warranted to elucidate the underlying pathophysiology of MEDF and establish clear diagnostic criteria to guide clinical practice.
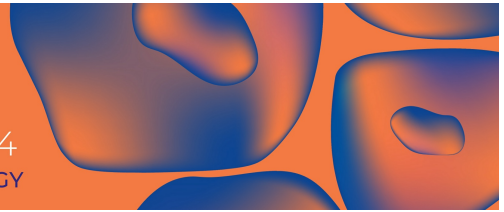
Abstract N°: 7418

"From Pixels to Precision: AI's Impact on Dermatopathology Diagnosis and Education"

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Introduction & Objectives:

The amalgamation of artificial intelligence (AI) and deep learning algorithms has brought about a paradigm shift in dermatopathology, heralding transformative changes in diagnostic accuracy, patient care, and educational methodologies. AI, particularly deep learning, utilizes machine learning algorithms and convolutional neural networks (CNNs) to analyze intricate dermatopathological images, predicting disease outcomes and enhancing diagnostic precision. In this abstract, we delve into the significance of AI in dermatopathology by synthesizing key findings from recent studies and developments in the field. It provides a comprehensive overview of AI applications, including deep learning models, CNNs, and pathology deep learning systems (PDLS), highlighting their role in diagnostic accuracy, efficiency, and education. Methodologically, the abstract synthesizes information from relevant literature, case studies, and historical perspectives to present a cohesive narrative on the integration of AI in dermatopathology.

Materials & Methods:

In the Materials & Methods section, we aim to elucidate the significance of AI in dermatopathology by synthesizing key findings from recent studies and developments in the field. It provides a comprehensive overview of AI applications, including deep learning models, CNNs, and pathology deep learning systems (PDLS), highlighting their role in diagnostic accuracy, efficiency, and education. Methodologically, the abstract synthesizes information from relevant literature, case studies, and historical perspectives to present a cohesive narrative on the integration of AI in dermatopathology.

Results:

Recent advancements in AI have demonstrated significant potential in enhancing diagnostic accuracy and efficiency in dermatopathology. Deep learning algorithms, particularly CNNs, have shown remarkable accuracy in classifying dermatopathological images, achieving comparable performance to board-certified dermatopathologists. Moreover, AI-powered educational tools, such as intelligent tutoring systems, offer personalized feedback and guidance to learners, potentially elevating educational standards in dermatopathology. Additionally, AI-driven computational research methodologies, including natural language processing (NLP) techniques, enable population-based studies and literature mining, advancing our understanding of cutaneous diseases.

Conclusion:

The integration of AI represents a significant leap forward for dermatopathology, promising unparalleled advancements in diagnostic capabilities and educational methodologies. By embracing these technological innovations and fostering collaborations with AI experts, dermatopathologists can optimize diagnostic tools and educational resources, ultimately enhancing patient care and educational outcomes. As we navigate this symbiotic relationship between human expertise and machine intelligence, dermatopathology stands poised to achieve transformative progress, shaping a future characterized by innovation and excellence. The crucial role of dermatopathological correlation cannot be overstated, especially when biopsy results prove insufficient. Despite

advancements in technology, the indispensable nature of in-person doctor visits persists, reaffirming the enduring value of direct patient care and examination in dermatological practice.

Abstract N°: 7432

"Skin Health in the Digital Age: Assessing Dermatology Apps"

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Introduction & Objectives:

The integration of mobile technology into dermatologic care has ushered in a new era of possibilities for patient management and education. Mobile applications (apps) have become integral tools in this field, offering tailored solutions to address various needs of patients and healthcare providers.

Our objective is to delve into the landscape of dermatology-focused mobile applications, exploring their diverse functionalities and potential benefits for both patients and providers. This encompassed an in-depth exploration of the features provided by these applications, focusing on how they address the unique challenges and requirements within dermatologic care. We will assess factors such as usability, relevance, and user feedback to understand their impact and potential utility in enhancing dermatologic healthcare services.

Materials & Methods:

To achieve our objective, we embarked on a thorough review of the available dermatology-related mobile applications. This involved a deep dive into the functionalities offered by these apps, focusing on how they address the unique challenges and requirements within dermatologic care. Our evaluation considered factors such as user interface, comprehensiveness of information, and integration with existing healthcare systems.

Results:

Our exploration revealed a rich variety of dermatology-focused mobile applications, each designed to address specific aspects of dermatologic care. These apps offer a range of functionalities, from educational resources and self-assessment tools to teledermatology services and remote consultation platforms. Notably, many of these apps are designed to be user-friendly and accessible, making them potentially valuable additions to dermatologic care practices.

Conclusion:

The proliferation of dermatology-focused mobile applications represents a transformative shift in the delivery of dermatologic healthcare services. These apps offer promising opportunities to improve patient care, enhance medical education, and facilitate remote clinical consultations within the dermatologic domain. However, careful consideration must be given to the validation of app content and regulatory oversight to mitigate the risks of misinformation or suboptimal clinical outcomes. Continued investigation is imperative to assess the safety profile and clinical efficacy of these technological interventions, underscoring the need for ongoing research, development, and educational initiatives.

Within the dermatological realm, challenges persist in accurately diagnosing conditions with shared morphological features and distinguishing them from mimicking conditions. The importance of skin biopsy and dermatopathological correlation remains paramount, particularly in cases where clinical manifestations are ambiguous. Additionally, effective communication skills are essential for addressing the psychological impact of diagnoses on patients. Despite technological advancements, in-person consultations retain their significance, emphasizing the importance of direct patient care and physical examination in dermatologic practice.

Abstract N°: 7499

Ofuji's Unexpected Encounter: A Unique Cutaneous Presentation in Lupus and Sjogren's Syndrome

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Introduction & Objectives:

Patients with connective tissue diseases like lupus erythematosus and Sjogren's syndrome can present with a range of cutaneous manifestations, often posing diagnostic challenges. We describe a case of a patient with these underlying conditions who presented with unique dermatological features resembling Ofuji disease, an uncommon variant of eosinophilic folliculitis.

Materials & Methods:

A 68-year-old male patient known with cutaneous lupus erythematosus and Sjogren's syndrome presented with asymptomatic, ill-defined, erythematous, scaly plaques, inconsistently indurated, apparently consisting of confluent papules covered by fine, uniform scale,, initiated two weeks prior, localized on the outer parts of the arms bilaterally, with resolving appearance on the left brachium. A punch biopsy was performed to establish a definitive diagnosis, considering differential diagnoses including subacute cutaneous lupus erythematosus, tinea corporis and nummular eczema.

Results:

Histopathological examination of the lesion revealed findings consistent with eosinophilic folliculitis (suggestive of Ofuji disease) characterized by the presence of eosinophils within the hair follicles and follicular mucinosis. Treatment with potent topical corticosteroids resulted in complete resolution of the lesions.

Conclusion:

This case underscores the importance of considering rare dermatological entities like Ofuji disease in patients with underlying connective tissue disorders. Recognition of such atypical presentations is crucial for accurate diagnosis and appropriate management, leading to favorable outcomes for affected individuals. What is also intriguing about our case is the association of follicular mucinosis on histopathology, a finding typically seen in human immunodeficiency virus- associated eosinophilic folliculitis rather than in Ofuji disease.1 It's noteworthy that our patient is HIV-negative, highlighting the unique nature of this dermatological presentation in the absence of HIV infection.

Inpatient Dermatology referrals: What is the burden? A retrospective review of 14 years of dermatology inpatient referrals

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Introduction & Objectives:

The lack of dermatological knowledge by non-dermatologists is exposed by the increasing number of requests made for inpatient dermatological consultations. Patients have been commenced on inappropriate treatment because of poor dermatology training.

To determine the burden and accuracy of inpatient dermatology referrals.

Materials & Methods:

A retrospective cohort study using paper inpatient dermatology referrals from one Health Board between June 2007 and July 2021. Data analysis included timing of referrals; referring speciality; diagnosis and treatment. Descriptive statistics, using Excel, were used for analyses. 1659 referrals were analysed.

Results:

The average number of referrals per year was 106 (79-166). The most frequent day of referral was Monday (26%). Most referrals were from medical teams (73%).

Differential diagnosis was suggested by the referring team in 59% of referrals. In only 29% of referrals the dermatology team agreed with the differential diagnosis. There was discrepancy in the correctness of diagnosis in all categories, however the paediatricians were most likely to offer a correct differential (44%). In 44% of referrals treatment was commenced by the referring team, most commonly antibiotics.

Conclusion:

There is an extra burden on dermatology teams to cover inpatients. Our figures highlight two important issues – the need for better dermatological education in medical schools to improve diagnosis accuracy and management of conditions as well as the need to recognise the need for an inpatient dermatology service to review inpatient referrals and advise in diagnosis and management of dermatology cases on the wards, and to protect the service from being uncoupled from the main hospital.

Hospital Anxiety and Depression Scale in the dermatologic patient in the emergency department.

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Introduction & Objectives:

The extent of anxiety and depression presents a metric for evaluating patients social functionality. Thi aspect may be influenced by physical illnesses, thereby impeding their capacity to adequately manage the associated pathology.

The aim of the study was to assess the perceived level of stress among patients, which impacts the effective management of the presenting pathology, with a specific focus on individuals seeking dermatological consultation compared to those seeking medical attention for other reasons

Materials & Methods:

A cross-sectional study was carried out in the dermatology and emergency service between February to March 2024.

Patients who presented for dermatological, cardiological, digestive, oncological, respiratory, and other reasons were evaluated using a validated questionnaire: "The Hospital Anxiety and Depression Scale" (HADS) to detect states of depression and anxiety in a hospital outpatient clinic setting." Original version by Zigmond and Snaith, 1983. The variables analyzed in said survey were: level of anxiety, anxiety disorder and depression adapted to each process for which you consult.

Results:

This study included 28 participants. Skin conditions consultation were 13 (46.4%) and other group 15 (53.6%).

Conclusion:

The average scores of the items and subscales of the HADS for both skin and other reasons. Patients with diagnoses included in depression obtained significantly higher scores (ED 1,364 p < 0.59) ,unlike anxiety, which was the most significant element among the group of other reasons for consultation besides dermatological, compared to depression.

nevus pens, a rare phenotype of epidermal nevus

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Introduction & Objectives:

Described by Torrelo et al. in 2011 for the first time under the name of nevus PENS with skyline basal cell layer, in 5 cases, and 1 year later by Tadini et al. in 6 cases, as a rare and distinct phenotype within the group of epidermal nevi, characterized by asymptomatic skin lesions. In the literature, up to 50% of the cases were associated with neurological alterations such as epilepsy and mental retardation. The PENS nevus had not yet been described in Brazil

Materials & Methods:

Case 1: a 6-year-old female patient had small papules with an irregular surface, measuring between 0.5 and slightly elevated, between 0.5 and 2 cm, isolated, located near the nipple, back, arm and gluteal region since the age of 3 (4 lesions).**

Case 2: a 3-year-old female patient presented with slightly elevated plaques, between 0.5 and 1 cm, with a pearly surface, located on the thigh and upper limbs (approximately 5 lesions).

Case 3: a 5-year-old female patient presented with irregular, polygonal papular lesions with a rough surface, measuring between 0.5 and 3 cm, whitish, located on the elbow and lower limbs (approximately 5 lesions).

Case 4: a 4-year-old male patient presented with discretely papular lesions with a slightly rough surface, isolated and confluent in a segmental arrangement, affecting from the gluteal region to the dorsum of the right foot.

Results:

The histopathological examination of the four cases showed epidermis with mild hyperorthokeratosis and acnntosis, the most notable finding being the arrangement of the basal layer forming a regular palisade ("skyline")

Conclusion:

The PENS nevus has only recently been characterized in the dermatological literature and has not yet been identified in Brazil.

The genetic alteration responsible for this phenotype has not yet been characterized.

We present four cases clinically and histopathologically superimposed on the cases previously described. Tadini et al identified a subgroup of cases in which neurological alterations ("PENS nevus syndrome") were associated, which were not observed in any of our cases.

The clinical lesions are characteristic: papules with an irregular shape and surface and slightly squamous, usually presenting with hypochromia.

The lesions are usually randomly distributed, with the exception of the segmental form presented in our Case 4,

which had been previously described in 1 patient (Faure).

The clinical differential diagnosis of nevus PENs should be made with other epidermal nevi, with viral warts, seborrheic keratoses, and lichen sclerosus and atrophic. Histopathological changes are described as discrete hyperkeratosis and acanthosis, the main finding is the clear palisade arrangement of the basal keratinocytes, which led to the comparison with the grouping of skyscrapers in a metropolis ("skyline"). In the presence of nevus PENS, any neurological or intellect alterations should be investigated

Reference

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Abstract N°: 7614

"Breaking the Age Barrier: The Rise of Prejuvenation in Aesthetic Medicine"

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Introduction & Objectives:

Recent interest in aesthetic dermatology has led to advancements in skin rejuvenation techniques, aiming to make aged skin appear younger. "Prejuvenation" methods focus on both rejuvenation and preventing aging, popular among younger demographics influenced by social media and beauty standards. They seek to prevent fine lines, wrinkles, discoloration, and sagging.

This review explores regenerative medicine in dermatology, focusing on wound healing mechanisms and key cellular components like platelets, fibroblasts, and adipocytes. It discusses emerging modalities including adipose-derived stem cells (ASCs), nanofat grafting, platelet-rich plasma (PRP), extracellular vesicles (EVs), and aesthetic regenerative scaffolds (ARSs) such as calcium hydroxyapatite (CaHA), hyaluronic acid (HA), and polylactic acid (PLLA) fillers. It also covers polynucleotide-based therapies, skin peels, microneedling, and other methods, highlighting their roles in correction and prevention.

Materials & Methods:

This review meticulously examines regenerative medicine and the prejuvenation trend in dermatology through an exhaustive literature search. The search primarily focuses on peer-reviewed articles, clinical trials, and reviews. Databases like PubMed, MEDLINE, and Embase were thoroughly interrogated using relevant Medical Subject Headings terms and keywords. Studies were meticulously selected based on their relevance, with a keen eye on recent publications. Data extraction and synthesis were rigorously conducted to compile key findings pertaining to regenerative approaches in aesthetic dermatology.

Results:

The findings highlight the efficacy of various techniques in aesthetic dermatology for regenerative and prejuvenative purposes. ASCs and nanofat grafting show promise in fostering tissue regeneration. PRP and EVs emerge as potent agents for biochemical modulation, while aesthetic regenerative scaffolds like CaHA, HA, and PLLA fillers provide structural support and facilitate tissue regeneration. Clinical investigations reveal compelling outcomes for peels, microneedling, and other modalities, showcasing improvements in skin quality, reduction in wrinkles, and restoration of volume. These results affirm the effectiveness of regenerative interventions in addressing dermatological concerns, underlining their potential utility in prejuvenation strategies among millennials and younger demographics.

Conclusion:

In summary, regenerative dermatology offers promising noninvasive solutions for skin rejuvenation across various age groups, including the burgeoning trend of preventive anti-aging measures among younger cohorts. This review highlights the efficacy of the aforementioned techniques. Despite these encouraging outcomes, the absence of standardized protocols presents challenges in clinical practice. Additionally, the shift towards preventative, proactive treatments is expected to drive an increase in demand for aesthetic interventions, as a broader spectrum of patients seeks to manage the aging process. While this trend bodes well for the industry, it's

imperative to navigate this demand safely and ethically by ensuring the delivery of age-appropriate treatments and countering social media advice from non-professionals with evidence-backed professional guidance to ensure the safe adoption of preventative measures among younger patients.

Abstract N°: 7616

Evaluation of ChatGPT's Skin Advice: A Scoping Review

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Introduction

Artificial intelligence-powered chatbots, exemplified by OpenAI's Chat Generative Pre-trained Transformer (ChatGPT), have emerged as accessible resources for patients seeking quick medical insights. Leveraging natural language processing, these programs generate tailored responses by aggregating online information. This systematic review aims to evaluate the quality of ChatGPT's responses to dermatological inquiries.

Methodology

We conducted searches across MEDLINE, EMBASE, CINAHL, and Web of Science using keywords pertinent to ChatGPT and dermatological conditions. We excluded studies focused solely on clinician-facing or cosmetic-related queries. Data extracted encompassed the ChatGPT version used, assessed dermatological conditions, evaluation criteria or clinical comparators, overall response quality, and response strengths and weaknesses.

Results

Our review included ten studies, analyzing 355 questions directed to ChatGPT on common dermatoses such as acne, atopic dermatitis, psoriasis, and rosacea. Queries predominantly revolved around etiology, management, and prognosis, sourced from online forums, Google Trends, medical records, and inputs from dermatologists. Assessment criteria comprised accuracy (7/10 studies), appropriateness (4/10), reliability (4/10), comprehensiveness (3/10), and readability (2/10), typically benchmarked against clinical guidelines or dermatologists' expertise.

ChatGPT's responses generally demonstrated accuracy, appropriateness, and reliability, albeit with variation influenced by dermatological conditions and query nature. Inquiries on management exhibited lower accuracy and appropriateness compared to those on etiology or natural history. Factors contributing to decreased accuracy included the absence of case-specific recommendations and deviations from evidence-based practice, notably concerning naturopathic remedies. Such deviations may stem from the ambiguous evidence base surrounding certain treatments, potentially perpetuating medical misinformation. Noteworthy improvements in accuracy were observed between ChatGPT versions 3.5 and 4.0, particularly evident in responses regarding alopecia areata.

Appropriateness scores ranged from 79% (clinical management of alopecia areata) to 92% (melanoma). An instance of an entirely inappropriate response involved basal cell carcinoma management, where ChatGPT erroneously suggested untreated cases could progress to "life-threatening melanoma". Notably, ChatGPT exhibited no "hallucination" in any of its 40 responses to real patient inquiries from electronic medical records.

Conclusion

ChatGPT generally furnishes satisfactory responses to common dermatological inquiries. Nevertheless, identified weaknesses include less actionable recommendations and decreased accuracy in managing-related queries and contentious topics. While infrequent, instances of "red-flag" responses warrant attention. Further investigation is warranted to delineate ChatGPT's performance in addressing complex skin disorders.

Abstract N°: 7693

"From Burns to Blisters: Climate Change's Hidden Impact"

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Introduction & Objectives:

Anthropogenic global climate change persists due to fossil fuel consumption, raising global temperatures by about 1 °C above preindustrial levels. The United Nations Intergovernmental Panel on Climate Change warns of significant adverse effects if temperatures exceed 1.5 °C. Stratospheric ozone depletion increases melanoma and keratinocyte carcinoma risks due to UV radiation. Air pollution is linked to atopic dermatitis, psoriasis, pemphigus, acne vulgaris, melasma, and photoaging. Rising temperatures disrupt the skin microbiome, impacting atopic dermatitis, acne vulgaris, and psoriasis, exacerbating skin diseases and heat stroke risks. Extreme weather events like floods and wildfires cause cutaneous injuries, skin infections, and worsen inflammatory skin disorders.

Materials & Methods:

This review embarks on a journey to unravel the intricate relationship between climate change and dermatology, with a profound focus on inpatient care. Employing a rigorous methodology, we conducted a systematic search of PubMed, Scopus, and Web of Science databases to unearth pertinent articles spanning infectious diseases, skin conditions, ultraviolet radiation effects, and extreme weather events linked to climate change. Keywords such as "climate change," "infectious diseases," "skin conditions," "ultraviolet radiation," and "extreme weather events" acted as guiding beacons in our quest for knowledge. We meticulously selected articles published from 2010 to 2023 to ensure a panoramic view of recent advancements in this dynamic field.

Results:

Climate change profoundly affects dermatologic health, altering disease distribution and behavior. Temperature shifts impact infectious disease vectors, leading to geographic changes in diseases like Lyme disease. Escalating temperatures worsen prevalent skin conditions and increase the risk of skin cancer due to heightened UV radiation exposure. Extreme weather events compound dermatologic challenges, including heat-related ailments, injuries, and infections. Climate-induced air pollution worsens inflammatory skin diseases and autoimmune conditions.

Conclusion:

Amidst this whirlwind of dermatologic dilemmas precipitated by climate change, inpatient dermatologists emerge as frontline warriors in the battle for patient well-being. Armed with knowledge and empathy, they stand poised to confront the evolving spectrum of infectious diseases, skin conditions, and environmental stressors. However, mere awareness is not enough; action is imperative. Dermatologists must champion climate-friendly initiatives and actively contribute to endeavors aimed at curbing greenhouse gas emissions. From advocating for sustainable healthcare practices to fostering environmental stewardship within their communities, dermatologists wield immense potential to effect positive change. Furthermore, integrating climate-conscious protocols into patient care regimens can serve as a powerful tool in fortifying individual and planetary health against the ravages of climate change. As we navigate the uncertain terrain of a warming world, let us heed the call to action, harnessing science, reason, and compassion to safeguard the future of dermatologic care and beyond.