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Abstract N°: 52

case report of an unusual neck swelling presentation

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Introduction & Objectives:

Spontaneous Cervical Swelling Syndrome (SCSS) is a rare disorder which usually presents as a sudden, unprovoked unilateral supra-clavicular swelling.

It is poorly described in the literature, we identified only few number of case reports discussing this phenomenon.

The Objective of this case report is to highlight the presence of this unusual entity and add new data to an underreported condition.

Materials & Methods:

This is a Case report of a 34 years old left handed female, who was recently reviewed in the dermatology department with a sudden, spontaneous, non-painful, left-sided neck swelling, occurring on two different occasions.

With each episode she complained of fatigue, chest pain, shortness of breath, abdominal distention and generalized malaise, each lasted approximately 72 hours and was followed with complete spontaneous resolution.

On detailed history, it was noted that both episodes were triggered by vigorous exercise.

On Clinical examination a diffuse, 3cm cystic fluctuant swelling was noted within the left supraclavicular fossa.

Further clinical examination, laboratory investigations and imaging included neck Ultrasound and a thoracic CT scan.

Results:

Laboratory tests were all normal.

Imaging revealed the presence of a filling cystic defect in the thoracic duct confirming the diagnosis of a SCSS.

Conclusion:

SCSS is predominantly seen in women of child-bearing age with a mean onset between 30-65 years. It can be associated with vigorous exercise or in some cases, with patients with a high-lipid intake, it is usually not associated with any abnormal laboratory results, spontaneous resolution within few days is the most common sequelae.

The first to report on this syndrome was Franceschi et al.(1),he published a four case series paper on the recurrent cervical swelling syndrome .

In 2021 Julie Planchette et.al(2) carried out a retrospective study between 2010-2020 , and 14 patients with transient occlusion of thoracic duct were reported.

SCSS is a rarely described entity, only few cases were reported on this condition till now , in this case report, we report a new case of SCSS, and we highlight the importance of adding this diagnosis in the differential diagnosis of a sudden unprovoked cystic neck swelling, after exclusion of other inflammatory, infective and malignant etiologies

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Abstract N°: 183

"Nail Fold Capillaroscopic changes in Type 2 Diabetes Mellitus :A marker of prognosis ??"

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Introduction & Objectives:

Introduction: T2DM is considered as a disease with high mortality rate with long term multi systemic adverse effects. In view of its remarkable vascular involvement ,direct observation tools like ophthalmoscope etc were used since long time for assessing disease effect on microvasculature. One such novel tool of substantial importance is Nail Fold Capillaroscopy(NFC). NFC is an established method for assessment of microvascular circulation and architecture of Proximal Nail Fold, especially in CTDs. However its utility in early prognostic evaluation of T2DM requires further study.

Objectives: To describe various Nail Fold Capillaroscopic changes in patients of T2DM

Materials & Methods: NFC was done on 8 fingers(excluding thumbs) of 156 patients with T2DM along with fundoscopy to rule out Diabetic retinopathy(DR).

Results: Common nail fold capillaroscopic changes noted among study subjects were tortuosity(91.0%),followed by Sub-papillary venular plexus(87.7%) followed by neoangiogenesis(86.5%), microhaemorrhages(85.3%), architectural derangement(78.8%), megacapillaries(76.9%), capillary density changes(55.1%), receding(26.3%), angulated(25.6%) capillary dropouts(6.4%), avascular areas, bizarre changes (3.2%) each and meandering(1.3%).Various patterns of NFC were noted to be significantly higher among cases with poor glycemic status($P<0.05$).Mean capillary density did not vary with glycemic control status, but increased proportional to age & duration of diabetes with higher incidence among female patients.Among the fundoscopy findings,a total of 30 subjects were found to have DR, with subpapillary plexus(100)& tortuosity(93.75%) being the most commonly associated NFC findings.

Conclusion: NFC patterns correlate with disease duration & glycemic control & can be used as subtle marker for early prediction of complications in diabetics. Specific NFC patterns act as surrogate markers for Diabetic Retinopathy. This modality can be used in routine clinical practice for non invasive risk stratification in diabetics.

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Abstract N°: 210

Interprofessional Teamwork for Skin Problems in Pregnancy

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Introduction & Objectives: Hormonal changes in pregnancy regularly cause skin changes that can result in both physiological and pathological conditions. Support with information and control for risk signals is crucial in supporting the pregnant person professionally throughout her pregnancy. Midwives are often the first profession to be contacted by pregnant women with discomfort of any kind associated with the state of pregnancy. They play a key role in canalizing information for the pregnant women, in detecting risk signals and leading further management of skin diseases. It is one of their core abilities to distinguish between normal changes associated with pregnancy or changes that might lead to a more serious condition in need for medical consultation and treatment.

Materials & Methods: Presentation of interdisciplinary algorithms and educational means for information of midwives in skin conditions and skin diseases. Presentation of cases with physiological changes and their differentiation from pathological skin changes.

Results: With the establishment of the midwifery science degree program in 2020 at the University Clinics Hamburg Eppendorf, we started to implement teaching about skin physiology and skin diseases in pregnancy. The exchange with the midwives and students lead to an interprofessional information about needs of the pregnant women considering their skin conditions and diseases. We gave information about gestational dermatoses, chronic inflammatory skin diseases, evidence based treatments and medications and their respective risk potential for the unborn child. In reverse we received insight into skin problems which pregnant women address to their midwives during pregnancy, postpartum and lactation. The lectures and interprofessional seminars addressed main topics like wound healing, autoimmune or chronic inflammatory skin diseases and their changes in pregnancy, treatment options and contraindications for some systemic medications as well as national and international recommendations and guidelines for treatment of dermatoses.

Conclusion: The educational exchange of dermatologists and midwives and a close teamwork in skin problems of women, either being pregnant, postpartum or lactating shows an effective and timesaving way to ensure good monitoring, guidance and informed, evidence based treatment of women with skin conditions in this situation. We emphasize the need for interprofessional exchange of information and support information of midwives about skin conditions and skin diseases in pregnancy as the first line of care for this special situation in life.

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Abstract N°: 327

Recalcitrant Behcet's like cutaneous manifestations – Trisomy 8 Myelodysplastic Syndrome related autoinflammatory disease

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Introduction & Objectives:

Autoinflammatory diseases in relation to trisomy 8 with or without myelodysplastic syndrome (MDS) have been reported in the literature. The most common cutaneous manifestation is described as Behcet's-like disease, which is often accompanied by recurrent febrile episodes. We report a case of recalcitrant autoinflammatory disorder associated with underlying trisomy 8 MDS.

Materials & Methods:

Results:

A 68-year-old Asian man presented with recurrent fever, arthralgia and painful erythematous nodules over his trunk and limbs since 2018. There were no oral, ocular, genital and gastrointestinal symptoms, and pathergy was absent. Extensive autoimmune and infective workup was unremarkable. Repeated skin biopsies showed panniculitis and medium vessel vasculitis. Bone marrow examination showed a normocellular marrow without morphologic dysplasia. However, cytogenetic analysis revealed the presence of trisomy 8, suggesting an increased risk of development of MDS.

Our patient was started on high-dose systemic steroids with partial response. Trials of methotrexate, azathioprine, mycophenolate mofetil, leflunomide, colchicine, tofacitinib, sarilumab and tocilizumab all did not achieve satisfactory response, and patient remained steroid dependent.

He subsequently developed cytopenia and a bone marrow examination was repeated in 2022, which was diagnostic of MDS. Despite being diagnosed with low risk MDS according to the International Prognostic Scoring System (IPSS), he was started on azacitidine in view of his refractory autoinflammatory disease. After commencing azacitidine, he remained afebrile without recurrence of tender nodules and has since been able to taper down his steroid dosage.

Conclusion:

Cutaneous manifestations of autoinflammatory diseases in relation to trisomy 8 with or without MDS can mimic Behcet's disease. The co-existence of autoinflammatory features and cytopenia should prompt an active search for trisomy 8 or MDS.

Treatment of autoinflammatory disease relies on high dose steroids, which comes with significant side effects. Introduction of steroid sparing agents might not be effective. In addition, the presence of cytopenia related to underlying MDS can be a hurdle for treatment with conventional immunosuppressants. For refractory or steroid dependent autoinflammatory disease, treatment of underlying MDS even when at low risk of progression to acute myeloid leukemia, can be effective and should be considered.

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Abstract N°: 526

Rare presentations of common skin diseases: urticaria, basal cell carcinoma and erythema multiforme

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Rare presentations of common skin diseases: urticaria, basal cell carcinoma and erythema multiforme

Introduction & Objectives: Urticaria, basal cell carcinoma (BCC) and erythema multiforme (EM) are common and well-known dermatological diseases. However, the diagnosis may be difficult in some rare presentations. Here, we presented a case of yellow urticaria, BCC in vitiliginous skin on scrotum and EM following lines of Blashko.

Materials & Methods: Case 1: a 69-year-old man followed in the cardiology intensive care unit, consulted us because of the newly formed yellow, itchy papule and plaques. It was learned that the rash appeared 8 hours after the use of amiodarone, regressed with intravenous chlorpheniramine hydrogen maleate treatment and then recurred. A dermatological examination revealed scleral icterus, jaundice, and well-circumscribed, bright yellow papules and plaques surrounded by mild erythema on extremities and trunk. Laboratory findings included total bilirubin level of 2.9 mg/dl, alanine transaminase level of 200 U/L and aspartate transaminase level of 49 U/L. A biopsy of the skin revealed findings consistent with urticaria. Based on these findings, the patient was diagnosed with yellow urticaria. Case 2: a 78-year-old man applied to our out-patient clinic with the complaint of papule in the genital area for 5 years. A dermatological examination revealed erytematous papule in vitiliginous patch on scrotum. It was learned that the patient's genital vitiligo lesion had occurred 3 years ago and the first vitiligo lesion started on his hands 7 years ago. A biopsy of the skin revealed findings consistent with BCC with positive BerEp4 staining. Case 3: a 17-year-old man presented to the emergency room with a 1-week history of a linear wide-spread eruption. He had a history of glucose-6-phosphate dehydrogenase deficiency. Lesions first appeared on his hand and spread to arm, trunk and leg. Physical examination revealed a linear, erythematous, edematous, papular eruption following Blaschko's lines, extending from the right arm to the shoulder, and to the ipsilateral trunk and ipsilateral leg. The lesions consisted of target papules arranged in narrow bands, following the Blaschko's lines. A biopsy of the skin revealed findings consistent with EM.

Results: We presented a case of yellow urticaria, BCC in vitiliginous skin on scrotum and EM following lines of Blashko.

Conclusion: These clinical presentations are extremely rare. Therefore, we want to present these cases to raise awareness.

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Abstract N°: 826

The impact of sleep deprivation on the skin

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Introduction & Objectives:

Sleep is defined as a temporary suspension of awareness with decreased sensitivity to external stimuli and is regulated by the circadian rhythm. Sleep is vital in calibrating skin physiology, and various hormones and pro-inflammatory cytokines exhibit circadian rhythmicity. This review explores the complex bi-directional relationship between sleep deprivation and cutaneous disease.

Materials & Methods:

A focused literature review was carried out utilising the following PubMed search strings, ("sleep", "sleep loss", "sleep deprivation") and ("skin disease" or "psoriasis" or "eczema" or "ageing"). 45 articles were identified with each undergoing full-text review comprising peer-reviewed clinical trials, reviews, treatment guidelines, and retrospective and prospective studies.

Results:

The results of the literature review identified common themes, such as multiple studies showing an increased frequency of night-time awakenings, greater difficulty falling asleep, and decreased sleep efficiency in sufferers of atopic dermatitis (AD) and psoriasis. The authors identified pruritus as the most consistent statistical predictor of sleep deprivation. Research suggested a dual approach to optimise treatment for AD and psoriasis using intensive topical therapies coupled with sleep-directed therapies.

Chronic pain caused by skin erosions in pemphigus vulgaris and abscesses in hidradenitis (HS) suppurativa are shown to be driving forces behind sleep deprivation. Moreover, a higher incidence of obstructive sleep apnoea (OSA) has been reported in patients with hidradenitis suppurativa (HS) compared to controls.

Very few studies explored the relationship between acne and sleep deprivation, with one study finding that subjectively worse sleep quality was associated with objectively worse acne. 52.3% of rosacea patients suffered poor sleep quality compared to 24.0% of controls, scoring higher on Pittsburgh Sleep Quality Index.

Ageing is a progressive process determined by intrinsic and extrinsic factors that synergistically lead to a loss of structural integrity and physiological function. Studies showed a significant reduction in skin hydration after one day of sleep deprivation and a significant reduction in skin elasticity, potentially contributing to the rate of skin ageing.

Conclusion:

A dynamic interplay of elements results in sleep deprivation impacting skin diseases, including disruption of circadian rhythmicity, altered skin homeostasis, symptoms (including pruritus and pain) and comorbidities such as OSA. Management strategies should focus on optimising disease control coupled with improving sleep hygiene.

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Abstract N°: 832

The Cost of Diagnosis of Leprosy by Active Case Detection in Kailali, Nepal

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Introduction & Objectives: Leprosy is a chronic infectious disease caused by Mycobacterium leprae. Current modalities for early diagnosis of leprosy include active case detection campaigns, contact tracing, and skin camps. Active case detection is an effective strategy that enables early treatment, prevents impending disability, and potentially stops the spread of leprosy. This study was conducted to determine the cost of early diagnosis of leprosy by active case detection method in Lamkichuha Municipality of Kailali district.

Materials & Methods: In coordination with the Municipality, Leprosy Control and Disability Management Section of Ministry of Health and Population conducted a survey in July of 2022. Using active case detection method, orientation on leprosy was given to health workers followed by household visit and screening of skin lesions suggestive of leprosy. Suspected cases were confirmed by dermatologists. Data obtained from the campaign was analyzed and results presented as cost per patient.

Results: The team screened 4526 families that included 21472 persons in the Lamkichuha Municipality. Among them, 195 were suspected as leprosy by the health workers and referred to referral health facility for diagnosis. Three of them were confirmed as leprosy resulting the prevalence rate of 1.4 per 10,000 populations. The average cost spent per patient was NRS 250000 (2000 USD).

Conclusion: The cost of diagnosis of leprosy by active case detection is high. The national programs should prioritize cost-effective modalities including the awareness raising campaigns for early diagnosis.

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Abstract N°: 948

The Dermatology Life Quality Index(DLQI): Primary Endpoint in Clinical trials -A paradigm shift!

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Introduction & Objectives: Up to now quality of life measures have nearly always been used as secondary endpoint measures in clincial trials, despite the validation of QoL measures often being more extensive than other disease severity measures. The Dermatology Life Quality Index (DLQI) has become the most widely used patient reported outcome measure (PROM) in dermatological studies due to its simplicity, ease of use and meaningful scores. A systematic review of randomised controlled trials (RCTs) utlising DLQI, covering all diseases and interventions, confirmed its extensive use, mainly as expected as a secondary endpoint. However, the aim of this study was to identify the use of the DLQI as the primary endpoint in RCTs.

Materials & Methods: The study protocol was prospectively published on the PROSPERO database, and followed PRISMA guidelines. Searches were made with Medline, Cochrane library, EMBASE, Web of Science, SCOPUS, CINAHL(EBSCO) and PsycINFO databases and records combined into an Endnote database. Records were then filtered for duplicates and selected by the study inclusion/exclusion criteria. Full text articles were sourced and data was extracted by two reviewers into a bespoke REDCap database, with a third reviewer adjudicating differences. The JADAD scoring method was used to determine risk of bias.

Results: Of the 3,220 publications retrieved from online searching, 457 articles met eligibility criteria and included 198,587 patients. DLQI scores were primary endpoints in 24 (5.3%) of these studies comprising 15 different diseases and 3436 patients. Most drug interventions (17/25, 68.0%) were systemic of which 5/25 (20.0%) were biologics (liraglutide, alefacept, secukinumab, ustekinumab, adalimumab). Eight of the pharmacolgical interventions (32.0%) were topical treatments and eight non-pharmacological interventions were reported. Three studies used non-traditional medicines. Eight studies (33.3%) were multicentred, and studies were conducted in at least 14 different countries. Twenty three studies included both male and female patients: one study included only females. Only seven (29.2%) studies mentioned the ethnicity of the study group. The JADAD risk of bias scale showed that bias was low as 95.8% of studies had JADAD scores of ≥2.

Conclusion: Data on ethnicity should be recorded in all future trials involving patients.This study provides evidence of the use of DLQI as a primary endpoint in RCTs: this recent development indicates acceptance of the appropriateness of PROMs as primary outcome measures, and informs and reassures researchers and clinicians over further similar use.

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Abstract N°: 1029

Keratinocyte differentiation, DNA damages and inflammation as possible markers for cutaneous field cancerization.

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Introduction & Objectives: Cutaneous field cancerization (CFC) is a skin area apparently normal composed by clones of genetic altered cells mainly due to chronic exposure to ultraviolet radiation (UVR). Patients affected by CFC not only have a higher risk of cancer recurrence but also to develop multiple actinic keratosis (AKs), that might evolve into squamous cell carcinoma (SCC). Nowadays, the state-of-the-art treatment of CFC is the same of AKs, which causes morbidity to patients and tremendous costs to the health system. Increasing our knowledge about CFC formation and progression, it would be possible to realize a target therapy. In our study we investigated the expression of keratinocyte differentiation markers (CK14, CK10 and filaggrin), oxidative DNA damages markers (8-OHdG, OGG1) and inflammatory cytokines (IL-1β, IL-6, IL-10) because no data are available about their expression on the CFC. In addition, we evaluated the expression of p53 and Ki67 as marker of the field cancerization.

Materials & Methods: A total of 27 healthy patients (CTRL skin) and 42 NMSC patients were biopsied at the Dermatology Unit of AOU Maggiore della Carità of Novara. Biopsies were processed for FFPE inclusion (7 CTRL, 11 CFC), RNA extraction (14 CTRL, 20 CFC) and protein isolation (6 CTRL, 11 CFC). For protein expression evaluation we performed immunohistochemistry (IHC) on FFPE samples and western blotting on epidermis, that was separated from dermis through Dispase II digestion. mRNA expression was evaluated with qRT-PCR.

Results: In CFC samples we found a downregulation of both gene and protein expression of p53 compared with CTRL skin and an overexpression of Ki67. About keratinocyte differentiation, we found an overexpression of CK14 and filaggrin, at both gene and protein level, and a reduction on the CK10 protein expression. Analysing DNA damages, we found that an elevated number of cells positive for the 8-OHdG marker on the CFC compared with CTRL samples, which correlated with an overexpression of OGG1. Finally, we found that IL-6 was more expressed on the CFC, on the contrary of IL-10 which resulted downregulated.

Conclusion: with our study, we demonstrated for the first time that impairment of keratinocyte differentiation, together with oxidative DNA damage and inflammation are involved on CFC and that could be considered a possible target for a CFC-directed therapies.

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Abstract N°: 1143

A case of neurilemmoma occured on the upper lip

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Introduction & Objectives:

Neurilemmoma (also called schwannoma) is a benign encapsulated nerve sheath neoplasm, composed almost entirely of Schwann cells. It is usually solitary and presents as soft, slowly growing, skin-colored to yellowish dermal or subcutaneous nodule. Although usually asymptomatic, in large lesions, pain, tenderness, and neurologic symptoms may occur. Herein, we report a case of neurilemmoma occurred on the upper lip.

Materials & Methods:

Results:

A 52-year-old female patient presented with a papule on the left side of upper lip for several months. Physical examination revealed an asymptomatic, solitary, about 3mm-sized, skin-colored papule. The patient had received intralesional injection of triamcinolone at a local dermatologist, but there was no improvement. Histopathologic findings showed a part of well-circumscribed intradermal tumor with mildly nuclear palisading spindle cells. In some parts of tissue, irregularly scattered spindle cells in myxoid stroma and small blood vessels were observed. Immunohistochemical staining for S-100 protein was positive. Based on the clinical and histological findings, she was diagnosed as neurilemmoma and is scheduled for excision.

Conclusion:

Despite its rare occurrence, neurilemmoma should be considered as a differential diagnosis when dealing with a lip nodule. Skin biopsy is recommended for an accurate diagnosis, and with a complete surgical excision, its prognosis is favorable.

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Abstract N°: 1145

A case of eccrine poroma on scalp

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Introduction & Objectives:

Eccrine poroma is a rare benign adnexal tumor arising from the intraepidermal portion of the sweat gland ducts. It accounts for approximately 10% of all sweat gland tumors and commonly affects middle-aged to elderly patients. It is known to be found most commonly on palms and soles, and manifests as a solitary, skin-colored to erythematous papule or nodule with smooth or verrucous surface. Treatment of choice includes simple excision or electrodessication. Herein, we report a case of a case of eccrine poroma occurred on the scalp.

Materials & Methods:

A 60-year-old female patient presented with a protruding nodule on the vertex scalp for 4 years. Physical examination revealed an asymptomatic, solitary, about 5mm-sized, pinkish nodule. The lesion's size gradually increased. Shave biopsy was performed under local anesthesia.

Results:

Histopathologic findings showed proliferation of cuboidal cells within the epidermis, extending into the dermis. A relatively sharp demarcation between the normal keratinocytes and the cuboidal cells was observed and cystic spaces were present within tumor. Based on the clinical and histological findings, she was diagnosed as eccrine poroma. Most of the lesion was removed by shave biopsy, and a simple excision is planned when the lesion grows out again.

Conclusion:

Although eccrine poroma is mostly found on the acral surfaces, dermatologists should be aware that it can also occur on other areas, for example scalp, to avoid misdiagnosis.

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Abstract N°: 1483

Adjunct Utility of Cross-sectional Imaging in Four Different Dermatological Conditions

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Introduction & Objectives:

Dermatological diseases are readily amenable to inspection, palpation, dermatoscopy and biopsy for establishing diagnosis. But there are situations where deeper tissues like bones may be involved or other organs maybe involved when radiology may aid in assessing the true extent or nature of the disease. Four different cases are reported here where cross-sectional imaging had adjunct value.

Materials & Methods:

After clinical and dermatological examinations patients were subjected to radiological Investigations like CT (n=1) and MRI (n=3) of the relevant part as per the indication.

Results:

Case 1: A 48-years-old female presented with gradually progressive swellings over right leg for 6 months. On examination there were two erythematous, scaly, indurated and non-tender nodules at postero-medial aspect of right lower leg. Histopathology showed dense diffuse infiltrates of atypical lymphoid cells in the dermis extending to subcutaneous layer with clear Grenz zone. Immuno-histochemistry was positive for LCA, CD 20, CD 5, BCL 2 and Ki 67 index of 50% suggesting high grade Non-Hodgkin Lymphoma-Diffuse large B cell Lymphoma (DLBCL). CT scan revealed right obturator, femoral and right inguinal lymph nodes.

Case 2: A 2 years-old-male presented with an extensive pigmented patch over his body since birth. Examination revealed an extensive pigmented patch covering 50% of the skin surface area over the torso, genitalia and both thighs. Multiple pigmented satellite lesions of size, 4-5cm were also present over the chest, legs, both hands as well as parts of the face. There were no other associated congenital anomalies. MRI Brain showed T1 hyperintensities in bilateral mesial temporal lobe, pons, medulla, bilateral cerebellar hemispheres and bilateral thalami S/O – Neuromelanosis. USG abdomen. The histopathological findings were consistent with congenital melanocytic naevi.

Case 3: A 52-years-old female presented with progressive swellings near right wrist joint for one year. Examination revealed three firm, non-compressible, non-tender swellings extending proximal and distal to wrist. The Superficial branch of radial nerve was grossly thickened. NCS was normal. ESR was 30mm/hr and Mantoux test showed 25mm induration. X-ray chest, X-ray of right hand and wrist were normal. MRI right wrist joint revealed tenosynovitis of the extensor tendons, three T1 heterogeneous hypointense nodular lesions arising from the tendons and thickened superficial branch of radial nerve in close approximation to the largest nodule. HPE from nerve and swelling were consistent with features of granulomatous inflammation. CBNAAT was positive from skin tissue but was negative from nerve suggestive of tubercular tenosynovitis** with neuritis.

Case 4: A 20-years-old male presented with 6 years history of gradually progressive swelling over right foot. On examination multiple pus filled openings over right foot extruding some blackish particles were seen. MRI foot revealed multiple small rounded T2 hyperintense lesions with central low signal which showed post-contrast ring enhancement within the metatarsal bones, Final diagnosis of eumycetoma was arrived with additional micro and

pathological support.

Conclusion:

Imaging has an important adjunct role to play in diagnosis and prognosis of many dermatological conditions which are suspected to involve deeper tissues or organs.

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Abstract N°: 1592

Aquagenic Wrinkling of the Palms: A Case Report

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Introduction & Objectives:

Aquagenic wrinkling of the palms (AWP), also known and aquagenic keratoderma was first described in 1964 by Elliot and is characterised by the appearance of papules and wrinkling of the palms after contact with water.

Materials & Methods:

A 24-year-old female patient with a background history of psoriasis, psoriatic arthritis, and hidradenitis suppurativa (HS) returned to the dermatology outpatient clinic complaining of a five-month history of excessive wrinkling of the palmer skin on contact with water. This was associated with a burning sensation, pruritus, and hyperhidrosis. Of note, the patient noted no family history of cystic fibrosis and has an unknown cystic fibrosis transmembrane conductance regulator (CFTR) gene mutation status.

For her psoriasis, psoriatic arthritis, and HS the patient had been stable on a regime of Methotrexate 5mg once weekly and Adalimumab 40mg every two weeks since 2019. In October 2022 she had a flare of HS and was commenced on Doxycycline 100mg once daily, shortly thereafter she developed excessive wrinkling of the palms and associated symptoms on contact with water.

On review in clinic, time taken to develop aquagenic wrinkling was measured. A burning sensation was experienced at approximately 1 minute followed by skin changes including the development of papules and excessive oedematous wrinkling at approximately two minutes. Base on the clinical findings a diagnosis of aquagenic wrinkling was made

Results:

AWP is characterised by the appearance of papules and wrinkling of the palms after contact with water, associated symptoms include pruritus, burning sensation and hyperhidrosis. In general, both the lesions and symptoms resolve within one hour. AWP has a strong association with cystic fibrosis patients and mutation carriers. The pathogenesis of AWP remains unclear however, it is proposed that sweat electrolyte disturbance results in sodium retention in epidermal keratinocytes leading to an increase in osmotic induced cell volume. There have been several case reports of drug induced AWP associated with COX inhibitors, aminoglycoside antibiotics, spironolactone, and gabapentin, all of which have full or partial response to withdrawal of the offending drug. Multiple treatment options have been published in the literature with varying results including topical tacrolimus, topical aluminum hydroxychloride, iontophoresis and botulinum toxin injections.

Conclusion:

The authors hope that this case can add to the existing knowledge of AWP, its pathogenesis and treatment options.

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Abstract N°: 1661

Efficacy of fractional carbon dioxide (CO2) laser versus Q-switched neodymium-doped yttrium aluminum garnet (Nd:YAG) and potassium-titanyl-phosphate (KTP) lasers in the treatment of acanthosis nigricans: A Pilot study

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Introduction & Objectives: Acanthosis nigricans (AN) is a common chronic skin disorder clinically presents by velvety hyperpigmented lesions mainly at the flexural areas. Fractional photothermolysis has been reported to improve both pigmentary and textural changes by removing thin layers of skin with minimal thermal damage. Other options are the Q-switched (Qs) Nd:YAG (1064 nm) and Qs KTP (532 nm) lasers. Both can induce collagen remodeling by dermal photo-mechanical microdamage. The aim of this study was to assess the clinical efficacy and the safety of fractional CO2 laser versus Qs Nd:YAG and KTP lasers in the treatment of acanthosis nigricans.

Materials & Methods: This randomized-controlled split neck study was conducted on 23 patients suffering from AN. For each patient, one side of the neck was randomly assigned to fractional CO2 laser and the other side to Qs Nd:YAG and KTP lasers every four weeks for four months followed by 4 monthly follow-up assessment. Acanthosis Nigricans Area and Severity Index (ANASI) score, melanin and erythema indices as well as Patient Satisfaction Scale (PSS), were used to assess improvement on each side separately.

Results: There was no statistically significant difference regarding the clinical improvement between the side treated with Fractional CO2 laser and the side treated with Qs Nd:YAG and KTP lasers (P value> 0.05). In most patients, both sides showed improvement during different sessions of therapy, as regards ANASI scores, melanin indices, patient satisfaction scores, and side effects.

Conclusion: In this study, we concluded that both fractional CO2 and Q-switched lasers proved to be a safe and effective line of treatment of acanthosis nigricans.

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Abstract N°: 1668

The Salernitan school of medicine - the 1st and the most important medical school in mediaval Europe

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Introduction & Objectives:

The Salernitan school of medicine was situated in the south italian city salerno

It was founded in the 9th century and it rose its prominence in the 10th century

The scool became the main base of all medical knowledge of that time

Materials & Methods:

We tried to give our vision of this problem based on the analysis of individual facts in various literary sources.

Results:

It is still not known exactly how and by whom the Salernitan medicalschool was founded but there is a legend that reported that a Greek pilgrim named Pontus had stopped in the city of Salerno and found shelter for the night under the arches of the Arcino aqueduct. There was a thunderstorm and another Italian runner, named Salernus, wandered in the same place. He was hurt and the Greek, at first suspicious, approached to look closely at the dressings that the Latin practiced to his wound. Meanwhile, two other travelers, the Jew Helinus and the Arab Abdela had come. They also showed interest in the wound and at the end it was discovered that all four were dealing with medicine. They then decided to create a partnership and to give birth to a school where their knowledge could be collected and disseminated.

It's a legend. It's known that the school was the first western medical school, representative of both the Greek and Arabic medical traditions. There was 3 historical periods of the school development – 1) 9-10 centures, 2) 11-13 centures, 3) 14-19 centures. Study In Salernitan medical school consisted of 3 years of logic and 5 years off medicine)including surgery and anatomy). Lessons consisted in the interpretation of the texts of ancient medicine. The Salernitan medical school is also famous for thous that both men and women had rights to study there. And there were also women who toughed there. This is quite unusual for the medieval education institution.

Conclusion:

When study in the treatises of the school it is difficult to believe that these works were written in the middle ages. Despite the oppression of the scientific learning through the "Dark Ages" the medical school of Salerno flourished promoting the development of the future European Universities.

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Abstract N°: 1675

meglumine antimoniate induced eosinophilic cellulitis (Wells syndrome): A case report.

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Introduction:

Eosinophilic cellulitis is a rare inflammatory disorder of unknown etiology. Characterized by erythematous plaque that mimic cellulitis. We describe a case of eosinophilic cellulitis induced by meglumine antimoniate.

Case report:

A 55 years old woman without past medical history, present with cutaneous leishmaniasis treated by intramuscular meglumine antimoniate. The patient developed burning bilateral red patches over buttocks after 1 week of treatment. Skin examination shows two annular red violaceous plaques on the buttocks. Laboratory tests found peripheral blood eosinophilia. histopathology revealed intra epidermal spongiosis, papillary dermal edema and an interstitial dermal infiltrate of eosinophils, with lymphocytes.

Results:

Eosinophilic cellulitis described by Wells in 1971. The pathogenesis is poorly understood. It can be explained as various stimuli triggers inappropriate eosinophilic local reaction due to anomalies in the systems regulating the function of the eosinophils. Clinically characterized by urticaria-like plaque which may have annular configuration, the eruption is preceded by prodromal itching or burning. Many triggering factors have been reported include insect bites, infections, an underlying myeloproliferative disorder and drugs (antibiotics, non-steroidal anti-inflammatory drugs, thiazide diuretics, anti-TNF). We report a new case of meglumine antimoniate induced-Wells syndrome. The lesions usually resolve in 2 to 6 weeks. Steroid therapy seems to be the most effective and allow rapid healing. Topical steroid may be sufficient in mild cases. Finally, treatment of triggers or associated disease should be considered.

Conclusion:

Wells syndrome is rare dermatosis, once the diagnosis is established relaying on clinical and pathological findings, triggering factors should be identified, as it can influence the patient management.

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Abstract N°: 1818

Acute Radiodermatitis Complicated by Herpes Zoster Following Radiofrequency Catheter Ablation

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Introduction & Objectives:

Radiodermatitis (RD) is a term used to express the damages that occur after ionized radiation. RD is classified into 2 categories. Those that develop within 3 months after irradiation are called acute RD, and those that develop months and years later are called chronic RD. Radiofrequency catheter ablation (RCA) is a method for treatment of cardiac arrhythmias. Herein, a case of acute RD complicated by herpes zoster (HZ) that developed after RCA is presented, because there is no similar case in the literature.

Materials & Methods:

A 40-year-old male patient applied to outpatient clinic with complaint of erythema in the right back that had started for 2 days. He applied to cardiology department one month ago, he was diagnosed with supraventricular tachycardia. Hence, RCA was applied one month ago. After that, oral ecopirin and fenofibrate were started due to hypertriglyceridemia. On the dermatological examination, sharply demarcated rectangular 15x20 cm erythematous patch was observed in the right scapula. This erytematous patch also extended to the posterolateral region of right arm. There were eroded and intact vesicles with dermatomal involvement on the lesion. Since the patient's pain was high, empirical systemic HZ treatment was initiated. A 4 mm punch biopsy was obtained from the intact vesicule. Histopathology revealed spongiosis which cause diffuse vesiculations in the epidermis and multinucleated giant keratinocytes containing intranuclear inclusions. Based on these findings, the patient was diagnosed with acute RD complicated by HZ developing after RCA. Local wound care and systemic HZ treatment continued one week and the lesion completely regressed. However, he presented with a similar erythematous lesion on the same area after 2 months. No additional radiation exposure or drug use were present. Hence, the diagnosis of recurrent acute RD progressing to chronic RD was considered.

Results:

RCA is a procedure which causes too much radiation exposure. RD develops in 90% of patients in cancer radiotherapy. In RCA, RD developed in 0.89% of the patients in the only large-scale study conducted in 2016. Acute RD usually occurs 1-4 weeks after radiation exposure. Pale or vivid erythema, focal dry or moist desquamation, diffuse moist desquamation, necrosis on the epidermis and dermis can be observed. Chronic RD is seen as areas where telangiectasias predominate on atrophic fragile skin. The relationship between acute and chronic RD is not clearly known and it is considered to occur by different mechanisms. It is thought that acute RD is caused by direct cell damage and chronic RD is caused by chronic production of TGF-β.

One of the acute side effects of ionized radiation on the skin is suppression of the cellular immune response. Herpes virus activation occurs as a result of the suppression of the cellular immune response, which appears as recurrent herpes activation or HZ. Studies have shown that the risk of HZ development is higher in cancer patients in whom radiotherapy is used.

Vesicles occurring in HZ and acute RD can be confusing. In both cases, patients may have burning and pain

complaints. Although there are cases of acute-chronic RD developing after RCA and HZ developing after radiotherapy, there are no cases of acute RD complicated with HZ after RCA in the literature.

Conclusion:

Acute RD cases are risky for all kinds of infections including herpes zoster. It should be taken care about development of herpes zoster on radiodermatitis cases.

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Abstract N°: 2097

carcinoma cuniculatum a likely simulator

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Introduction & Objectives: Carcinoma cuniculatum is a rare and infrequent tumor first described in 1954. It is considered a variant of well-differentiated squamous cell carcinoma. The term cuniculatum refers to a lesion originating from the epidermis, in Latin it means a tube or canal shape.

Its incidence is unknown and it affects males in greater proportion. Its growth is slow and its evolution can take up to 30 years. The most frequent site of involvement is the plantar region (90%).

Materials & Methods: Clinical case: We present the case of a 61-year-old male who consulted for painful tumor lesions of 3 months of evolution, 1.5 cm in diameter, located on the external aspect of the right forearm, ulcerated with infiltrated borders, excavated and hypopigmented center, with areas covered with crusts and multiple orifices with spontaneous drainage of sebaceous material.

In the patient's report he commented that, prior to the appearance of the lesions, he had presented warts in that anatomical site.

A sample was taken for mycological culture, which was negative, and an excisional and deep biopsy was performed, which reported ulcerated and infiltrating spinocellular carcinoma with warty and cuniculatum type patterns, with infiltration up to the subcutaneous cellular tissue, without perineural or angiolymphatic vascular invasion.

Results: Discussion: This tumor is considered a variant of well-differentiated squamous cell carcinoma, of low grade and banal appearance with significant local aggressiveness that can involve regional bone and muscle structures, with exceptional distant secondary involvement.

Its most frequent localization is limited to the plantar region and can be confused with over-infected warts or warts that do not respond to local treatment.

The few cases reported in the literature are described as locally growing soft masses covered by skin with orifices through which sebum-like material drains. As for their histology, they present a peculiar architecture characterized by vertical growth in the form of channels and interconnected fistulas that simulate rabbit burrows. These findings also present in our case could suggest a certain degree of suspicion in medical practice.

Conclusion: This presentation is motivated by the fact that this is a rare and infrequent pathology not only because of the histological type but also in this case, because of the anatomical site involved, different from the reported cases.

The chronicity of its evolution and behavior slows down the diagnosis and results in the need for extensive surgical and reconstructive resections of great magnitude, so we believe that it should always be suspected in chronic lesions of torpid evolution.

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Abstract N°: 2137

Tattoo-related pseudolymphoma: a clinical and histopathological analysis of 15 cases

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Introduction & Objectives:

Tattoo pseudolymphoma is a rare cutaneous complication of tattooing, which may clinically and histologically mimic a malignant lymphoma. It is described as a reactive lymphoproliferation, most probably due to chronic antigenic stimulation of the tattoo ink. A lack of clonal B- and T-cell populations in the microscopic examination imply for the benign character of lesions. To our knowledge, 45 cases of tattoo-related pseudolymphoma have been described in the literature to date. With the growing popularity of tattooing, we are observing an increasing number of patients suffering from this complication. The aim of our study was to analyze the clinical and microscopic picture of patients diagnosed with tattoo pseudolymphoma.

Materials & Methods:

15 patients (9 F, 6 M; mean age 39) coming from the Dermatology Department in Brescia, Italy (8 cases) and in Gdańsk, Poland (7 cases) were analyzed. All of the patients were diagnosed with a tattoo pseudolymphoma in the years 2018-2023, based on the histopathological examination of the skin biopsy.

Results:

In 13 out of 15 patients (86.7%), pseudolymphomas were diagnosed in tattoos of a red color. Only two patients developed lesions in black and blue ink respectively. The average delay of onset was 16 months after tattooing. Clinically, 53,3% of patients presented a papulo-nodular pattern, 26.7% - showed an infiltrative pattern, and 20% demonstrated a plaque-like pattern. The most characteristic additional symptom was pruritus, which was present in 66,7% of the cases. 86.7% of affected tattoos were placed on the limbs of the patients. Microscopic findings revealed infiltration composed mainly of T-cell lymphocytes in the majority of the cases (T-cell phenotype- 20%, predominant T-cell- 33,33%). Mixed T- and B-cell subtype was observed in 46,7%. Different treatment methods were introduced, including topical clobetasol, triamcinolone injections, surgical excision, oral prednisone, and CO2 laser ablation with various clinical outcomes.

Conclusion:

According to our analysis tattoo related pseudolymphomas are delayed cutaneous reactions that most frequently involve red tattoo color and present a T-cell pattern in histology. A biopsy from all of the red-ink hypersensitivity reactions is recommended in order to exclude a diagnosis of tattoo pseudolymphoma.

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Abstract N°: 2148

intralesional steroid injection with 40 % urea cream in treatment of keloid

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Introduction & Objectives:

Keloids are very common dermatological condition in our opds. There are various treatment options available to treat Keloids, but no single treatment works alone. We often need combination of treatment to treat Keloids. There by making the treatment expensive for the patients. We tried to treat Keloid in cheap ,safe and nonsurgical manner.

We tried to evaluate the effects of 40 percent urea cream along with Intralesional steroid injections (10 mg) in Keloid patients .

Materials & Methods:

We enrolled 10 patients in the study. The patients were explained about the treatment, and consent was taken for the treatment. The patients were injected with 10mg of intralesional Triamcinolone acetonide, and 40 percent urea cream was given to them to apply at home for a period of one month. Patients were followed up monthly.

Results:

2 patients lost to follow up, 3 patients switched to other modality of treatment and 5 patients continued the treatment and significant suppression of Keloid was seen. Hypo pigmentation around the healing lesions and initial pain during injecting Triamcinolone acetonide were the side effects.

Conclusion:

Intralesional injection of Triamcinolone acetonide and 40 percent urea cream can be a safe and cheap treatment option for treating Keloids.

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Abstract N°: 2163

A Rare Clinical Case: Monoclonal Gammopathy of Undetermined Significance (MGUS) Linked to Generalized Acquired Cutis Laxa

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Introduction

Cutis laxa (CL) is a skin disorder that can be inherited or acquired. The acquired form of CL is uncommon and has been linked to other diseases, such as rheumatoid arthritis, systemic lupus erythematosus, and plasma cell dyscrasias.

Materials and methods

In this report, we describe a case of a 50-year-old woman who developed an acute form of acquired cutis laxa (ACL) due to monoclonal gammopathy of undetermined significance (MGUS).

Results

A 50-year-old woman with no relevant medical history was consulted for sagging, wrinkled and redundant skin with a reduced elasticity of cephalocaudal progression with 1 month of evolution. She had no other symptoms or associated triggering factors. Skin biopsy showed a mild superficial and deep perivascular lymphoplasmocytic infiltrate, with few eosinophils, and slightly increased stromal cellularity of the reticular dermis. Histochemical study using the elastin technique revealed a total absence of elastic fibres in the reticular dermis and a decrease of elastic fibres in the papillary dermis. Clinical investigation with haemogram, biochemistry, immunology, protein electrophoresis, abdominal ultrasound, echocardiogram, chest X-ray, gamma interferon release assay and serology, showed only Monoclonal IgA/Lambda gammapathy, without systemic involvement. Thus, the diagnosis of generalised CLA associated with MGUS was assumed, and the patient was referred to a haematology and plastic surgery consultation.

Discussion

ACL is a condition characterized by the degeneration of skin elastic fibers, resulting in reduced elastic recoil. While multiple myeloma, plasma cell dyscrasia, and heavy chain disease have been rarely associated with CLA, this case highlights the importance of investigating underlying gammopathy in patients with newly developed ACL.

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Abstract N°: 2169

A Case of a Painless Ulcer on the Nose: Extranodal NK/T Cell Lymphoma, Nasal Type (ENKL)

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Introduction

Extranodal NK/T cell lymphoma, nasal type (ENKL) is a rare subtype of non-Hodgkin's lymphoma (NHL) that accounts for approximately 2-10% of all lymphomas. It is characterized by a predominance of the NK cell phenotype over the cytotoxic T cell phenotype and is highly associated with Epstein-Barr virus (EBV) infections. This entity is more commonly observed in adult males with a median age of 45 years. Although the nasal cavity/nasopharynx is the most frequently affected site, cutaneous involvement can manifest as a primary or secondary manifestation of lymphoma.

Materials and methods

We aim to present a case of ENKL in a 47-year-old male patient.

Results

The patient with no family or personal history of interest was evaluated for a painless ulcer at the dorsum of the nose that had been present for two months. The lesion had well-defined, regular, and non-elevated borders with a central hemorrhagic crust, measuring 2 cm. He had performed oral and topical antibiotics without improvement. He did not present other clinical symptoms and denied any international travel history. The histopathological examination revealed an ulcerated skin with diffuse dermal intermediate-sized lymphoid proliferation with cytological atypia. Immunohistochemical profiling (CD20-, CD3+, CD2+, CD5-, CD7+, CD4-, CD8-, CD56+, CD30- and proliferative index of 60-70%) and CISH-EBER (positive) testing confirmed the diagnosis of ENKL.

Staging was performed with paranasal sinuses and thoracoabdominopelvic CT and positron emission tomography, which showed only increased uptake in the left nasal cavity, adjacent to the middle turbinate, with associated mucosal thickening (initial Q.SUVmax=5.1; late Q.SUVmax=6.3), with extension to the subcutaneous region of the dorsum of the nose.

The patient was treated with radical RT to the nasal region [50 Gy/25 fr, 2Gy/fr, VMAT technique] for two months. PET 6 weeks after RT: no residual labeling. He is being followed up in a Hematology consultation.

Discussion

ENKL usually manifests as well-defined erythematous-violaceous nodules mostly on the extremities and trunk, but it can present as a midfacial destructive ulceronecrotic tumor. Ulceration is common. It is essential to differentiate ENKL from other aggressive cutaneous T-cell lymphomas such as Primary cutaneous CD8-positive aggressive epidermotropic cytotoxic T-cell lymphoma and Primary cutaneous gamma/delta T-cell lymphoma (PCGD-TCL). This case highlights the importance of Dermatology in the diagnostic approach to this pathology and emphasizes the need to consider this entity in the case of suspicious lesions that do not heal.

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Abstract N°: 2216

The Use of Artificial Intelligence in Dermatology: Opportunities and Challenges

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The Use of Artificial Intelligence in Dermatology: Opportunities and Challenges

Introduction & Objectives:

The swiftly advancing Artificial Intelligence (AI) technology harbours immense possibilities for redefining numerous sectors, including Dermatology. This abstract aims to delve into the current and forthcoming uses of AI in skin healthcare. It will also address the challenges that may hinder optimal results from adopting AI techniques in Dermatology.

Materials & Methods:

A crucial component of my research was conducting a comprehensive evaluation of scientific literature from trusted sources like PubMed and Google Scholar. Employing relevant keywords such as “Artificial Intelligence”, “Machine Learning”, “Deep Learning”, “Dermatology”, “Skin Cancer”, “Psoriasis”, and “Eczema”, I scrutinized articles published from 2015 to 2023.

Results:

Artificial intelligence (AI) can be a vital tool for dermatology diagnoses; its abilities are effectively being used to detect skin cancer accurately rivalling trained professionals while demonstrating high accuracy percentages in disease classification regarding skin conditions. The ability to provide personalized treatment options based on predicted response rates for treating psoriasis and eczema brings hope for improving overall patient care outcomes.

Nevertheless, significant challenges remain towards adopting AI as a standard method in real-world practice due primarily to unstandardized data collection aspects and access requirements over large-scale datasets that hinder progress. Furthermore, concerns arise over decision-making capacity concerning the black box nature described in algorithms, which may limit their transparency and relevance within clinical settings.

Conclusion:

Establishing a framework for standardized data collection methods and advanced interpretable algorithms are needed to make AI technology viable in clinical practice for real-world applications to succeed. Additional research is imperative to thoroughly comprehend the capabilities of AI in Dermatology and create successful approaches for its integration.

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Abstract N°: 2244

Assessment of self-medication in dermatology among the general population

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Introduction & Objectives:

Self-medication is defined by the WHO as the use of one or more treatments by the patient himself to treat symptoms without a medical prescription. It is a rapidly expanding global public health problem that can affect both modern and traditional medicine. It can lead to serious side effects.

Our aim is to evaluate the prevalence, reasons, and treatments used by self-medication for various dermatoses among the general population.

Materials & Methods:

For data collection, a 17-question form was created on Google Forms, it was shared through social networks via an electronic link.

Results:

Two hundred and ten people responded to the questionnaire, of whom 65.7% were women. Age distribution of the cases was 17.6% under 20 years, 57.1% between 20 and 50 years, and 25.2% over 50 years.

The education level was tertiary, secondary, primary, or informal in 67.1%, 23.8%, and 9%, respectively.

Social coverage was available for 81% of participants; 64% had consulted for the same reason before, while 36% had never consulted.

Reasons for self-medication were recommendation by someone in 39%, lack of time in 32.4%, reuse of a previous prescription in 24.8%, the belief that the skin disease is benign in 22.9%, easy access to medicines for 21.4%, and difficulty in consulting a doctor in 12.9% of cases.

The source of information on medications was family and friends, followed by the internet, pharmacists, reuse of old prescriptions, and then non-dermatologist doctors.

the disease was acute in 54.8% of cases and chronic in 45.2%.

Among the most common dermatoses, acne was the most frequent reason (30%), followed by hair loss (25.2%), urticaria (14.8%), eczema (13.3%), dandruff (12.9%), insect bites (7.1%), skin pigment disorders (6.9%), burns (6.7%), zoster (5.7%), herpes infections (5.2%), chickenpox (3.8%), and warts (0.5%).

Topical therapy was the predominant form, used in 83%, with a predominance of cleansing gels, shampoos, and hair lotions, followed by topical corticosteroids and anti-acne agents, then antifungals and depigmenting creams, and finally topical application of plants and oils.

For systemic therapy, it was used by 35.2% of participants, with a predominance of antibiotics, dietary supplements, anti-inflammatory drugs, antihistamines, and corticosteroids.

69% of people were aware of the risks of self-medication.

76.2% reported no side effects, while 23.8% reported side effects, including worsening of symptoms in 40% of cases, superinfection in 39%, skin or scalp irritation in 21% of cases.

Conclusion:

Our study confirms that self-medication is widely practiced.

Soumah et al revealed that self-medication was more common among women, with a predominance of infectious and allergic skin diseases. Local antiseptics and oral antibiotics were the most commonly used. Kombaté et al identified that female gender, duration of the dermatological disease for more than one year, and fungal infections are factors associated with self-medication. They also found that a higher level of education is considered a protective factor against self-medication.

Poudyal and Joshi noted that self-medication for dermatophytosis was common and that the most commonly used drugs were topical corticosteroids alone or in combination with antifungal treatments.

Several factors have contributed to the growth of self-medication worldwide; better knowledge of this alarming phenomenon can lead to rational use and limit the risks associated.

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Abstract N°: 2248

Scalp rupture-related Acute Hair Matting in a child: A case letter

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Scalp rupture-related Acute Hair Matting in a child: A case letter

Introduction & Objectives:

Acute Hair Matting (AHM) is an acquired rare disorder that presents as a compact uncombable mass of scalp hair due to cuticle damage. The exact etiology of AHM is unknown but seems to be multifactorial as a combination of physical, chemical, and behavioral factors.

Materials & Methods:

Herein, we report the first case of AHM following scalp rapture in a 10-year-old girl presented with diffuse matting of the scalp hair after 3-weeks of scalp injuries.

Results:

A 10-year-old girl presented with Acute Hair Matting (AHM) condition at scalp, which was initiated three weeks after a scalp rupture due to a blunt trauma. Trauma was through a car accident and caused scalp rupture in size of about 6 centimetres. The rupture underwent primary repair and was sutured by 0-nylon monofilament and 3 weeks later the stitches were removed successfully. While recovering process, she frequently used Povidone-iodine as an antiseptic for 21 days, 3 times per day. Also, routinely she used shampoos for dry hair 2 times per week. No more special substances were used. Three weeks later, the hair at the ruptured area looked unusual. On scalp examination, there was a patchy era of compact mass without any abnormal appearance on the scalp except scar line. There were no signs of parasitic infestations. On dermoscopic examination of compact mass, there was an area of broken hair associated with 180° twisted hairs and retained telegenic hairs. Regarding the clinical appearance and hair examination, a diagnosis of AHM was made.

Conclusion:

Taken unclear the exact etiopathogenesis of Acute Hair Matting, to prevent this disorder, detection of risk factors is the key answer. Based on our case, scalp injuries such as scalp rupture as a physical factor and Povidone-iodine as a chemical one, could be possible risk factors and should be considered.

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Abstract N°: 2374

Assessment of the general population's knowledge on sun protection

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Introduction & Objectives:

The sun is necessary for good health, but the associated risks, ranging from sunburn to skin cancer and cellular aging, should not be ignored. The negative effects of ultraviolet radiation (UV) are well recognized, and it is important to establish public education programs to promote photoprotection, including the use of sunscreen. The aim of our work is to evaluate the knowledge of the general population on sun protection.

Materials & Methods:

We conducted a descriptive study. A 22-question form was created on Google Forms to evaluate the general population's knowledge of sun protection. The form was shared through social media networks.

Results:

Four hundred and forty people answered the questionnaire, of whom 86% were women and 14% were men. By frequency, participants over 36 years old represented 42.5%, followed by those between 18 and 25 years old at 34.3%, and those between 26 and 35 years old represented 23.3%. Regarding sun protection, 85.3% of participants avoid the sun between 10 am and 4 pm, 72.8% wear wide-brimmed hats, 70% prefer to stay in the shade during sunny days, 65% wear UV-blocking sunglasses, and only 20.3% wear adequate sun-protective clothing.

Eighty-three percent of the participants stated that they use sunscreen, with 39.1% stating that they have read the ingredients of their sunscreens at least once. More than half of the participants (65.2%) who work indoors use sunscreen during work hours. As for their knowledge, only 19.3% of participants know that the recommended amount of sunscreen to apply is 2mg/cm2, and 57.5% of participants know that it is not recommended for infants under 6 months old. Fifty-five percent of participants use sunscreen daily, 34.8% use it occasionally, 7.5% use it at least 3 times a week, 1.7% use it at least twice a week, and 0.7% of participants stated that they only use it on weekends and holidays. Seventy-one percent of participants only apply it once a day, 15.3% use it at least every 4 hours, and 13.8% use it every 2 hours.

The responses regarding the time interval between sunscreen application and sun exposure were diverse, 30% immediately expose themselves to the sun after applying sunscreen, 54.1% wait at least 15 minutes before sun exposure, and 16.1% wait for more than 30 minutes. Eighty-four percent of the participants believe that the recommended sun protection factor is SPF50+, 10.5% chose SPF30, and 5.5% chose SPF15.

Our study revealed that 14% believe that sunscreen does not protect against skin cancer or aging, and 10.3% assume that using indoor tanning beds carries no risk. Seven percent of participants think that people with dark skin do not need sun protection, 16% believe that it is not necessary to apply sunscreen in the winter, and 24% do not see its importance on cloudy days. The percentage of participants who believe that sunscreen prevents vitamin D intake is 15.5%, and that people who practice sports should reapply sunscreen more frequently is 68.3%. Our female participants who do not use sunscreen when applying makeup containing sunscreen represent 18.1%.

Our population is not sufficiently informed about sun protection and the importance and role of photoprotection in preventing skin cancer. The risks of sun exposure are therefore a public health issue that require awareness campaigns.

Conclusion:

In addition to avoiding the sun and covering up, sunscreens are important means of sun protection to reduce our exposure to UV rays, and good compliance is the “condition sine qua non” for good sun protection.

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Abstract N°: 2380

Efficacy of Ceramide-Containing Lotion with Sunscreen on Skin Barrier Function

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Introduction & Objectives: UV rays not only cause oxidative damage to the skin but have been shown to cause damage its barrier. Sunscreen use is a crucial part of protecting the skin from UV radiation, but it may also have a positive impact on the function of the skin barrier. While much research has focused on the protective effects of sunscreen against UV oxidative damage, little is known about the impact of daily sunscreen use on the skin barrier function. This study investigated the changes in skin barrier function before and after using a ceramide-containing sunscreen.

Materials & Methods: Sixty volunteers (mean age: 36.43±6.14, from 20-45) were recruited. A least 40 the volunteers also self-percieved having sensitive skin. All participants apply ceramide-containing sunscreen twice a day (once morning, once afternoon) on the face for 4 weeks. Transepidermal water loss (TEWL), skin hydration, erythematic index (EI) value and skin redness area a* value were measured using Tewameter, Corneometer, Mexameter and image analysis via VISIA-CR, respectively, at baseline, week 1 and week 4. Tewameter, Corneometer and Mexameter measurement was taken on the center of each subject's right or left check. Adverse reactions were also assessed.

Results: After 4 weeks of using the ceramide-containing lotion with sunscreen, significant reductions in skin redness compared with baseline were observed. Both skin redness area a* value and skin erythema index value has decreased significantly by 11.89% and 5.68% respectively. There was also a significant decrease in TEWL by 22.96% and a significant increase in skin hydration by 21.96% in the stratum corneum. No adverse events occurred during the entire testing process.

Conclusion: Daily application of the tested ceramide-containing lotion with sunscreen increases skin hydration and enhances the function of the skin barrier while helping to protect skin from UV radiation.

C1 - Internal use

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Abstract N°: 2407

Research Productivity Among Canadian First Year Dermatology Residents

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Introduction & Objectives: Academic research productivity is an essential component of medical training and one of the selection criteria evaluated by residency programs. In this study, we aim to quantitatively characterize research productivity among medical students who successfully matched into Dermatology residency programs across Canada.

Materials & Methods: A retrospective review was conducted to obtain the names of all residents that began training in all Canadian dermatology residency programs between 2008 and 2022. The database Scopus was searched to obtain metrics reflective of research productivity which included publication count, publications in dermatology, authorship position, and H-index for each match year. Descriptive, univariate, and bivariate statistics were used to identify and evaluate trends in research productivity among successful applicants.

Results: A total of 371 dermatology residents (90% complete data set) from the 11 Canadian residency programs producing 828 publications, of which 329 were dermatology-related were identified. Overall, 56% of residents had a minimum of one publication at the time of the match, with a mean of 4.06 + 5.07 publications and a mean H-index of 2.74 + 2.52. A significant increase ($p < 0.001$) in all research productivity metrics (number of publications, first author publications, publications in dermatology, and H-index) was observed during the 2020-2022 period compared to 2008-2010.

Conclusion: Over the past 15 years, the amount of publications authored by first year dermatology residents has increased significantly. This may suggest an increased emphasis placed on medical research by both medical students and residency programs, a finding that has also been described in other competitive specialties.

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Abstract N°: 2424

Pseudoepitheliomatous, Keratotic, and Micaceous Balanitis. A rare disease.

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Introduction & Objectives: Pseudoepitheliomatous keratotic and micaceous balanitis (PKMB) is a rare and diagnostically challenging entity due to its similarity to other inflammatory and neoplastic diseases affecting the penis.

Materials & Methods: A 54-year-old male, with no personal background, presented with a penile growths of 5-month duration, which was developed over an undamaged previous area. The lesion had been gradually increasing in size, itching, induration and mild pain. No difficulties while urinating were presented. Clinical examination showed two bark-like, exophytic masses over the glans penis separated from normal mucosae; A keratotic, whitish plaque, with a 2 cms diameter, papillomatous surface and well defined limits. Adjoining to this, an erythematous plaque with papillomatous surface extending to the foreskin was presented. No regional lymph nodes were palpable. Routine laboratory investigations and serology showed normal values. Histopathology of the lesion revealed epidermal hyperplasia with extensive hyperkeratosis, parakeratosis and acanthosis, no cellular atypia was found. Dermis showed a lymphoplasmacytic inflammatory infiltrate with some eosinophils. Treatment was initially started with salicylic acid 5%, twice a day. After 8 weeks of medication, a significant reduction of both lesions was observed. Currently, the patient is being followed up developing an adequate response to topical therapy.

Results: PKMB was described in 1996 by Lortat-Jacob and Civatte. It is an extremely rare penile disorder involving the skin of the glans that mainly affects elderly circumcised males. There has been a total of 40 cases published in the literature. It is characterized by keratotic plaques, usually asymptomatic, resembling psoriasis. Histopathology of the lesion classically reveals hyperkeratosis, parakeratosis, acanthosis and elongated papillary ridges. In advanced stages, cellular atypia, koilocytes and pleomorphism may be observed. Although initially considered a benign condition, it is now reflected upon as a premalignant condition with low-grade malignancy potential, due to the increased risk of progression to verrucous carcinoma and squamous cell carcinoma. Despite this, no relationship between PKMB and HPV has been demonstrated. Differential diagnoses include lichen sclerosus et atrophicus, penile horn, giant condyloma, verrucous or squamous cell carcinoma and erythroplasia of Queyrat. Notwithstanding, the definitive diagnosis it is given by its histological features. Treatment is not standardized. Salicylic acid and topical 5-fluorouracil are the most recommended options for early stages, reserving surgical excision whenever there is cellular atypia. Other options that has been used are cryotherapy, localized photodynamic therapy and CO2 laser.

Conclusion: We present a case of PKMB treated with topical salicylic acid. PKMB is a rare but potentially severe entity, due to its association with malignant diseases of the penis. Therefore, early diagnosis and close follow-up of these patients should be considered.

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Abstract N°: 2479

Clinical evaluation of efficacy, safety and tolerability in healthy subjects of a cosmetic containing Pistacia lentiscus and hyaluronic acid in combination with semi-permanent nail lacquer

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Introduction & Objectives:

Semi-permanent and gel nail polish has recently gained worldwide popularity as a cost-effective method to keep a perfect manicure for as long as 2 weeks. However, nail damage (brittleness, thinning and/or splitting) can occur both from the application and removal processes. Consequently, we evaluated if a cosmetic product formulated with *Pistacia lentiscus* and hyaluronic acid might reduce the deleterious effect of semi-permanent lacquer use on nail quality. We present results of 2 studies under dermatological control.

Materials & Methods:

Study 1 (E1): 15 women from 18 to 48 years old with semi-permanent manicured nails were included in the study. On Day 0 (D0) one hand was randomly assigned to apply the tested product once daily at night before sleeping on the test hand's nails for 4 weeks (D28), while the other hand (untreated) served as control. On D28, lacquer was removed and a final layer of the product was applied to each nail. Patients were evaluated clinically and under dermoscopy. The following scores were collected on D0 and on D28 one hour after the final application: Onychoschizia, onychorrhexis, roughness, total nail and nail fragility scores. In addition, participants completed a survey on D28. **Study 2 (E2):** 22 women from 21 to 63 years old, with semi-permanent (N=11) and gel nail polish (N=11) manicured nails applied the product daily on the nails of one hand for 3 weeks (D21). On D21, a subjective survey regarding the perceived efficacy and cosmetic qualities was completed. Confocal microscopy was additionally performed on the nails of a subset of 10 participants (5 per group) to evaluate thickness on Day 0 (D0) and after a final application following manicure removal on D21.

Results:

E1: All scores showed statistically significant improvement on the tested nails compared to control, except for roughness score. Score variation values for D28 vs D0 and corresponding p-values are shown on table 1.

Table 1. Score variation D28 vs D0

	Treated	Control	p-value
Onychoschizia Score	-0,67	-0,27	0,0002
Onychorrhexis Score	-0,67	0	0,0003
Roughness Score	0,07	-0,07	0.33
Total Nail Score	-1,4	0,33	<0,0001
Nail Fragility Score	-0,33	0,27	0,005

E2: There was an increase in nail thickness at D28 in the treated nails (+6.8%) compared to control (-8.7).

Subjective cosmetic and efficacy evaluation showed a high degree of satisfaction by participating subjects in both studies. The product had very good acceptability and compatibility.

Conclusion:

Our results show that a cosmetic product formulated with *Pistacia lentiscus* and hyaluronic acid helps to counteract the deleterious effects of semi-permanent manicures in nails and is safe to use concomitantly.

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Abstract N°: 2493

Safety evaluation of different topical medical devices - quantitative analysis of selected cytokines in ex vivo skin model and hypoallergic properties assessed in vivo.

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Introduction & Objectives:

Dysregulation in the activity of cytokines is a crucial factor in the development of numerous dermatoses, including atopic dermatitis (AD) and cradle cap. Changes in cytokine expression can be taken into consideration in the safety evaluation of formulations applied on affected skin. Therefore, we investigated the influence of four medical devices for topical application (two of them were urea-based emulsions, one emollient as leave-on emulsion for AD flare-ups, and a cleansing product for AD-afflicted skin) on the release of cytokines in an *ex vivo* skin model. Additionally, we assessed the hypoallergic properties of the devices in *in vivo* conditions.

Materials & Methods:

Reconstructed human epidermis (RHE) model was treated with four products (**15107** – urea-based cream for hyperkeratosis-related dermatoses; **16907** – emulsion with urea for the treatment of cradle cap;**16917** – cleansing foam for sensitive, AD-prone skin, and **16926** – emollient cream for AD flare-ups). Positive control (PC) was 0.5% SDS. A common sensitizer was used as reference in the study. After 1h of treatment, cell media were collected and subjected to flow cytometry analysis of IL-1β, IL-6 and IL-8 concentrations. The influence on the concentration of selected cytokines was compared to the negative control (NC; untreated cells). To assess the hypoallergenicity, patch tests were conducted in groups of 20 females (16907, 16917, 16926) and a group of 20 females and 10 males (15107). All patients had a history of allergy.

Results:

The inhibition of a pro-inflammatory cytokine IL-1β concentration was observed for 15107, 16907, and 16926, but none of the results were statistically significant, compared to control samples. For 16917, the concentration of IL-1β was comparable to the value reported in NC.

For IL-6, a decrease in concentration was reported for 15107, 16906 and 16926. The results were not statistically significant. Treatment with 16917 caused a statistically significant increase in IL-6 concentration. As IL-6 exhibits both pro- and anti-inflammatory properties, additional analyses regarding its mode of action in the evaluated model are required.

In case of pro-inflammatory IL-8, we observed a slight decline in its concentration for 15107, 16917, and 16926. However, the differences between samples and NC were statistically insignificant. Treatment with 16907 did not influence the concentration of IL-8 in comparison with NC.

In patch test, neither irritation nor allergic reactions were reported for evaluated medical devices.

Conclusion:

The evaluated formulations did not exhibit any considerable influence on pro-inflammatory cytokine expression in RHE model, which may suggest that they do not induce inflammation in human epidermal cells. Hypoallergic

properties were confirmed in *in vivo* evaluation.

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Abstract N°: 2815

The use of dietary supplements for skin diseases: results of a global study

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Rationale

While a plethora of articles continue to be published on the role of nutritional agents, both in the lay press as well as in indexed journals, the data is not well-founded and leaves the dermatologist in a predicament and the patient confused.

There are very few studies on the consumption of food supplements by patients themselves in the context of their skin disease.

Objective

For the ALL project, we created a sample of more than 50,000 individuals, representative [according to the quota method] of each of the 20 countries, spread over the 5 continents. [China 5000, USA 5000, Brazil 4001, India 3000, Australia 2000, France 4000, Italy 400, Canada; Denmark; Germany; Israel; Kenya; Mexico; Poland; Portugal; Senegal; South Africa; South Korea; Spain; UAE], which together accounts for over 50% of the world's population.

Result

After identifying individuals with skin disease, we asked them about their use of dietary supplements and their reasons for using them.

40.68% said they suffered from a skin disease, of which 48.03% admitted to taking food supplements because of their skin disease.

Women being significantly more likely than men to report taking them (49.15% vs 46.68% ? P<0.001).

There is also a statistically significant difference in the use of dietary supplements - the younger the person, the greater the use of dietary supplements. 31.98% of the younger people (16-34 years), 23.71% of the 35-54 year olds and 8.19% of those aged 55 and above.

There is a great disparity between countries: less than 20% of patients suffering from dermatosis in Portugal (18.23%) or in Poland (19.37%) and more than 50% in the United Arab Emirates (52.92%) and in India (69.18%). China stands at 39.68%.

For one patient in three (34%), the use of food supplements is motivated by the desire to prolong the effect of a medical treatment. With disparities between countries: more than 50% in China, Brazil and Poland. Less than 15% in Australia or the USA.

For 37%, the use of food supplements is motivated by the desire to replace a medical treatment.

Finally, one out of two patients (51.42%) hope to slow the progression of their skin disease by taking food supplements.

We wanted to know if consulting a doctor for their skin disease had an influence on the use of food supplements. We observed a statistically significant difference, with 58.02% patients consulting a doctor claiming to use food supplements, as against 19.4%.

Discussion

The patients with skin disease take the dietary supplements, with a higher prevalence among women and young people. This use is not at the expense of allopathic treatment and is more frequent among individuals who consult, which is consistent with the motivations expressed.

Sardana K, Sachdeva S. Role of nutritional supplements in selected dermatological disorders: A review. J Cosmet Dermatol. 2022 Jan;21(1):85-98. doi: 10.1111/jocd.14436. Epub 2021 Sep 26. PMID: 34564936.

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Abstract N°: 2973

Unusual presentation of multiple granuloma annulare affecting both ears resembling chondrodermatitis nodularis helicis

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Introduction & Objectives:

Granuloma annulare (GA) is a common, benign, inflammatory skin disease of unknown etiology that occurs in both adults and children. Typically, it is clinically characterized by papular lesions, usually distributed in ring-shaped configurations. Histologically the findings correspond to a necrobiotic granuloma, surrounded commonly by a radial arrangement of infiltrated lymphocytes and histiocytes.

Materials & Methods:

A 36-year-old man presented with multiple skin-colored papules on both ear helical and antihelical areas for 3 months. He didn't have any past medical history and symptoms of the lesions. A punch biopsy was done on his right ear lesion.

Results:

A biopsy specimen from the lesion of the right antihelical area showed a palisading infiltration of histiocytes, and lymphocytes around and between altered collagen fibers in the dermis. Giant cells were also observed. Based on these findings, he was diagnosed with GA. After treatment with intralesional injection of steroid, the size of the lesions decreased.

Conclusion:

GA is clinically classified into four types: (1) localized with single or multiple rings, (2) generalized, (3) subcutaneous, and (4) perforating. Among the four clinical subtypes, the localized form is the most common type and the acral sites, especially the knuckles and dorsum of the fingers are most commonly affected. Facial involvement is rare. The differential diagnosis of GA on the ear includes chondrodermatitis nodularis helicis (CNH), which presents with painful nodules and a characteristic layering of fibrin. However, in this case, painless lesions and palisading granuloma with altered collagen fibers on the biopsy suggested an atypical presentation of GA on both ears, rather than CNH.

There have been only six reported cases of GA on the ear. It is necessary to consider the possibility of GA in the differential diagnosis of the lesion presenting as multiple nodules on the ear. Herein, we report an unusual presentation of GA affecting both ears mimicking chondrodermaittis nodularis helicis.

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Abstract N°: 3018

Combination of 5-aminolevulinic acid photodynamic therapy and isotretinoin in the treatment of disseminated superficial porokeratosis.

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Introduction & Objectives: both isotretinoin and photodynamic therapy (PDT) has been reported in the treatment of disseminated superficial porokeratosis (DSP). However, there are no studies on combination therapy of PDT with isotretinoin in this indication. To evaluate the efficacy and safety of PDT combined with isotretinoin in the treatment of DSP.

Materials & Methods: Four patients with DSP were treated with a combination of PDT and isotretinoin. PDT was performed 3 times every 4 weeks; and oral isotretinoin, 20 mg a day for 3 months. The skin lesions were counted before treatment and at week 12 and week 24 to evaluate the clinical efficacy (body surface area (BSA) tool was used). Adverse reactions during the treatment were recorded. Liver function and lipids levels were tested once a month. The recurrence rate was recorded 6 months after treatment.

Results: All patients completed the study. The effective rates, measured as BSA, at week 12 and 24 of treatment were 80%, and 85%, respectively; Adverse reactions, such as erythema and burning sensation during photodynamic therapy were tolerable. No recurrences were observed up to 6 months after the treatment.

Conclusion: PDT combined with isotretinoin is an effective and well-tolerated DSP treatment method in DSP, characterised by a low recurrence rate.

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Abstract N°: 3148

Cutaneous manifestations in patients with chronic renal failure on hemodialysis

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Introduction & Objectives:

Dermatological manifestations are common among patients with chronic kidney disease. Literature states that 50%-100% of patients with end-stage renal disease have at least one associated cutaneous change.

These manifestations, polymorphic and diverse, are either due to the disease or from the treatment. The presence of skin conditions adds to the disease load and complicates the management of these patients. The aim of our study was to assess the prevalence and characteristics of different cutaneous manifestations in hemodialysis patients.

Materials & Methods:

Over a period of 17 months (December 2021- April 2023), a full dermatologic examination including skin, hair, nails and mucosa was performed in dialysis patients. We retrieved 45 patients with dermatological manifestations.

Results:

Average age of patients was 50 years, 67% were female and 33% male. Duration of hemodialysis had wide range from 3 months to 25 years. Principal associated chronic diseases were high blood pressure (26%) and diabetes (6,6%). Other comorbidities were systemic scleroderma, pemphigus and syphilitic myelitis. Pruritus was the most common manifestation noted in 86% of patients. Xerosis was seen in 62% of cases, cutaneous pallor in 37.5%, and hyperpigmentation in 37.5%. One young patient had acquired perforating dermatosis (2.22%). Fungal infection was found in 13% of cases (onychomycosis and intertrigo of toe web space). Involvement of nails was noted in 35%. Main disorders were longitudinal ridging, nail dystrophy, half and half nails, nail pigmentation, yellowish discoloration and subungual hyperkeratosis. Telogen effluvium and dry lusterless hair were main hair changes observed in 23.5% of patients. Other manifestations included senile lesions in 37.7% such as senile purpura, solar lentigo, idiopathic guttate hypomelanosis and wrinkles. We also noticed eczema around the arteriovenous fistula, maskne due to face mask use during the COVID-19 pandemic, icterus, prurigo nodularis and contact dermatitis.

Conclusion:

In accordance with literature findings, our study demonstrates the polymorphism of cutaneous manifestations in dialysis patients. Pruritus is reported as one of the most annoying symptoms. Xerosis is also found to be a common manifestation, and may be explicated by reduction in the size of eccrine sweat glands. Pallor is correlated with presence of anemia. Acquired perforating dermatoses is reported to occur in 4.517% and were significantly more prevalent in diabetic patients. Nail diseases are frequent (52-82%). Their pathogenesis remains unclear. They are essentially represented by half and half nails, nail ridges and brown nails. Hair changes are sparse body hair, diffuse alopecia with dry, lusterless hair. Hyperpigmentation is attributed to the failure of the kidneys to excrete beta-melanocyte stimulating hormone. Many studies reported high incidence of fungal infection which may be due to low socioeconomic status and hot humid climate especially in our context. The acceleration of skin aging during chronic kidney disease can be explained by xerosis, presence of toxins in the plasma of patients and

vitamin D deficiency. Eczema is reported as one of disorders associated with arteriovenous fistula. Other cutaneous finding are acrochordons, prurigo nodularis, ichthyosis, vitiligo, plantar keratoderma, chronic eczema, seborrheic dermatitis. However, causal association with renal failure could not be established.

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Abstract N°: 3263

Can Dermatologists Trust Artificial Intelligence in Daily Practice? – An original study of ChatGPT-3.5 and ChatGPT-4 Dermatological Knowledge Level

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Introduction & Objectives: The global use of artificial intelligence, including deep-learning-based language models in healthcare, has the potential to revolutionize the healthcare industry. Despite the fact that artificial intelligence is becoming more popular, there is still a great lack of evidence on its use in dermatology. This study aimed to determine the capacity of ChatGPT to support dermatological knowledge and clinical decision-making in medical practice, by examining its effectiveness in answering questions from Dermatology specialty examination tests. The aim was also to investigate the development dynamics and future prospects of ChatGPT in the field of dermatology, based on one of the first scientific comparisons of the previous generation of ChatGPT - GPT-3.5 with the new generation of ChatGPT-4.

Materials & Methods: Three dermatology specialty certificate tests, in English and Polish, consisting of 120 single-best-answer, multiple-choice format questions, with 5 possible answers each, were used to assess ChatGPT-3.5 and ChatGPT-4 performance.

Results: ChatGPT-4 exceeded the 60% pass rate in every performed test, with a minimum of 80% and 70% correct answers for the English and Polish versions, respectively. ChatGPT-4 performed significantly better on each exam ($p<0.01$), regardless of the language, compared to ChatGPT-3.5. Furthermore, ChatGPT-4 answered clinical picture-type questions with an average accuracy of 92.98% and 84.21% for English and Polish questions respectively. The difference between the tests in Polish and English did not turn out to be significant but still, ChatGPT-3.5 and ChatGPT-4 in English performed better overall than in Polish by an average of 8 percentage points for each test. Incorrect ChatGPT answers were highly correlated with a lower difficulty index, which denotes questions with higher difficulty in most of the tests. ($p<0.05$)

Conclusion: The dermatological knowledge level of ChatGPT was high, with a significantly better performance of ChatGPT-4 than ChatGPT-3.5. Although the use of ChatGPT will not replace the doctor's final decision, physicians should support artificial intelligence development in dermatology to raise the standards of medical care. In addition, more research is needed to assess the efficacy, also depending on the language used, and the ethical implications of using AI chatbots, such as ChatGPT, in different disciplines. It should be suggested that for the best performance of ChatGPT in the field of dermatology, data should be entered into the chat in English.

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Abstract N°: 3273

Leiomyoma of the scrotum - typical presentation of an uncommon tumour

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Introduction & Objectives:

Cutaneous leiomyomas are rare, uncommon, benign tumours deriving from smooth muscle fibers.

They can arise anywhere on the skin where there is smooth muscle. There are three types of cutaneous leiomyomas: piloleiomyoma, arising from errector pili muscle in the piloseabceous unit, genital leiomyoma, arising from smooth muscle found in the scrotum, vulva or periareolar skin, and angioleiomyoma, deriving from tunica media of small arteries or veins.

Scrotal leiomyomas are one of the rarest types of cutaneous leiomyomas, with only a few cases reported in the literature. Mostly, they are sesile or pedunculated, usually solitary, painless, slowly growing tumours, arising in males in the fourth to sixth decade.

Materials & Methods:

We report a case of a 64 year old male, who complained of a painless papule, on the left side of the scrotum, that enlarged over a 3 year period. There was no history of trauma, infection or inflammation.

Physical examination revealed a 0,9/0.9 painless skin-coloured, dome-shaped papule which was mobile and had a rubbery consistency; no inguinal lymphadenopathy was identified.

Under local anesthesia with 1% lidocaine, surgical excision with 1 mm margins was performed, and the tissue sample was sent to the Pathology Department for histopathological examination.

Results:

The histopathological examination revealed the diagnosis of typical leiomyoma, with spindle-shaped cells, eosinophilic cytoplasm and no evidence atyipias.

At the 10 days follow-up the sutures were removed, leaving a smooth scar, without complications.

Conclusion:

Scrotal leiomyomas are very rare, benign tumours, originating from the Dartos muscle. Diagnosis is confirmed by histopathologic examination and the treatment is based on simple surgical excision.

Considering the scarcity of case reports in the literature, they are usually misdiagnosed. Scrotal leiomyoma should be considered while making a differential diagnosis of a painless scrotal tumour.

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Abstract N°: 3376

Skin in the artwork of Christian Schad during the Weimar era

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Introduction & Objectives:

Christian Schad (1894-1982) was a German painter and photographer that has been associated with the Dada and the New Objectivity ('*Die Neue Sachlichkeit*') movement. The later combined social criticism and near-photographic realism, including the representation of the human body with exact reflections of malformations or diseases. Schad usually painted portraits where the female figure takes a striking and central role and one of his favourite and often repeated motifs was figures wearing semi-transparent clothing.

We performed here an iconodiagnostic review of cutaneous findings in the artworks of Christian Schad that have been mainly performed during the 1920-1930s.

Materials & Methods:

A narrative review of skin conditions depicted in the artwork by Christian Schad over the Internet. The author used mainly http://www.google.com and http://www.wikiart.org website.

Results:

We reviewed 25 artworks, that depicted 21 women and 15 men, included 3 self-portraits of the author. Dark circles under the eyes were the most common finding appearing in 16 paintings (64%), followed by facial naevus (32%), androgenic alopecia in only males (6 out of 9 artworks with men, and 9 out of 15 men characters). Facial scars were represented in two characters. One portraited depicted notable pectus excavatum and notable signs evocative of Marfan's syndrome (*Agosta, the Pigeon-Chested Man, and Rasha, the Black Dove* 1929) and another possible rosacear or lupus (*Notturno*, ?)

Conclusion:

We reviewed only a narrow part of Christian Schad's work, mainly the period from 1920 to 1930, during the Weimar – era. Schad painted then socialites, sex workers, quack doctors and modernist writers, boys kissing and women masturbating. As written in *Art news* website, Schad's sitters also stand out as individuals, for he painted them with luxuriant clarity and rendered outlines and shadows in a way that separates them from their surroundings. He often added symbolic touches, like flowers, and imported backgrounds (Italian or Parisian cityscapes) that suited his subject. In each case, he subjected his isolated figure to what can feel like a clinical assessment or a lascivious gaze. Or both. The portraits invite confrontation, consumption, communion: exchanges at once depleting and stimulating, sexual and spiritual.

A wide number of the portraited present infraorbital dark circles. Dark circles are exceedingly common in the population, especially in women. It is therefore possible that Schad simply depicted with precision what he saw. He could also have used shadowing under the eyes to highlight and give more intensity to the look. Other findings included common benign disorders like alopecia in men or naevus or beauty mark. Only two paintings may depict conditions with dermatologic feature: a case of Marfan's syndrome and a possible case rosacea or cutaneous lupus.

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Abstract N°: 3382

Use and acceptance of Digital Health Services in Germany: Representative Survey of the General Population and Population with Skin Disease

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Introduction & Objectives: The availability of digital health interventions (DHIs) in dermatology and other areas has markedly risen recently. However, it remains unclear how the general German population and individuals with skin issues perceive and utilize these interventions. Thus, the objective is to examine the population's perspective regarding the utilization and acceptance of DHIs. Additionally, we aim to explore how demographic factors influence the adoption and acceptance of these applications.

Materials & Methods: A representative survey of the German population was conducted in August 2022, interviewing a total of 2101 individuals. Computer-assisted telephone interviews were done with 1001 participants, while an internet-based survey was administered to 1100 participants. Collected data underwent descriptive analysis. A subgroup comparison was conducted to compare individuals with and without skin issue and multivariate analysis was performed to identify factors influencing acceptance and usage of DHIs.

Results: Among the 2101 respondents, 29.9% (630) reported a skin problem in the past year. General digital application usage felt safe for both groups: 66.0% without skin problems and 65.7% with skin problems (p: 0.80). Those with skin problems rated the added value higher (50.9% vs. 44.3%; p: 0.001) and were more likely to accept a DHI (51.8% vs. 44.4%; p: 0.001). The electronic health record (ePA) usage was 8.0% without skin problems and 9.9% with skin problems (p: 0.56). Unawareness of ePA was high in both groups (52.5% vs. 53.2%; p: 0.78). Individuals with skin problems used DHIs more: video consultation (3.5% vs. 7.5%; p: <0.001), store-and-forward teledermatology (1.8% vs. 4.0%; p: 0.02), and digital diaries of illness (7.4% vs. 10.8%; p: <0.001). However, these applications were rarely used specifically for skin problems. Multivariate analysis identified factors influencing DHI acceptance: younger age, higher education, low data privacy concerns, confidence in using DHIs, and presence of a skin condition. Younger age (18 – 29 years) was the strongest predictor (OR 3.25 [95% CI 2.37 - 4.45]; Ref: 60 years +). DHI usage had a similar pattern, with the exception that women using them more commonly than men. Severity of skin disease was associated with higher usage (OR 2.11 [95% CI 1.23 - 3.64]) and acceptance (OR 2.16 [95% CI 1.22 - 3.81]) of DHIs.

Conclusion: Utilization of DHIs among the general German population is moderate to low. The identified gap between usage of DHIs for all health conditions and usage for dermatological conditions in a population with a skin disease presents a significant opportunity for DHIs in dermatology. Addressing digital inequalities and ensuring accessible, evidence-based DHIs for all is crucial. To integrate DHIs effectively, it is imperative to develop strategies for implementing evidence-based DHIs in clinical routines. Further, a regular monitoring on the impact of DHIs on health inequities and esearch to identify unmet patient needs is necessary.

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Abstract N°: 3686

Baricitinib: Therapeutic alternative in refractory livedoid vasculopathy.

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Introduction & Objectives:

Livedoid vasculopathy is an uncommon ulcerative cutaneous disorder with a chronic and recurrent course that can significantly impact the quality of life. It is characterized by purpuric lesions and painful ulcerations with a reticular distribution predominantly found on the lower extremities, which heal leaving white atrophic scars. Although the exact pathophysiology is unknown, it is currently regarded as an occlusive disease caused by ischemia in the cutaneous microcirculation, being the role of inflammation in its pathogenesis still uncertain.

Materials & Methods:

We present a clinical case of a 31-year-old patient with severe livedoid vasculopathy affecting both lower extremities since July 2018. For disease control, she required treatment with oral prednisone, methotrexate and enoxaparin. In September 2019, treatment with rivaroxaban was initiated, initially showing a good response but therapeutic failure happened in April 2022. In May 2022, rivaroxaban was replaced by dabigatran, but primary treatment failure was observed as there was no improvement after 8 weeks of treatment.

Results:

The presence of isolated cases of livedoid vasculopathy reported in the literature that responded satisfactorily to janus kinase (JAK) inhibitors prompted compassionate use of baricitinib at a dose of in July 2022, resulting in clinical remission after two months of treatment. Currently, the patient continues treatment with dabigatran and baricitinib, maintaining a good clinical response after an eight-month follow-up.

Conclusion:

There is currently no established therapeutic regimen, and multiple treatments have shown potential usefulness in the management of livedoid vasculopathy. The most commonly used drugs include oral anticoagulants, systemic corticosteroids, intravenous immunoglobulins, and antiplatelet agents. We present a case of refractory livedoid vasculopathy with a positive response to oral baricitinib and review the existing literature regarding the pathophysiology of this condition, the most effective therapeutic options, and the potential role of JAK inhibitors in its management.

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Abstract N°: 3726

First Case Report of Scleredema of Buschke Associated with IgG-kappa Monoclonal Gammopathy Of Undetermined Significance and IgA Nephropathy

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Introduction & Objectives:

Scleredema of Buschke (SB) is a rare sclerotic skin disease of unknown etiology characterized by skin induration due to an excess of collagen and mucin in the dermis. The lesions typically appear on the neck, shoulders, upper back, and arms. SB is categorized into three types based on their association with underlying conditions: type 1 occurs following infection (55% of cases), particularly streptococcal infection of the upper respiratory tract; type 2 (25%) is associated with paraproteinemia, and type 3 (20%) is diabetes-related. Although rare, systemic involvement has been reported, usually in types 2 and 3. This report aims to present a possible new association of SB with IgA nephropathy.

Materials & Methods:

We present a case of SB associated with IgA nephropathy and IgG-kappa monoclonal gammopathy of undetermined significance (MGUS) refractory to treatment with methotrexate.

Results:

A 34-year-old woman presented with a progressive 3-year history of skin induration. The clinical examination revealed woody, indurated skin involving the face, neck, trunk, and limbs, predominantly affecting the trunk and upper limbs. Laboratory tests showed normal complete blood count, renal function, hemoglobin A1C, and blood glucose levels. Antinuclear antibodies, complement levels, and Scl-70 were negative. Skin biopsy exhibited thickening of the middle and deep dermis due to thick bundles of collagen with preserved appendages (figure 1) and mucin deposits in the dermis (figure 2), consistent with the diagnosis of SB. Further investigation through serum protein electrophoresis, immunofixation, and myelogram revealed IgG-kappa MGUS. Treatment with oral prednisone (1.3mg/kg/day) and methotrexate (10mg/week) was initiated, resulting in partial improvement of skin induration after 2 months. Subsequently, prednisone was tapered down while the methotrexate dosage was increased. However, after 4 years of follow-up, the patient experienced worsening skin thickening, progressive dyspnea, dysphagia, and regurgitation, despite using methotrexate (25mg/week). In the same year of follow-up, she also developed persistent microscopic hematuria with dysmorphic red cells. Nephrology investigation diagnosed IgA nephropathy confirmed by kidney biopsy. However, treatment was not required as there were no signs of activity on the renal biopsy, with no proteinuria or worsening of renal function.

Figure 1. Thickening of the dermis due to thick bundles of collagen (H&E, 4x).

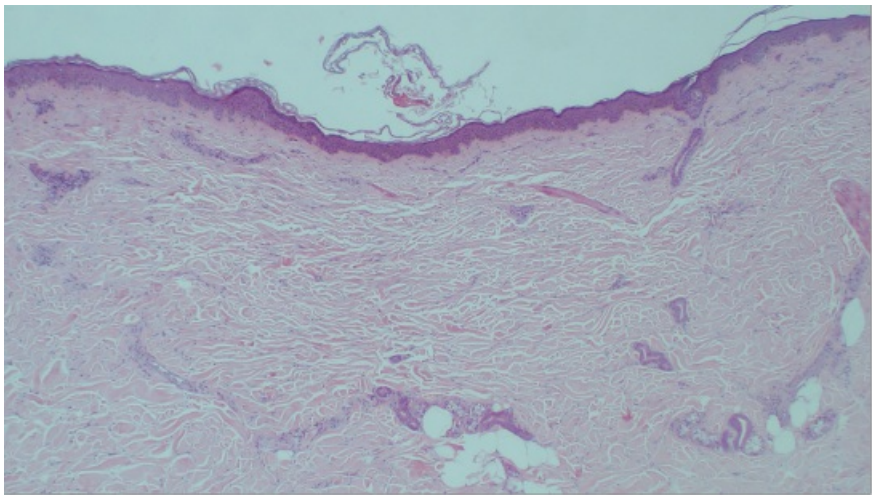
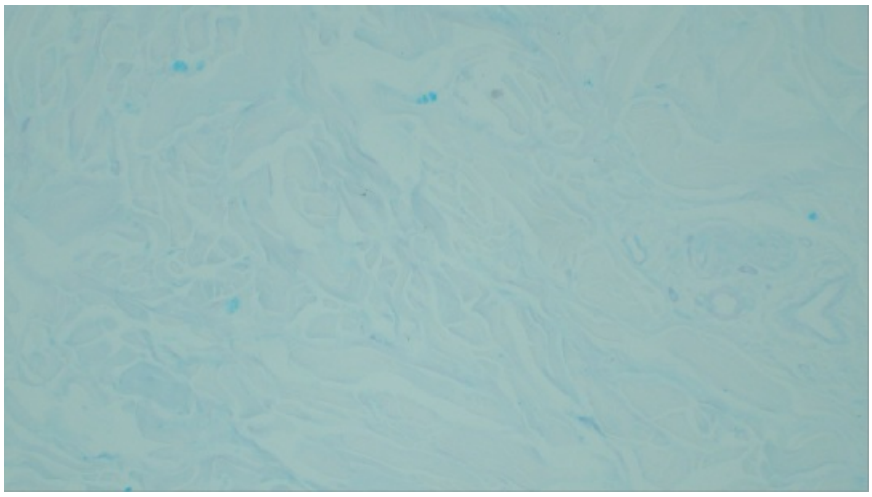


Figure 2. Mucin deposits in the dermis (Alcian Blue, 40x).



Conclusion:

This case report highlights a rare association between SB, IgA nephropathy, and IgG-kappa MGUS. Although the underlying mechanisms linking these conditions remain unclear, this report emphasizes the need for careful examination and consideration of systemic involvement in SB cases. Further research is necessary to elucidate the potential pathogenic links and determine optimal management strategies for this rare condition.

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Abstract N°: 3780

ChatGPT vs. the UK Postgraduate Dermatology Exam (Specialty Certificate Examination)

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Introduction & Objectives:

Postgraduate training in dermatology necessitates the acquisition of a breadth of knowledge and up-to-date clinical information. As a specialty with >1500 diagnoses (1), written or multiple choice examinations are commonly used as a component of postgraduate training to assess clinical knowledge. In the UK, the Specialty Certificate Examination (SCE) is a multiple-choice examination must be passed in order for a doctor training in dermatology to qualify to work as a consultant registered with the General Medical Council. In a fast-changing clinical landscape wherein the uses and scope of artificial intelligence (AI) have yet to be fully elucidated, this study aimed to investigate whether AI (by way of ChatGPT) is able to correctly answer sample questions from the Dermatology SCE.

Materials & Methods:

88 multiple-choice questions produced by the Royal College of Physicians (UK) as sample questions for the Dermatology Specialty Certificate Examination (SCE)(2) were asked to ChatGPT (May 12 2023 Version)(3). 4 questions were excluded from analysis as they contained photographic content that could not be interpreted by ChatGPT. The answers given, as well as the rationale provided, were compared with the model answers and explanations provided by the authors of the sample questions. The overall score was compared with the previously published pass marks for the Dermatology SCE. Performance in individual examination sub-sections was analysed.

Results: ** ChatGPT answered 53/84 best of five multiple-choice questions correctly (63.1%). The pass mark for previous three sittings of the SCE have been 72.7%, 74%, and 72%. ChatGPT, therefore, is not likely to pass the SCE in its current iteration. When broken down into question sub-categories, ChatGPT performed best in the photodermatology and skin oncology subcategories (4/5 correct answers; 80%), and paediatrics and genetics (14/19 correct answers; 73.7%). ChatGPT scored 0% in psychodermatology (0/1 correct answers), and cutaneous allergy (1/4 correct answers; 25%). Of the 31 questions answered incorrectly, 9 were in the sub-category of general dermatology. Incorrect answers related to choice of diagnosis, investigations, and management (treatment options) of dermatological presentations.

Conclusion:

Artificial intelligence is able in real time to extract clinically relevant data from vignettes provided in examination questions. It is able to interpret histological descriptions and laboratory parameters and results to answer the majority of the postgraduate dermatology questions it was posed. It was not, however, able to reach the pass mark required for the exam.

SCE multiple-choice questions are designed in the best of five structure. Where incorrect answers were chosen by ChatGPT, the justification gives insight into why a particular answer was chosen. The chosen incorrect answer was generally a clinically acceptable alternative answer (regarding investigation or management of a condition), except in the cases where the incorrect diagnosis was selected.

When asked how difficult it found the exam, ChatGPT simply responded: “As an AI language model, I don’t have personal experiences or emotions, so I don’t have the ability to find an exam difficult or easy. However, I strive to provide accurate and helpful information based on the given questions and available knowledge.”(4).

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Abstract N°: 3786

White fibrous papulosis of the neck: a rare disease

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Introduction & Objectives: White fibrous papulosis of the neck is a rare entity, with a benign course and unknown pathogenesis. It is clinically characterized by the appearance of firm, persistent, usually asymptomatic, non-follicular papules located on the neck.

Materials & Methods:

We present the case of 69-year-old women who presented asymptomatic lesions on the neck whose biopsy was compatible with this entity.

Results:

A 69-year-old woman, presented with a several-months history of multiple white-yellowish millimetric, monomorphic, non-follicular papules, on both sides of the neck. She did not have any symptoms suggestive of vascular, gastro-intestinal, and ocular disorders; they were absent in other family members as well. Physical examination, including peripheral pulses and cardiovascular evaluation, revealed normal findings. Cutaneous biopsy revealed a slightly decreased elastic fibres,with thickened collagen bundles in the papillary dermis. Based on these findings, the diagnosis of white fibrous papulosis of the neck was confirmed. The presented patient has not started any of the proposed treatments for her skin lesions. She remains under observation care.

Conclusion:

WFPN is a rare acquired fibroelastolytic disorder, which presents clinically as yellowish-white round or oval papules that occur more frequently on the posterior neck region, but also on the back, without associated systemic manifestations. It is first described by Shimizu et al. in 1985. Its etiopathogenesis, not fully understood, seems to be related to intrinsic skin photoaging, but is probably multifactorial.

Bas du formulaire

the main differential diagnosis of this entity, is pseudoxanthoma elasticum (PXE), a genetic disease caused by a mutation in the ABCC6 (ATP-binding cassette sub-family C member 6) gene and is associated with ectopic mineralization of the skin, eyes, and blood vessels. However, in contrast to the latter, WFPN usually appears late in life, as in our patient’s case, is not associated with systemic complications, and does not require further investigation.

We reported this case to take attention to the cosmetically undesirable condition and its differential diagnosis.

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Abstract N°: 3788

psoriasis and blistering disease: a case report

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Introduction & Objectives:

Although pemphigus has recently been linked to psoriasis, the risk of emergence of pemphigus during the course of psoriasis is yet to be delineated. Psoriasis is a chronic immune system disorder that is driven by the tumor necrosis factor-α/interleukin-23/interleukin-17 axis, it also exhibits an autoimmune aspect involving autoreactive T cells. Pemphigus is a rare group of blistering dermatoses, causing vesicles and erosions on the skin and mucosae. It arises from the production of autoantibodies targeting cell adhesion molecules. Although psoriasis is commonly associated with bullous pemphigoid, its link to pemphigus has only recently been suggested. Understanding the risk of developing pemphigus during the course of psoriasis requires further investigation.

Materials & Methods:

Case report

Results:

A 41-year-old male patient with a diagnosis of vulgar psoriasis was initially treated with methotrexate and a combination of topical corticoid/calcipotriol but due to lack of significantly improvement, the decision was made to discontinue the previous therapies and start systemic immunomodulatory biological treatment with risankizumab. While risankizumab gradually cleared the initial dermatosis, the patient developed a disseminated bullous pruritic dermatosis after two months. Physical examination revealed erythematous plaques, erosions, impetiginized crusts, and fragile blisters on the face, trunk, limbs, and extremities, accompanied by scalp and beard desquamation. Based on the clinical presentation, histopathology, and elevated levels of Anti-Desmoglein 1 antibodies, the patient was diagnosed with severe foliaceus pemphigus. Treatment with rituximab and prednisolone successfully resolved the cutaneous lesions and led to a decrease in anti-desmoglein titer. Notably, no signs of psoriasis were observed throughout the tappering of the treatment.

Conclusion:

These clinical case highlights the interesting link between psoriasis and bullous dermatosis. In our patient, despite the atypical presentation, a diagnosis of psoriasis was made based on clinical ground, supported by confirmatory biopsy findings. Treatment with Risankizumab was initiated, leading to notable improvement in the patient's dermatosis over a three-month period. However, there was subsequently a change in the clinical presentation and a diagnosis of pemphigus foliaceus was established through clinical, histological, and serological evaluations. It is noteworthy that Risankizumab, an IL-23 inhibitor, is not approved for the treatment of pemphigus. However, there have been reported cases of biologic immunomodulatory treatments triggering bullous diseases, including bullous pemphigoid and pemphigus vulgaris. While it remains uncertain whether the presentation of both dermatoses in this patient was only a coincidental immunological crossover, speculation arises regarding the potential role of Risankizumab in the progression of the dermatosis although further research is needed to clarify the underlying mechanisms. Moreover, the observed association between psoriasis and other autoimmune disease, such as pemphigus is supported by existing evidence. It suggests shared underlying immunological pathways and genetic predispositions. Understanding these connections is crucial for optimizing the management

and treatment strategies for patients with psoriasis since balancing the treatment of both diseases can be challenging.

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Abstract N°: 3980

Unusual case of adult-onset eccrine angiomatous hamartoma

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Introduction & Objectives:

Eccrine angiomatous hamartoma (EAH) is a rare benign tumour of vascular and eccrine origin. Most cases reported in the literature concern paediatric population with mean onset age of 16 years (less than 8% of cases were diagnosed in adulthood). EAH most commonly manifests as a solitary red, violet, brown, yellow or blue plaque/papule localized on the distal extremities. In the literature there are only two dermoscopic cases describing multiple yellow globules over erythematous background and linear and arborizing blood vessels (so called popcorn pattern) or globular spitzoid-like pattern. Clinical course is typically asymptomatic, however local pain, hyperhidrosis and hypertrichosis may be present, which sometimes lead to surgical excision. Literature analysis revealed only one case of spontaneous regression of EAH. Herein, we report an adult-onset case of EAH with regression after a diagnostic biopsy.

Materials & Methods:

A 23-year-old female, with previous diagnosis of Fox-Fordyce disease (FFD), presented to the dermatology department due to poorly marginated skin macule located on the proximal, dorsal aspect of the left third toe. The lesion appeared 2 months prior to the visit. The patient denied any accompanying symptoms and possible association with trauma. Dermoscopy revealed scattered dotted vessels on the white-pinkish background. Punch biopsy was performed and histopathological examination revealed focal proliferation of microvessels and eccrine glands accompanied by infiltration of lymphocytes, which, together with the clinical presentation, led to the diagnosis of EAH. During follow-up visit, 3 months after the biopsy, complete resolution of the lesion was observed.

Results:

-

Conclusion:

The presented case of EAH is interesting due to adult-onset, previously non-described dermoscopic pattern, biopsy-induced regression and association with FFD (rare, chronic disorder affecting the apocrine glands clinically manifesting as itchy papules localized on the skin areas bearing apocrine glands, mainly axillary areas). The possible association of the two disorders originating from the sweat glands is interesting and requires further studies.

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Abstract N°: 4118

Clinican and Patient Perspectives on Virtual Dermatology Biologic Clinics: A Retrospective Mutlicentre Study in Wales

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Introduction & Objectives:

Telemedicine has been an underutilized tool in Dermatology until the Covid-19 pandemic compelled the health-care system to find alternative methods. In March 2020 UK issued the first lockdown forcing hospitals to adapt to new ways to follow up their patients. The aim of our study was to gather the perspectives of clinicians and patients including patient satisfaction with regards to virtual biologic clinics in two centres in South Wales to evaluate how we can improve the service.

Materials & Methods:

Data was collected from two dermatology centres in Wales. Data from clinicians was collected via a proforma and from patients via telephone interviews. All patients seen in the biologic clinics between February to August 2021 were eligible. Clinicians documented whether they thought the appointment was successful. Patients were asked to give their overall opinion on how the virtual consultation was conducted with follow up questions. They also ranked their level of satisfaction and the convenience of the appointment.

Results:

A total of 70 patients were recruited to our study, 34 from centre A and 36 from centre B. The characteristics of the participants is shown in Table 1. Most appointments were rated successful by the clinicians (68/70 appointments).

The data from the patient interviews shows that around 24% (17) of the participants would prefer telephone consultations, 40% (28) would prefer face-to-face review and 36% (25) would prefer a mix of both telephone and face to face appointments. Most of the latter participants thought that a face-to-face appointment would only be necessary if they had problems with their skin otherwise a telephone consultation would suffice. 87% (61) of the patient's thought the appointment addressed their concerns and 9% thought it did not (9). Regarding patient satisfaction 66% (46) were very satisfied with the outcomes of the appointment and only 9% (6) and 1% (1) patients were either slightly or very unsatisfied respectively. Further analysis of the data did not show that age had an impact on the satisfaction rating. 56% (39) and 23% (16) of patients strongly agreed or slightly agreed that the virtual appointments were more convenient and only 1% (1) and 3% (2) slightly or strongly disagreed respectively.

In the patient interviews it appeared that the patients with no lesions were generally happier with having a virtual consultation. Some patients found it time saving and comfortable and one patient expressed that a telephone consultation was more ideal because they suffered from anxiety. Some patients who would have preferred a face-to-face review expressed that they would be more reassured if the health care professional could examine their skin. One was frustrated because they could not describe the skin lesion over the phone, and another felt rushed. When asked about suggestions to improve the consultation, patients suggested that a video call would improve

the quality of the consultation.

Conclusion:

Our data shows that the majority of clinicians thought that the virtual appointments were successful. On the contrary more than two-thirds of patients would either like a face-to-face review or a hybrid model depending on the condition of their skin. Many patients suggested that a video consultation is preferred. Most services will continue to utilize virtual appointments to some extent, so it is important that hospitals provide the needed technology and safe platforms to do so.

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Abstract N°: 4133

Gender Equity in Medicine and Dermatology in Europe and the United States: The Long Road Traveled and the Journey Ahead

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Introduction & Objectives:

Over the past 50 years the representation of women in medicine has increased significantly with similar rates of men and women graduating from medical training today. Nevertheless, gender gaps in leadership, research publications, and compensation persist. In this review, the authors take a deep dive into the literature to evaluate the trends in gender differences among leadership positions in academic medicine in dermatology in the United States and Europe, then evaluate the roles of mentorship, motherhood, and gender bias on gender equity in medicine.

Materials & Methods:

In January 2022, a scoping review of PubMed, limited to the English language, was performed. All study types were considered for review. Articles were screened for duplicate records with remaining titles and abstracts screened for relevance.

Results:

Since the 1970s, there have been improvements in the gender parity of women across academic dermatology departments. Fifty years later, women accounting for roughly half of dermatology resident trainees and academic faculty in the United States but remain significantly more likely to hold junior titles and continue to be underrepresented in senior faculty and leadership roles. This underrepresentation results in a lack of role models for younger women to identify with, which may contribute to the decision to leave academic medicine. However, multiple peer reviewed publications offer potential constructive solutions for addressing various aspects of these persisting gender inequities (Table 1).

Conclusion:

Gender bias continues to contribute to the disproportionate barriers to promotion, equal compensation, and mentorship many women experience in academic medicine, especially when raising children. This contributes to the cyclic process that perpetuates the underrepresentation of women in leadership who could otherwise serve as role models for their younger counterparts. The gender inequity within academic medicine, and dermatology, is a deeply engrained, systemic problem, creating a vicious cycle that will require a multi-faceted approach and commitment from every level of the system to establish and maintain gender equity across positions in academic medicine.

Table 1. Constructive Solutions for Addressing Gender Inequities in Academic Medicine

Gender Inequity Issue Addressed	Proposed Solution	Anticipated Impact
Leadership	Promotion criteria emphasizes research dominant career tracks ➔ *fewer* women mentors in leadership positions	Develop measures for promotion that include mentorship as a form of leadership and productivity
Childcare Burden	Lack of a universal new parental leave (NPL) policy ➔ *increased* burden of child-rearing for women in residency and *decreased* support from co-residents in postpartum period	Standardization of NPL policy for residents inclusive of support systems for co-residents during parental leave
	Unequal childrearing burden and lack of support à a major barrier to career advancement	Establish hospital-provided, on-site or near-site childcare services with extended hours

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Abstract N°: 4137

Laterality of biophysical parameters of the skin in a normal population

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Introduction & Objectives:

The biophysical characteristics of skin helps clinicians and researchers to arrange a proper approach to management of skin condition. However, there have been no previous studies about the laterality of skin properties. The aim of this study was to analyze the baseline differences of skin properties between both sides of the face in a normal population. Additionally, we aimed to study how demographic factors such as age and gender affect the difference.

Materials & Methods:

424 healthy volunteers (53 men and 371 women) without any specific skin lesions on the face were enrolled. Skin parameters including erythema index, melanin index, hydration, and transepidermal water loss (TEWL) were measured at the same point on both sides of the cheek, where the vertical line of midpupillary spot and horizontal one from the end of nasal tip meet.

Results:

The erythema index was significantly higher on the left side of the face, while the melanin index and hydration were higher on the right side (all p <0.001). The degree of differences between both sides varied with age and gender. As the age increases, the differences of the erythema and the melanin index were observed to be greater (p=0.01 for erythema index, p=0.048 for melanin index). The skin of female participants was significantly more hydrated and had greater differences between left and right than that of male participants.

Conclusion:

Laterality of skin properties should be taken into account in the clinical and research settings. The influence of age and gender factors on the laterality should be also considered.

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Abstract N°: 4166

Tunnel vision in teledermatology : A case of cholecystocutaneous fistula

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Introduction & Objectives:

External biliary fistulas are extremely rare. It is an uncommon complication usually associated with neglected calculous cholecystitis but can also be secondary to cholangiocarcinoma, biliary duct injury during surgery or other traumatic causes. The rarity of this condition nowadays is likely attributed to improved diagnostic investigations and greater availability of treatmen. Although rarely seen by dermatologists, external biliary fistulae can present primarily as cutaneous defects. We present a case of cholecystocutaneous fistula referred by primary care to our skin cancer teledermatology service

Results:

A 95 year old lady with a past medical history of gallstones and an episode of cholecystitis five years previously was referred to our 2 week wait suspected skin cancer teledermatology service with a 2 year history of an otherwise asymptomatic non-healing, weeping granulomatous lesion to the right lower abdomen. Three images of lesion were sent initially with the electronic referral showing an umbilicus-like depression to the skin surface with an approximately 6mm granulating nodular lesion within the peripheral rim. Due to poor orientation of the locator image the triaging clinician assumed the depression to be the umbilicus. Based on history and clinical appearances from the photographs, a differential diagnosis of Sister Mary Joseph nodule, amelanotic melanoma, squamous cell carcinoma, inflammatory lesion or pyogenic granuloma was suggested. Surgical excision was arranged which revealed the lesion was separate from the umbilicus. The dermatological surgeon performing the procedure noted a fibrous tubular structure in connection with the lesion and further seen at the base of the excision wound which was closed primarily over the tubular structure.

The histological findings of the excision sample were in keeping with non-specific dermal scarring. On the basis of this unusual intraoperative finding, an ultrasound was arranged which demonstrated a deep collection communicating to the exterior via a sinus tract through abdominal wall with internal debris. As an enterocutaneous fistula was a possible explanation, an urgent referral to gastrointestinal team recommended CT scan of abdomen with contrast which revealed a cutaneous tract within the right anterio-lateral abdominal wall which communicated with the gallbladder, in keeping with a cholecystocutaneous fistula. Gall stones were seen within the neck of the gallbladder but there was no evidence of malignancy. The patient was referred to the hepatobiliary surgeons for further management.

Conclusion:

In recent years the increasing pressures on skin cancer services and advancing technology have meant that Teledermatology has become a valuable tool to help manage skin cancer patients more conveniently and efficiently. However, the integrity of Teledermatology is reliant on good quality clinical information and high quality well-orientated images.

This case demonstrates how mal-orientation/ insufficient detail can significantly influence clinical judgement. Although rare, cutaneous fistulae to underlying structures should be considered as a differential diagnosis in

patients presenting with depressed, granulating, lesions of the skin. In particular with a history of biliary disorders presenting with such a lesion in the right upper quadrant, a cholecystocutaneous fistula should be considered and should prompt further investigation of the biliary tract.

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Abstract N°: 4219

Utility of teledermatology for triage , diagnosis and counselling : A prospective study at the tertiary care centre in western India

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Introduction & Objectives:

Teledermatology is a health care tool that has been used more frequently in COVID 19 pandemic as well as post pandemic era. Initially utilised as a triage tool by primary health care providers during COVID 19 era, now teledermatology has expanded magnificently. In the field of dermatology, two main types of teledermatology is currently being used: (1) Real time, (2) Store and Forward.

The aim of the study was to assess the utility of teledermatology for patients' diagnosis, referral, follow up, counselling and predecision making for dermatological surgeries.

Materials & Methods:

This was a prospective study conducted over a period of 1 year from April 2022 to April 2023. The study was approved by the Institutional Review Board(IRB) Committee and followed the ethical standards of Declaration of Helinski. Data was fully anonymized before access. This was a forward looking study conducted by the department of Dermatology at the tertiary care hospital in western India involving the primary health care providers. Both Real time Teledermatology and Store- Forward teledermatology were used for diagnosis of skin lesions, providing treatments and decision making for dermatosurgery. Counselling and mindfulness sessions were also performed for patients of chronic dermatological disorders by treating dermatologists. Data were analysed using statistical SPSS 2.0 version.

Results:

A total of 37,234 patients were consulted through teledermatology during the study time. Out of this, 74.8 % were consulted through real time teledermatology while 25.2 % were consulted via store and forward teledermatology. Diagnosis concordance between the general practitioner and the dermatologist was moderate (κ=0.5). Physical examination by the dermatologist at the hospital of reference was necessary for 20.6% of the patients, and time until a definitive diagnosis for the patient took longer in such cases 21.2 days than for the cases that didn't need a physical evaluation at the centre. A total of 9.3% of patients were advised biopsy after a triage tele consultation by the dermatologist.

Conclusion:

Being the visual speciality field, Teledermatology is indeed a boon to cop up with the lack of human resources and specialists in a developing country like India. With the advent of AI (Artificial intelligence) enriched teledermatology, it's a new horizon to transform the dermatological practices in near future. Pragmatic studies are needed to evaluate AI performance (alone and in combination with physicians) compared with standard care. This signifies the energetic involvement of dermatologists across the globe undoubtedly.

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Abstract N°: 4222

tacrolimus as a therapeutic option for atrophoderma of pasini and pierini: a case report

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Introduction & Objectives:

Atrophoderma of Pasini and Pierini (APP) is a rare cutaneous condition. It presents as single or multiple hyperpigmented patches and atrophy of the skin, it is slightly more common on woman and mostly located on the trunk. The disease doesn't have a well-defined etiology, at first the disease was associated with Borrelia burgdorferi infection, but nowadays theories of genetic and immunological factors are more accepted. There is no consensus regarding the correct treatment of this condition. The objective of this abstract is to report a case of APP, treated with tacrolimus 0,1% and the it positive outcome.

Materials & Methods:

We report a case of a 15 years old female patient with a hyperpigmented patch on the upper back, associated with skin atrophy of the central area, with approximately 7 cms. The lesion appeared about 8 years ago, at first as a small brown macule and over the years it grew and she had the feeling of "deepening" of the skin. Symptoms associated were itching and pinching. She had no associated diseases, neither use of continuous medications and no similar family history. Previous treatments were only moisturizing creams. We perfomed a skin biopsy and some hypotheses were Scleroderma, Lichen scleroatrophica, Macular amyloidosis and APP. A high frequency ultrasound was also perfomed. Histological examination revealed preserved epidermis, discreet collagen deposition in the superficial and intermediate dermis with foci of perivascular lymphocytic inflammatory infiltrate. A slight loss of the elastic weave was noted. In conclusion the biopsy showed a slight sclerosis with reduction of elastic fibers in the superficial dermis, in the spectrum of APP. At high-frequency ultrasound, a hypotrophy of the hypodermis and a reduction in the thickness of the dermis was observed, measuring 1,5mm compared to the adjacent area without alteration in which the dermis was 3,9mm thick. We closed the diagnosis as APP. Besides being a rare condition with no well-defined etiology, this disease lacks of a consensus regarding its treatment. Some authors recommend the use of topical corticosteroids. Considering the patient age, the prolonged use of topical corticosteroids could lead to adverse effects. We chose to carry out a therapeutic trial with a calcineurin inhibitor, hoping for an improvement of the symptoms. We prescribed tacrolimus 0,1% cream applied once a day at the lesion on her upper trunk for 3 months.

Results:

After 3 months of daily treatment with tacrolimus 0,1%, the patient returned for follow up and, fortunately, she reported a significant improvement of the symptoms within the first 15 days of applying the medication. To our surprise, on physical examination we also noticed an improvement in the texture of the skin, with decrease of the stiffening and also a lightening pigmentation. The patient was satisfied with the outcome of the treatment and we decided to keep applying tacrolimus 0,1% cream daily and follow the evolution of her case.

Conclusion:

Although there is still no proven effective treatment for APP, the use of Tacrolimus could be considered as a potential treatment in some cases. The use of calcineurin inhibitors in dermatology is already well established, and its prolonged use does not present major side effects. Furthers studies are needed to explain the possible

mechanism of action of tacrolimus in APP, but with this case report we hope to raise this discussion and believe that it could be a therapeutic option for this rare condition.

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Abstract N°: 4294

Skin microbiome effects of long term dexpanthenol based gentle wash and emollient products formulated for dry skin

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Title:

Skin microbiome effects of long term dexpanthenol based gentle wash and emollient products formulated for dry skin

Introduction & Objectives:

The skin's chemical landscape can be strongly impacted by the products applied to it. Certain compounds present in these products may also contribute to skin microbiome variation, particularly if repeated exposure has a cumulative effect. As the microbiome can influence the structure, function and behaviour of the skin, it is important that topical products respect the microbiome composition and do not negatively impact it by reducing the microbial diversity present. The studies reported here examined the effects of four products designed for dry skin on the skin microbiome after 4 weeks of daily use. Containing a repair complex of dexpanthenol (provitamin B5), natural lipids, glycerine and niacinamide (vitamin B3), the test products were two gentle washes (face and body) and two emollients (body lotion and face cream). The emollients also contained isopropyl isostearate.

Materials & Methods:

2 studies were performed – a wash study and an emollient study. Study details are given in Table 1. Both studies were carried out in the same season by the same CRO, and the same inclusion/exclusion criteria were used to select the subjects. For microbiome assessment, the subjects were swabbed at baseline and after 4 weeks of daily product usage. DNA was extracted from the swab samples and PCR amplification was carried out to allow for determination of bacterial species present. Microbial populations were described in terms of α- and β-diversity and Shannon index.

Results:

In both studies, *Actinobacteriota*, *Firmicutes* and *Proteobacteria* were found to be the most abundant phyla on the assessed test areas.

Face wash: No significant differences were found between the treated and untreated face areas (as determined by α-diversity and β-diversity), showing a comparable microbiome for all treatments at baseline and 4 weeks.

Body wash: No significant differences were found between the treated and untreated forearm areas (as determined by α-diversity and β-diversity), showing a comparable microbiome for all treatments at baseline and 4 weeks.

Body lotion: An increase in microbiome richness (α-diversity) over time for the body lotion treated site was observed. No significant differences were found between the treated and untreated forearm areas for β-diversity.

Face cream: No significant differences as determined by α-diversity and β-diversity were found between baseline and 4 weeks for the face cream or the untreated face site.

Adverse event details from the studies have been summarized in Table 1.

	Wash study	Emollient study
Treatments and sites	Face wash, untreated face Body wash (forearm), untreated forearm	Face cream (face), untreated face Body lotion (forearm), untreated forearm
Treatment time	28 days (4 weeks)	28 days (4 weeks)
Treatment regimen	Once daily wash per site, controlled dose	Approximately 2mg/cm^2 of each product, each applied once per day
Study population	N=23 (9 Male, 14 Female)	N=24 (6 Male, 18 Female)
Subject age	54.3 ± 11.5 years	53.7 ± 9.5 years
Skin phototype	4 Fitzpatrick I 14 Fitzpatrick II 3 Fitzpatrick III 1 Fitzpatrick IV 1 Fitzpatrick V	4 Fitzpatrick I 15 Fitzpatrick II 4 Fitzpatrick III 1 Fitzpatrick V
Adverse events	3 AEs reported for the study population. No product related AEs	10 AEs reported for the study population. 6 AEs product related, all mild

Table 1. Study design criteria and adverse event (AE) details.

Conclusion:

Choice of an appropriate treatment regimen for cleansing and moisturizing delicate skin is important. The daily use of dexpanthenol based gentle wash and emollient products tested here have been shown to not negatively impact skin microbiome after 4 weeks of treatment. It can be concluded that all these products are skin microbiome friendly.

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Abstract N°: 4309

Rare case of disseminated superficial porokeratosis associated with recurrent squamocellular carcinoma

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[1]University Clinical Centre of Serbia, Dermatovenereology, Belgrade, Serbia,[2]Institute of Pathology "Djordje Joannovic", Belgrade, Serbia

Introduction & Objectives: Porokeratosis is a rare heterogenic group of congenital or acquired keratinization's disorders of unknown etiology, characterized with centrally atrophic papules or plaques surrounded by a hyperkeratotic rim. Lesions can be either localized (porokeratosis of Mibelli, linear porokeratosis, porokeratosis ptychotropica, punctate porokeratosis) or generalized like in eruptive disseminated forms (disseminated superficial actinic porokeratosis-DSAP, disseminated superficial porokeratosis-DSP, disseminated palmo-plantar porokeratosis). Porokeratosis, especially, eruptive disseminated forms, is presumed to be associated with immunodeficiencies, renal and liver disfunction, malignancies or viral infections. Porokeratosis is also considered premalignant dermatosis because of possible malignant transformation into squamocellular (SCC), basocelluar carcinoma (BCC) or even melanoma.

Materials & Methods: We present the case of a 77-year-old Caucasian woman who presented with 40-year-history of widespread symmetrical distributed brownish, centrally atrophic papules and plaques with elevated, palpable, keratotic rim. Additionally, multiple small, yellowish hyperkeratotic papules were present on the palms and soles. Further examination revealed an ulcerated tumor on the right foot, highly suspicious of SCC. The patient was taking chronic therapy for hypertension and had a 15-year-history of surgically removed SCC on the left leg. Family history regarding skin diseases was negative.

Routine laboratory analyses revealed slightly elevated inflammatory parameters. Tumor marker values were within reference range. Serology tests for HIV, Hepatitis B and C were negative. Chest X-ray was normal. Histopathological examination of hyperkeratotic papules revealed histological hallmark of porokeratosis - cornoid lamellae. Diagnosis of SCC was also histopathologically proven, by finding nests of atypical, tumor cells with hyperchromatic nucleus extending into dermis and forming extracellular keratin pearls. The patient was diagnosed DSP and palmo-plantar porokeratosis associated with SCC.

Results: Surgical excision of SCC, followed by skin graft, was performed. Upon wound healing, acitretin in dose of 0,5mg/kg was administered, as well as topical 10% urea. After two months of therapy, significant improvement on palms and soles was seen, but other persisted. This could be explained due to short course of acitretin therapy, started after the performed operation. Five months later, new highly suspicious lesions of SCC were detected near operating field. Histopathological examination confirmed another SCC, thus being the third SCC, and the patient was referred to another excision.

Conclusion: Although porokeratosis usually has benign course, malignant transformation is possible. Early recognition and appropriate treatment is important in order to prevent possible malignant transformation. Patients with porokeratosis should be regularly checked and followed to early detect arising carcinomas.

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Abstract N°: 4316

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

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Introduction & Objectives:

Keloid is cosmetically disfiguring benign fibrous outgrowths which present as a major therapeutic dilemma as they frequently recur. 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 intralesional steroid injection alone in the treatment of keloid. The aim of this study was to determine the effectiveness of the PDL in combination with intralesional triamcinolone acetonide over intralesional triamcinolone acetonide alone 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 pulsed dye laser followed by intralesional triamcinolone acetonide injection on the same seating. 25 patients belong to Group B were treated with intralesional triamcinolone acetonide injection alone. The initial dose per injection site was 40 mg/ml. Subsequent doses were titrated after assessment of lesion.

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 whereas steroid injection alone does not have this good property in the treatment of keloid. Again mean sizes of keloids of the group A (PDL + Triamcinolone) drops relatively rapid than group B (Triamcinolone) from baseline to 12th weeks. Moreover, VSS score drop rate of Group B (Triamcinolone) was found slower than that of group A (PDL + Triamcinolone). The same slight difference was found for safety scores also.

Conclusion:

PDL followed by intralesional triamcinolone acetonide injection was found beneficial with an excellent outcome over intralesional triamcinolone acetonide injection alone in the treatment of keloid.

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Abstract N°: 4339

Segmental Neurofibromatosis: Dermatological Recurrence Following Herpes Zoster Infection. A Case Report.

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Introduction & Objectives:

Neurofibromatosis encompasses a group of neurocutaneous disorders that impact both the skin and the nervous system. This condition manifests in various types, including neurofibromatosis type 1, neurofibromatosis type 2, and Schwannomatosis.

Segmental neurofibromatosis is a less common form of neurofibromatosis type 1, with a relatively low incidence rate of approximately 1 in every 25,000 individuals. It is characterized by cutaneous lesions such as coffee with milk spots, neurofibromas, or plexiform neurofibromas present on a segment or body area without crossing the midline, without systemic involvement, and without a family history. The objective is to present a clinical case of true segmental neurofibromatosis in an adult patient who experienced lesion recurrence following herpes zoster infection in the affected area.

Materials & Methods:

We report a clinical case of true segmental neurofibromatosis in an adult patient with recurrent lesions following herpes zoster in the affected area.

Results:

An 84-year-old male patient with a history of arterial hypertension and benign prostatic hyperplasia with a 7 year evolution dermatosis consisting** of multiple papular and nodular neoformations, exophytic in appearance, variable in size, smooth surface, skin colored, soft in consistency, depressible, and non-painful upon palpation. The lesions were located on the unilateral right trunk with distribution at the T9-T10 dermatomes. The patient reported a previous treatment with electrodesiccation for these lesions seven years ago, which was followed by their recurrence subsequent to a herpes zoster infection in the same dermatome. A biopsy was performed, which revealed hyalinized collagen fibers with fusocellular dermal proliferation. Immunohistochemical staining for S100 and neurofilaments was positive, consistent with neurofibroma. Ophthalmological and neurological evaluations showed no abnormalities. Based on the clinical presentation, absence of familial history, histopathological findings, and immunohistochemical profile, the patient was diagnosed with segmental neurofibromatosis. Surgical resection of the lesions was recommended.

Conclusion:

Segmental neurofibromatosis is a rare and generally benign condition, often asymptomatic, which may contribute to underdiagnosis. However, given the recurrence of neurofibromas, reports of malignancy associated with segmental neurofibromatosis comparable to neurofibromatosis type 1, and the potential impact on offspring leading to the development of full neurofibromatosis type 1, it is crucial to emphasize a multidisciplinary approach in managing this condition.

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Abstract N°: 4402

Ultraviolet radiation related skin diseases in a mixed racial population

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Introduction & Objectives:

The incidence of rosacea and skin diseases related to ultraviolet radiation (UVR) exposure, such as actinic keratoses (AK) and skin cancer (SC) are less frequent in people with darker Fitzpatrick's phototypes (III-VI) compared to fair-skinned individuals (I-II). However, there is not enough data reporting the Latin American population phototypes among the diseases mentioned above. We aim to describe Fitzpatrick phototype of patients with rosacea, SC and AK in a Colombian population.

Materials & Methods:

We performed a cross sectional study between June 2017 to July 2022 in a dermatologic center in Bogota, Colombia in patients with at least one of the following: SC, AK and/or rosacea. Variables obtained from medical-records were sex, age, Fitzpatrick's phototype. We performed an univariate and bivariate analysis. Data was collected and analyzed using Microsoft® Excel.

Results:

Out of 925 patients, 62.62% were men (n=578). Phototype III was the most frequent phototype with 74.86% of the sample, followed by phototype IV at 19.82% and phototype II at 4.86%. In patients diagnosed with AK, phototype III was present in more than three fourths of the sample (77.09% n=414), followed by phototype IV with 18.99% (n=102). In patients with rosacea, 74.17% were phototype III (n=158) followed by phototype IV with 20.18% (n=43). The majority of patients diagnosed with SC were phototype III (75.99% n=236), followed by phototype IV in 18.84% patients (n=59). The concomitant diagnosis of two of these diseases was present in 13.18% of the sample. The totality of patients with three concomitant diseases were phototype III (100% n=8).

Conclusion:

In contrast to literature reports, our study showed that phototypes III and IV were present in the majority of patients with rosacea, AK and SC (>90%), likewise when assessed individually. The frequency of concomitant presentation of these diseases was low. According to our results, the Fitzpatrick phototype classification may not be as accurate in the Latin American population as in the non-Latin American population due to racial mixing. This suggests the need to reevaluate and research the value of this phototype classification in UV-related dermatoses among different populations.

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Abstract N°: 4437

A closer look on medical students' perception of dermatology.

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Introduction & Objectives:

Dermatology, as a medical specialty, often faces pervasive prejudices and misconceptions from both public and medical community. These preconceived notions can impact career choices made by medical students, leading to a potential shortage of dermatologists in the future. This study aims to investigate the perception of dermatology among medical students and their influencing factors, providing insights for promoting dermatology as an attractive career option.

Materials & Methods:

We conducted a prospective study from May 2022 to May 2023. Medical students were invited to complete an anonymous questionnaire. Participation was voluntary. The collected data was analysed using the Jamovi Software.

Results:

A total of 283 medical students participated in the study. The average age was 23.1 years, with a sex ratio of 2.2 female per male. Among them, 62.2% had completed internships in dermatology. The duration of the internships varied from one week to six months. Only, 43.1% reported being interested in dermatology. 63.3% of the participants believed they had a significant knowledge gap in dermatology, while 35.3% considered themselves to have an intermediate level of understanding. Only 1.4% of the respondents felt they had an advanced level of knowledge in this field. Furthermore, dermatology is regarded as a challenging specialty for many of them (92.6%). The frequency and diversity of dermatological conditions were attested by 94% of the surveyed population, as well as their significant psychological impact (88.7%). However, a proportion of the respondents (36%) expressed disgust and aversion towards these conditions due to their unpleasant odor, while a small number believed them to be incurable (7.8%) and contagious (4,3%). Regarding the therapeutic options in dermatology, many participants (65.7%) summarized it to topical treatments, particularly corticosteroids. According to the surveyed students, dermatologists have more free time and a higher income compared to other specialists (74.9% and 66.8% respectively). As for their future specialty choice, only 14.1% responded with dermatology. When it comes to the factors influencing this choice, interest in another specialty came in first (76.4%), followed by the quality of the internship (traumatic experience or insufficient duration; 39%). The department head also plays a significant role due to their reputation and quality of supervision (33.5%). The career choice was also influenced by factors such as the quality of theoretical education (28%) and the challenges posed by elementary lesions and diagnosis (26.4%). Surprisingly, only a minority of participants raised concerns about the representation of specialties in the media (12.6%). And despite the significant predominance of women in dermatology, only 11% of respondents saw it as a feminine specialty.

Conclusion:

Dermatology, despite its wide range of conditions, is often undervalued and lacks recognition. Further studies are needed to identify and address the biases surrounding this specialty.

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Abstract N°: 4459

Squamous cell carcinoma arising on inflammatory linear verrucous epidermal nevus

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Introduction & Objectives:

The "inflammatory linear verrucous epidermal nevus" is a rare disease, consisting of hyperplasia of the normal components of the epidermis, which bear the risk of turning into a cancerous lesion.

Materials & Methods:

We present the case of a 46-year-old male who was admitted for a whoozing cauliflower shaped tumor, measuring 5 cm in diameter, developed on a inflammatory linear verrucous epidermal nevus, on his left thigh. The patient declared that the tumor has developed in the last 2 years.

We performed an excisional biopsy of the tumor, under local anesthesia, followed by primary suture. The post operatory evolution was favorable and the sutures were removed after 21 days.

Results:

The histopathology report showed a well differentiated squamous cell carcinoma, developed on inflammatory linear verrucous epidermal nevus, with tumor-free resection margin measuring 2. 5 cm.

The patient was referred to the oncology department and also advised to excise all the remaining inflammatory linear verrucous epidermal nevus.

Conclusion:

Although extremely rare, ILVEN is associated with malignant transformation, such as basal or squamous cell carcinoma and keratoacanthoma. All patients with ILVEN should undergo regular dermatologic examinations.

Our patient has delayed doctor consultation for 2 years, but fortunately the squamous cell carcinoma was well differentiated and the excision was done within the oncologic safely margin.

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Abstract N°: 4503

A rare case of microvenular hemangioma

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Introduction & Objectives:

Microvenular hemangioma is a rare benign lesion presenting as a papule, plaque or nodule on the trunk or extremities and sometimes on the face. The most interesting aspect is that it can mimic a malignant lesion.

Materials & Methods:

We present the case of a 68-year-old female patient, who presented for an erythematous and violaceous plaque on the left arm that had been present for seven months, with a gradual increase in size. Clinically, the lesion was a round plaque, 2 cm in diameter, with a sharp demarcation (a slightly elevated margin) and it was asymptomatic. The patient denied previous trauma or insect bite at the site of the lesion. Previous treatments with topical antifungals and oral and topical corticosteroids showed no improvement. A direct microscopic mycological examination excluded a fungal infection. Based on the clinical examination, diagnoses such as T-cell lymphoma, Kaposi sarcoma and pseudolymphoma were considered.

Results:

A 4 mm punch biopsy from the lesion was performed and the histopathological report showed a benign vascular proliferation compatible with the diagnosis of microvenular hemangioma.

The patient was sent to plastic surgery for the surgical excision of the lesion.

Conclusion:

This was the case of a microvenular hemangioma, a rare cutaneous entity in which the final diagnosis was based on histopathological examination. It is important to reassure the patient of the benign character of this lesion.

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Abstract N°: 4508

ChatGPT-4 can pass the UK Dermatology Specialty Certificate Examination

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Introduction & Objectives:

The Specialty Certificate Examination (SCE) in dermatology is an examination sat by dermatologists in training in the UK, and is a requirement for achieving specialist registration to practice as a dermatologist. The SCE comprises 200 best-of-five multiple-choice questions (MCQs), with a pass mark of set at around 70-72%. ChatGPT is an artificial intelligence (AI) language model that has been trained through datasets provided by OpenAI to process language tasks. ChatGPT does not have access to the internet and cannot perform web searches. It can be used to generate text answers (including code, essays, and human-like conversation), and to answer text-based questions, such as those encountered in the SCE. We examined how well ChatGPT-3.5 and ChatGPT-4 performed on publicly-available dermatology SCE sample questions published by the Royal College of Physicians.

Materials & Methods:

88 multiple-choice questions produced by the Royal College of Physicians (UK) as sample questions for the Dermatology Specialty Certificate Examination (SCE) were asked to ChatGPT-3-5 and ChatGPT-4. 4 questions were excluded from analysis as they contained photographic content that could not be interpreted by ChatGPT. The answers given were compared with the model answers. Performance in individual examination sub-sections was analysed.

Results: ** ChatGPT-3.5 answered 53/84 best of five multiple-choice questions correctly (63.1%). The pass mark for previous three sittings of the SCE have been 72.7%, 74%, and 72%. ChatGPT-4 performed significantly better, achieving an overall score of 90.5% ($p<0.001$). These results show that ChatGPT-4 can answer sample dermatology SCE questions and achieve a pass mark, demonstrating a significant improvement in performance when compared with ChatGPT-3.5.

The 84 sample questions spanned all but one sub-category of question encountered in the SCE (dressings and woundcare questions did not feature). ChatGPT-4 achieved a passing grade in every sub-category of question except for skin oncology (3/5 correct answers – 60%). Though officially published sample questions, it is possible that this sample of questions is not truly reflective of the actual SCE, which comprises 200 questions. ChatGPT was not able to answer any questions containing clinical or histological photographs.

When asked how difficult it found the exam, ChatGPT simply responded: "As an AI language model, I don't have personal experiences or emotions, so I don't have the ability to find an exam difficult or easy. However, I strive to provide accurate and helpful information based on the given questions and available knowledge."(4).

Conclusion:

Artificial intelligence is able in real time to extract clinically relevant data from vignettes provided in examination questions. It is able to interpret histological descriptions and laboratory parameters and results to answer the majority of the postgraduate dermatology questions it was posed. Our findings are in keeping with those already published by OpenAI that describe ChatGPT-4 passing the US Bar exam, and the US Law School Admission Test.

Increasingly sophisticated AI should be embraced in medical education and assessment to improve the design of

assessments and ensure rigorous testing of materials. The justification and explanations provided by ChatGPT-4 can serve as tools to further enhance understanding of a topic, and offer insight into the logical workings of this artificially intelligent machine.

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Abstract N°: 4573

Skin diseases in geriatric populations : access resolved?

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Introduction & Objectives:

By 2030, 20% of the population will be > 65 years, with increase in admissions to long-term care facilities(LTCF). In parallel, the incidence of skin conditions is rising, with>27 million visits to dermatologists and >5 million new skin cancers each year, mostly in older adults.While store-and-forward teledermatology (SFTD) helps overcome travel burden among elderly, it is important for geriatricians to avoid overexploiting its usage and recognize its limitations. The purpose of our study was to assess SFTD usage by LTCF geriatricians over a 5-year period.

Materials & Methods:

We prospectively collected all SFTD requests(clinical images with medical information)sent by LTCF geriatricians to our university hospital TD program since its implementation in January 2016 until December 2020. We collected:patients' demographic characteristics, urgency of the case according to requesters, qualitative rating of supplied information from 1 to 4, suspected diagnosis, management plan, median time to complete final response, and number of no-shows to scheduled procedures

Results:

Results are presented in Table 1. In total, 27/115(23%) of scheduled patients for biopsies/excisions failed to show up.

Satisfaction with SFTD on one hand, and shortage of dermatologists on another hand, explain the increased requests over years. In 2020, COVID-19 caused a decrease in requests number and an increase in time for response completion. During the pandemic, LTCF physicians seemed more concerned about COVID-19 than other health issues. Unexpectedly, even though access to teledermatology expertise was possible, studies show decrease in SFTD requests from LTCF for dermatological reasons other than COVID-19 cutaneous signs. Geriatricians are well-exposed to skin diseases compared to other physicians, as the prevalence of skin conditions is high among elderly. This optimizes outcomes of SFTD since less exchanges are needed to supply patient information. As a quarter of patients didn't need a follow-up with a dermatologist, unnecessary travel for patients in LTCF was limited. However, around a quarter of patients for whom a biopsy or excision was scheduled did not show up. Unexpectedly, the proportion did not decrease over the years. This issue needs to be addressed because it creates a limitation for SFTD use in elderly. Many studies have focused on the accuracy of SFTD in making skin diagnoses in elderly. But, the impact of integrating an innovation in a conventional process should not only evaluate the diagnosis outcome compared to standard care, but also key performance indicators, such as time, cost and resources. In fact, SFTD is supposed to be time-saving and cost-effective, but no-shows waste system performance. While several studies have demonstrated a sustained decrease in no-show rates after implementation of teledermatology, this does not seem to be the case for SFTD used in elderly.

Conclusion:

In conclusion, adopting SFTD in the practice of LTCF is an effective toolto meet skin needs of elderly. Nevertheless, it is essential to conduct future studies to investigate the causes of no-shows post-SFTD in this population. This

would help us design a specific geriatric pathway that ensures access to care, while mitigating no-shows that result in wasting of considerable time, manpower, and resources.

Table 1: Characteristics of store-and-forward teledermatology (TD) requests between 2016 and 2020

	2016 N= 28 (%)	**2017 N=88(%)**	**2018 N=125(%)**	**2019 N=127(%)**	**2020 N=38(%)**	**Total N=406(%)**	p
Sex (F/M)	21/7	60/28	85/40	73/54	26/12	265/141	0.24
Median Age	89.5 [74-99]	87 [65-98]	87 [70-101]	86 [69-98]	87 [74-95]	87 [65-101]	0.54
Urgent cases according to requester	11 (39)	25 (28)	44 (35)	39 (31)	12 (32)	131 (32)	0.76
Median quality of supplied medical information *	3 [2-4]	3 [1-4]	3 [1-4]	3 [1-4]	3 [2-4]	3 [1-4]	0.03
Median time for response completion (days)	0 [0-36]	1 [0-24]	0 [0-16]	1 [0-18]	2 [0-30]	1 [0-36]	0.002
Suspected diagnosis							
Skin cancer	6 (21)	33 (38)	50 (40)	49 (39)	12 (32)	150 (37)	0.40
Inflammatory dermatosis	6 (21)	31 (35)	30 (24)	40 (31)	11 (29)	118 (29)	0.36
Infectious dermatosis	9 (32)	6 (7)	22 (18)	14 (11)	2 (5)	53 (13)	**0.002**
Drug reaction	1 (4)	4 (5)	5 (4)	1 (1)	1 (3)	12 (3)	0.50
Ulcer, bed sore	2 (7)	5 (6)	9 (7)	17 (13)	7 (18)	40 (10)	0.10
Other	0 (0)	4 (5)	2 (2)	4 (3)	2 (5)	12 (3)	0.53
Management plan							
Treatment with no follow-up	8 (29)	27 (31)	29 (23)	32 (25)	4 (10)	100 (25)	0.19
Refer for biopsy/excision	5 (18)	24 (27)	38 (30)	38 (30)	11 (29)	116 (29)	0.71
Refer for in-person dermatology	11 (39)	29 (33)	51 (41)	60 (47)	20 (53)	171 (42)	0.18
No-shows after biopsy/excision was programmed	**1 (4)**	**5 (6)**	**7 (6)**	**9 (7)**	**5 (13)**	**27 (7)**	**0.49**

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Abstract N°: 4611

Patient education for all? Skin of colour under-represented again.

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Introduction & Objectives:

Disparities in healthcare provision have a detrimental impact on health outcomes, which have been suffered by many patient cohorts, whether they are defined socially, economically or by the colour of their skin.1 In the field of dermatology, we rely hugely on visual cues. The visible manifestations of disease, and their evolution, are fundamental to how we formulate diagnoses and treatment strategies. Similarly, visual depiction plays an important role in patients' understanding of skin conditions, for example, what might represent a disease flare or what treatment response may look like. Many patient education resources used in dermatology include real-life photographs, which can enhance understanding, retain patients' attention and stimulate emotional responses, leading to improved comprehension and retention of information. This study aimed to analyse skin colour representation in patient education resources.

Materials & Methods:

A cross-sectional study was conducted exmaining skin colour representation in patient education resources across a number of inflammatory conditions, including acne, atopic dermatitis, hidradenitis suppurativa, psoriasis and rosacea. Resources from multiple dermatological bodies including the Irish Skin Foundation, British Skin Foundation, American Academy of Dermatology Association, Canadian Dermatology Association, Dermatology Society of South Africa, and the Australasian College of Dermatology were reviewed. Hard copy pamphlets published by the associations were analysed, and in incidences where those were unavailable, webpages pertaining to each condition were included. Images were divided by Fitzpatrick skin type into two categories: Fitzpatrick skin type I-IV, and Fitzpatrick skin type V/VI. There is no formal definition of skin of colour, and for the purposes of this study we referred to Fitzpatrick skin types V/VI.

Results:

In total, 115 images were reviewed. People with skin of colour were represented in 5% (n=6) of the images. This stark over-representation of Fitzpatrick skin type I-IV highlights the lack of inclusivity of current patient education resources on inflammatory skin conditions. Consequently, patients with skin of colour may benefit less from the education resources that they receive, if they cannot identify with the images portrayed.

Conclusion:

Disparities in dermatological healthcare provision have been identified before 2,3 and the first steps have been taken by many institutions, aiming to enhance resources to study, describe and improve care for people with skin of colour.4 Patient information resources are another facet of our practice that need focus and reform. Dermatological communities must continue to engage with the global effort to eliminate racial disparities, to improve inclusivity within our field, and work towards the over-arching aim of delivering healthcare that is racially just.

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Abstract N°: 4643

Dermatologic emergencies requiring an expert opinion: a real-world comparative study

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Introduction & Objectives:

Dermatologic emergencies(DE) units(DEUs) are experiencing a rise in the number of patients and a concurrent decrease in resources and manpower. Store-and-forward teledermatology (SFTD) is a network tool that physicians use to obtain access to dermatologic expertise, while saving time and healthcare costs. While there are studies comparing in-person dermatology cases to SFTD in general emergencies, there are no studies that compare characteristics and managements in specialized DEUs vs urgent SFTD. We conducted the first study, in a national reference center for severe DE, to compare in-person referrals to DEUs *vs* urgent requests in SFTD.

Materials & Methods:

Two referral networks for DE exist in our department at Henri Mondor Hospital Creteil-France: a DEU(since 1989) and a SFTD program(since 2015), both available 24h/day, 7 days/week. In this retrospective study, five months of the year 201 7(January, May, June, July and November) were selected. These months were selected to sample different activity periods, residents' rotations and potential seasonal fluctuations in skin conditions. We retrieved the list of all patients consulting at the DEU during that period. We randomly selected 10% of these patients by Stata software. Then, we selected those referred by physicians. On another hand, we extracted all SFTD requests by physicians for an urgent expertise during that period. We compared: age, sex, referring physicians, and diagnosis.

Results:

In total, 899 patients(10% sample) were studied in DEU, 17.7% of which(n=144) were referred by physicians. In parallel, there were 1006 urgent TD requests. Results are shown in Table 1. There were significantly more patients from emergency/inpatient departments via SFTD. In fact, SFTD is the preferred emergency tool for these patients because their transfer is not always feasible. On the other hand, there were more patients referred by private practitioners to the DEU. An economical and organizational evaluation is thus needed to propose the most adequate coordination between hospital and private practitioners in order to minimize unnecessary in-person referrals to the DEU. Reinforcement of physicians' skills through proper standardized training in DE is thus crucial.

Surprisingly, almost all severe conditions gained access to DE expertise through SFTD. Our mission as a reference center for these conditions was therefore accomplished through SFTD rather than DEU. While there were less ''severe conditions'' in the DEU, there were significantly more follow-ups in our specialized department for patients presenting to the DEU *vs* SFTD. In fact, the major problem is that DEUs are playing the role of walk-in clinics to compensate shortfall of dermatologists. After a patient presents to the DEU, referral for follow-up in other departments is rarely possible, given the dermatology workforce shortage. On the contrary, this does not seem to be the case with SFTD. This is a major issue to be addressed because unnecessary referrals to DEU are changing the latter's role, and this wastes considerable time, manpower and healthcare costs.

Conclusion:

In establishing future specialized DEUs, urgent SFTD has to be implemented and distinguished from regular SFTD.

Not only does it constitute an accessible door for real DE, but it is a cornerstone to optimize workforce organization, referral patterns, and high quality of care for these cases.

Table 1:

	Referred Patients in **DEU** **N=144**	Referred Patients in **SFTD** **N=1006**	*p* value
Age, years (mean±SD)	50±16	49±23	0.6
Missing data	*0*	*229*	
Female gender	82 (56.9)	496 (53.3)	0.7
Missing data	*0*	*76*	
Referring physician			
Emergency department	34 (23.6)	421 (42.8)	**<0.01**
Inpatient department	6 (4.2)	334 (34)	**<0.01**
Long-term care facilities	3 (2.1)	21 (2.1)	0.74
Private practice	101 (70.1)	207 (21.1)	**<0.01**
Missing data	*0*	*23*	
Dermatological diagnosis			**0.03**
Inflammatory	47 (32.6)	248 (27.1)	
Drug eruptions	3 (2.1)	78 (8.5)	
Deep or extensive infections	17 (11.8)	156 (17)	
Superficial bacterial infections	8 (5.6)	56 (6.1)	
Fungal infections	4 (2.8)	19 (2.1)	
Scabies	6 (4.2)	16 (1.7)	
Skin cancer	13 (9)	60 (6.6)	
Autoimmune bullous disease (AIBD)	5 (3.5)	17 (1.9)	
Seasonal diseases	10 (6.9)	41 (4.5)	
Other dermatoses	19 (13.2)	103 (11.3)	
Unknown	12 (8.3)	114 (12.5)	
Multiple skin conditions	0	7 (0.8)	
Missing data	*0*	*91*	
Severe skin conditions	1 (0.7)	23 (2.3)	
Steven-Johnson/Lyell Syndrome	0	8 (0.8)	
DRESS Syndrome	0	5(0.5)	
Erythroderma	1 (0.7)	4 (0.4)	
Necrotizing fasciitis	0	6 (0.3)	
Second event	69 (48.6)	472 (52.8)	0.4
Inpatient hospitalization	6 (4.2)	74 (8.3)	0.13
Day-care hospital	5 (3.5)	10 (1.1)	**0.04**
Follow-up in our dermatology department	36 (25.4)	120 (13.4)	**<0.01**
Follow-up in another outpatient department	22 (15.5)	268 (30)	**<0.01**
Missing data	*2*	*112*	

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Abstract N°: 4652

Punctate palmoplantar keratoderma type I: case report

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Introduction & Objectives: Palmoplantar keratoderma (PPK) are a heterogeneous group of disorders characterized by abnormal keratinization of palms and soles. Three types of inherited punctate PPK are identified: type I (Buschke-Fischer-Brauer disease), type II (porokeratosis punctata, palmaris et plantaris) and type III (acrokeratoelastoidosis). We present a case of a patient with the diagnosis of type I punctate palmoplantar keratoderma. We report this case due to its rarity with few therapeutic options described in the literature.

Results: We report the case of a 61-year-old African woman presented with a ten year history of multiple, asymptomatic, small, circular hyperkeratotic papules and plaques with irregular distribution over the palms and soles. There was no keratoderma transgrediens or other complaints. The medical history of arsenic exposure, immunosuppression, malignancy, hyperlipidemia or hypertension was absence. On the family history, she has a 29-year-old daughter with the same dermatosis. We performed a skin biopsy that revealed epidermal hyperplasia with hypergranulosis and marked orthokeratotic hyperkeratosis, without inflammation on papillary dermis. A CT body scan ruled out malignancy. The diagnosis of type I hereditary punctate keratoderma was made based on clinical and histological features. The mother and daughter genetic study of *AAGAB* gene confirmed the presence of a heterozygous mutation in intron 5: c.535+1G>A. After, the mRNA analysis confirmed that splicing mutation induces the deletion of exon 5 leading to protein decrease. The treatment was performed with salicylic acid 30-percent, urea 40-percent and tretinoin with just a slight clinical improvement.

Conclusion: Type I punctuate PPK is a rare disease with an autosomal dominant pattern. Generally, the disease expression is more severe on the soles probably due to the higher pressure in this anatomical area. The lesions usually appear in the early adolescence. However, they may appear late, in the fifth decade of life, as reported in our case. *AAGAB* was identified as the major genetic factor in this disease which encodes alpha and gamma–adaptin binding protein p34. The mutation in this protein increases epidermal growth factor receptor protein expression and tyrosine phosphorylation which leads to cellular hyperproliferation. Till now, twenty-two loss-of-function mutations have been reported. The mutation identified in our patients (c.535+1G>A) is the same mutation identified in a sporadic patient in the Chinese population. The treatment of punctuate PPK is symptomatic. Traditionally, topical keratolytics such as lactic acid, urea and salicylic acid may be used with variable responses. In refractory cases, phototherapy, systemic retinoids (acitretin and alitretinoin) and surgery are the best options.

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Abstract N°: 4683

Skin Glycation Inhibition Properties of Two Flavonoid-Rich Fruit Extracts And A Cream With These Extracts

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INTRODUCTION: Glycation is a gradual, non-enzymatic reaction between sugar and an amino acid (Lys, Arg) of a protein like collagen, which induces the formation of Advanced Glycation End Products (AGEs) on the proteins and is a multi-phase process. AGEs provoke biomechanical and biological modifications of cellular functions and induce inflammatory pathways which contribute to skin aging. Exogenous factors like UV rays are known to accelerate the formation of AGEs in skin, which further exacerbates the signs of skin aging.

OBJECTIVES: The goal of this research was to evaluate the glycation inhibition efficacy of blueberry and pomegranate fruit extracts and a new cream containing these extracts.

MATERIALS AND METHODS: Blueberry extract and pomegranate fruit extract were studied as potential inhibitors of glycation in a 4-week collagen-ribose model (*in tubo*) and a 7-day UV-glycation model (*ex vivo*). In addition, a cream containing both extracts was evaluated in a 5-day, double-blind clinical trial with 20 healthy females aged 50-67 years' old. After 4 days of daily product treatment versus no treatment, 2 minimal erythema doses (MED) of UVA/UVB were irradiated on respective test sites. Skin punch biopsy samples were collected for pentosidine immunohistochemical analysis at Day 5.

RESULTS: In the collagen-ribose study, AGEs fluorescence of collagen was reduced after 1 and 4 weeks of incubation with blueberry (-46%, $p<0.05$ and -80%, $p<0.05$), pomegranate fruit (-19%, $p>0.05$ and -44%, $p<0.05$), and combo (-45%, $p<0.05$ and -80%, $p<0.05$), respectively. In the UV-irradiated *ex vivo* skin study, pomegranate fruit extract and the blueberry-pomegranate fruit extract combo led to a significant reduction of AGEs by 41% ($p<0.05$) and 38% ($p<0.05$), respectively. Finally, in the clinical study, UV-induced pentosidine increase in epidermis was reduced 34% ($p<0.05$) by test cream treatment.

CONCLUSION: Taken together, these results demonstrated the efficacy of blueberry extract, pomegranate fruit extract, combo, and a cream containing these extracts to inhibit glycation under multiple conditions, including, for the first time, a UV-induced glycation clinical model. The cream containing these 2 flavonoid-rich fruit extracts is expected to be a promising treatment for skin aging impacted by glycation.

C1 - Internal use

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Abstract N°: 4773

The Pharmacist's Role in Dermatology, Patient Medication Adherence

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Introduction & Objectives:

Medication nonadherence is currently estimated to have caused at least 100,000 preventable deaths and over $100 billion in preventable medical costs. Adherence is particularly poor in dermatologic conditions, with greater than 50% of patients discontinuing topical treatments within the first year. Pharmacists are among the most accessible healthcare professionals with the potential to greatly impact medication nonadherence through patient education, medication therapy management and improved access to care. This review aims to determine how pharmacists have improved medication adherence in dermatology and discuss strategies for further involvement.

Materials & Methods:

An extensive medical literature search using the PubMed database was conducted to evaluate clinical studies that have evaluated the pharmacist's role and impact on adherence of dermatologic products published in the last 20 years. PubMed search terms include: "pharmacists' role in dermatologic medication adherence", "pharmacist-led interventions in dermatology", "pharmacist medication adherence dermatology" and "pharmacist intervention dermatology". A total of 18 identified studies were identified.

Results:

Pharmacists improved dermatologic medication adherence by increasing access to medications, providing medication counseling programs and performing treatment monitoring services. Corticophobia may contribute to the pharmacists' hesitancy in making corticosteroid OTC recommendations.

Conclusion:

Pharmacists are accessible healthcare providers with the potential to improve dermatologic medication adherence. Future advanced training in dermatology medications may refine the pharmacist's knowledge of dermatologic products.

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Abstract N°: 4816

Clinical Applications of Exosomes in Dermatology

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Introduction & Objectives:

Exosomes are small extracellular vesicles that are play an important in cellular communication and the transport of essential biomolecules. Their cholesterol-rich membranes enable rapid molecule distribution, influencing immune responses in cardiovascular and central nervous system diseases. Despite promising in vitro applications as drug delivery vehicles, their in-human use is limited. This review focuses on the unexplored potential of exosomal applications in dermatologic treatments.

Materials & Methods:

A comprehensive PubMed search focusing on exosomes in dermatology was performed using the MeSH terms “exosome” and “skin”. All human and animal studies evaluating the use of exosomes in medical/cosmetic dermatology published in English were included.

Results:

Upon comprehensive evaluation, we identified 164 studies that satisfied our inclusion criteria, thus forming the basis of our review. However, a subsequent refinement led to the exclusion of 46 studies as their content lacked direct relevance to our research focus. The remaining 118 studies were strategically segregated into three categories: 60 studies were exclusively medical, 9 were purely cosmetic, and 49 were pertinent to both domains. The extraction of exosomes from various sources demonstrated immense potential in diverse applications. These included enhancing wound healing processes across a range of wound types, mitigating scar formation, guarding against photodamage, fostering skin regeneration, improving skin graft survival rates, minimizing hair follicle loss, and serving as both reliable biomarkers and efficient drug delivery vehicles.

Conclusion:

Exosomes can regulate immune cells for anti-inflammatory effects, potentially aiding in treating atopic dermatitis and other chronic inflammatory skin conditions. Exosomes enhance wound healing, stimulate hair growth, improve skin barrier repair, serve as drug delivery vehicles, and can be used as diagnostic markers for skin diseases. However, obstacles complicating its use include cost, a complex isolation processes, potential risks during preparation, environmental influences, method of administration, and lack of uniform experimental protocols. Further research should include in-vivo studies and large clinical trials to evaluate its clinical utility in the management of dermatology disease.

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Abstract N°: 5009

Exploring Facilitators, Barriers, and Acceptance for the Use of Digital Health in Dermatology: Qualitative Focus Groups with Dermatologists, Nurses, and Patients

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Introduction & Objectives: Dermatology encompasses a wide range of digital health interventions that can be utilized in dermatology practices and by patients; however, their adoption remains limited. The factors influencing the use of these interventions and the barriers and facilitators involved during their conception and implementation are still unclear. This study aims to identify the facilitators and barriers in dermatology experienced by patients, dermatologists, and nurses.

Materials & Methods: Online focus groups were conducted with participants from three groups: dermatologists, patients, and nurses. Each group consisted of 4-6 participants. Dermatologists and nurses were recruited nationwide using purposeful selection, while patients were recruited from a university hospital clinic, an outpatient clinic, and through a patient organization. A semi-structured interview guide was utilized to direct the discussions, encompassing descriptions of five digital health interventions (e.g., online video consultation) already in use in regular care or identified in the literature (e.g., digital patient monitoring). The focus group data was qualitatively evaluated using content analysis.

Results: A total of 34 dermatologists, 30 patients, and 34 clinic and practice staff were interviewed. Patients and clinic/practice staff predominantly expressed the benefits of digital health interventions, such as time savings. In contrast, dermatologists highlighted additional workload and information overload as potential barriers. All three groups recognized low digital literacy among older patients as an important obstacle. Dermatologists identified the integration of applications into their demanding work schedules as a challenge. Trust in institutions, colleagues, and practitioners emerged as a facilitator for digital health interventions. Patients indicated their willingness to use these interventions only if recommended by their physicians. All groups expressed concerns about data privacy risks. Other recognizing that such to strong regulations could impede the development of effective interventions.

Conclusion: To ensure successful digitalization in dermatology, user-friendly applications that cater to varying skill levels and benefit all stakeholders are crucial. Incorporating the perspective of dermatologists is particularly important, as their acceptance can drive utilization among patients and nurses. Therefore, aligning the benefits for practitioners with those of patients is necessary, along with integrating digital health interventions into existing routines. Striking a balance between adequate data protection, while maintaining the effectiveness of these interventions is essential. By incorporating these findings into implementation strategies, the potential of digital health interventions in dermatology can be realized, leading to improved patient outcomes and enhanced delivery of dermatological care.

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Abstract N°: 5091

Ethnicity and Medical Photographs: Patient perceptions of medical photography of dermatological conditions

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Introduction & Objectives: Dermatology is a visual specialty, and images of dermatological conditions are important in the education of future clinicians in the specialty. However, most images of dermatological conditions in textbooks are of Caucasian skin. This results in an incomplete picture of dermatological conditions which is likely to impact diagnostic competencies when conditions present in skin of colour.

Given this disparity between representation of skin of colour in dermatological textbooks, this study aimed to determine if patients' perceptions of medical photography used for educational purposes was a contributing factor to this inequality.

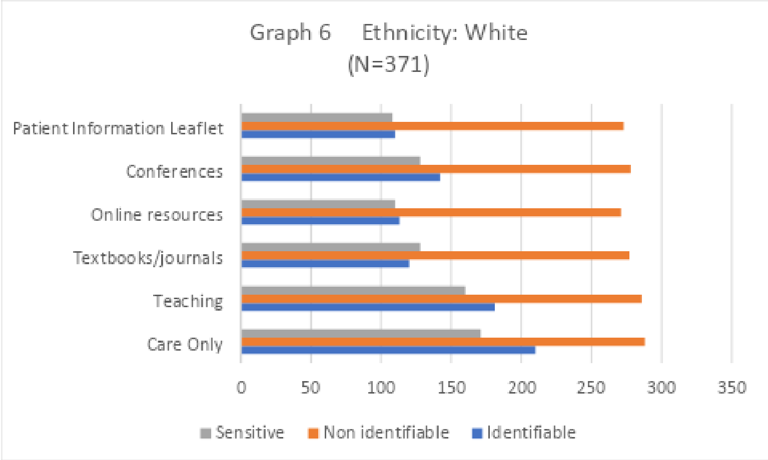
Materials & Methods:

Following ethical approval, members from dermatological patient support groups and charities listed on the British Association of Dermatologists' website who were ≥ 18 and had a dermatological condition diagnosed by a healthcare professional were invited to complete a survey via REDCap software.

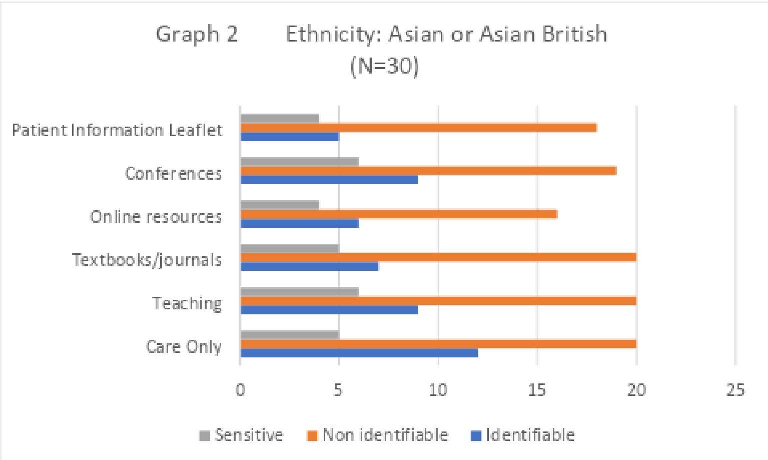
Apart from demographics, including ethnicity categories according to the United Kingdom Census, questions included diagnosis and views on images being used for various purposes. Participants were also asked to express their opinions on photographs taken of: identifiable, non-identifiable, and sensitive (e.g. genitalia, buttocks, breast) regions of the body. Here we report on patients' perceptions of photographs with respect to ethnicity.

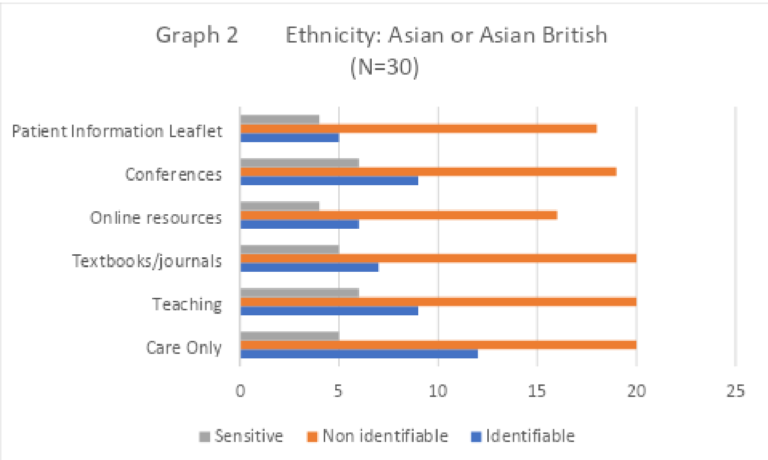
Results:

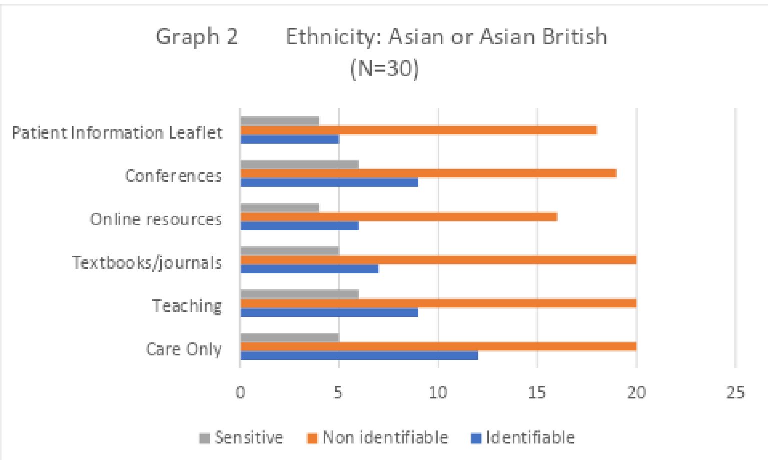
434 responses were analysed. 353 participants identified as female, 74 as male, 5 as other and 2 preferred not to say. 371 participants identified as white, 7 as African, Caribbean or Black British, 30 as Asian or Asian British, 19 Mixed or Multiple Ethnic groups, 2 Prefer not to say, and 5 as Other. Graphs 1-6 below, demonstrate majority of participants from all ethnic groups were willing to take and share photographs of their dermatological condition. For all ethnicities, across all categories, far more participants agreed to have photographs of unidentifiable regions as opposed to identifiable or sensitive regions. However only 139/434 participants (32%) indicated that they had been asked to have their photograph taken for any reason. 33% (123/371) of participants of white ethnicity and 27% (17/63) of all ethnicities other than white were asked to have their photographs taken. The difference was

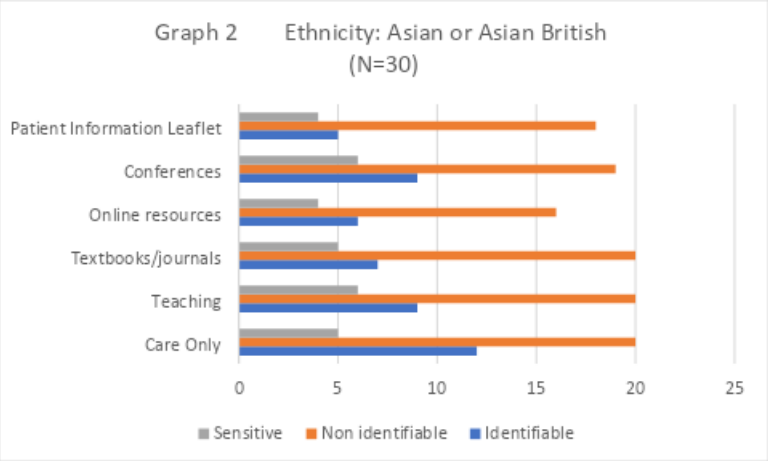


not statistically significant (p=0.33).









Graph 2 Ethnicity: Asian or Asian British (N=30)
Patient Information Leaflet
Conferences
Online resources
Textbooks/journals
Teaching
Care Only
0
5
10
15
20
25
Sensitive
Non identifiable
Identifiable

Conclusion:

Participants were more comfortable with images being used if they were of non-identifiable regions of the body, over identifiable or sensitive regions. However less than half the respondents were asked to have photographs taken. As a result, it can be concluded that patient ethnicity has no significant impact on patient perceptions of medical photography of their dermatological conditions and therefore is not a leading cause in the inadequate representation of skin of colour in medical resources. However, further research is required in this area to test if these results are reproducible.

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Abstract N°: 5129

How much time does it take to publish a paper? Findings from an institutional publication department

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Introduction & Objectives:

Not only due to content-related factors, journals reject scientific manuscripts with flaws in language, but also in form, structure or missing statements. To avoid this, the formal proofreading and editing of a manuscript to detailed journal guidelines costs authors a lot of time and money. In 2019, Elsevier reported that nearly one in three scientists declared "preparing manuscripts" as the work activity they found the most frustrating or time consuming.

Materials & Methods:

To focus more scientific capacities on actual research, in 2012 our dermatological research institute established a publication department to manage all of the institute's manuscripts (especially editing, formal proofreading,). The data for this evaluation included manuscripts published between 2020 and 2022 and were taken from a self-developed database that collects comprehensive data of manuscripts from first submission until publication. Working hours for each step from submission to publication were recorded.

Results:

According to our study, it took 8.02 h formatting a manuscript for submission. The submission took 1.19 h per manuscript. The formatting and the submission of a revision took us 3.8 h on average. For 64 % of manuscripts, one submitted revision was sufficient, 27 % of manuscripts had two revisions and 8 % of manuscripts had three revisions before acceptance. In total, our acceptance rate was 0.55. It took 1.6 submissions on average for manuscripts to get accepted. In total, we needed 16.84 h per manuscript from submission to publication.

Conclusion:

To our knowledge, no dermatological research institute in Europe has such a publication department. And the number of studies worldwide on this topic is also quite limited. One of the few studies we are aware of that attempts to quantitatively measure the effort put in scientific publications is by LeBlanc et al. (2019) using an internet-based self-report survey. It says: Manuscripts required a median of two attempts before they were accepted for publication. The median formatting time was 14 h per manuscript. This resulted in median calculated costs of USD 477 per manuscript or USD 1,908 per person, per year. Due to the effort of working hours and optimisations put into the whole publication process, it can be assumed that an institutional publication department can be of great help. With its clear distribution of roles, a lot of resources on side of the authors can be saved and the manuscripts are improved considerably. Of course, the data presented are not representative. But considering the increasing number of manuscript submissions to scientific journals alone, establishing a publication department should be worth considering for every university research institute.

Reference: LeBlanc et al. 2019: https://doi.org/10.1371/journal.pone.0223116

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Abstract N°: 5252

Cutaneous collagenous vasculopathy

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Introduction

Cutaneous collagenous vasculopathy (CCV) is a rare condition of idiopathic microangiopathy of dermal blood vessels that is clinically indistinguishable from generalized essential telangiectasia, but with unique histological appearance of dilated vascular structures containing deposits of eosinophilic amorphous hyaline material within the vessel walls, which are features essential to diagnosis. To date, cutaneous collagenous vasculopathy has been described in a total of 44 cases in the literature.

Results

A 43-year-old woman presented for evaluation of a 15- to 20-year history of discoloration that she first noted on her ankles, which subsequently spread to her legs and gradually spread over several years, to involve the torso and upper limbs. Her past medical history was not significant for any other diseases or medications. Physical examination revealed bilateral dorsal forearms, trunk, buttocks, and lower legs with diffuse, reticulate and confluent, partially blanching purpuric patches more reddish-colored on the arms and more violaceous on the lower extremities. She had no mucosal or nail involvement. Extensive laboratory examination revealed only elevated antinuclear antibodies (ANA HeP2 1:320 homogeneous) but no other evidence of systemic disease or bleeding diathesis. Stasis dermatitis, pigmented purpura, and vasculitis were considered clinically. Punch biopsy of the right lower leg was performed, and histopathologic examination showed dilated superficial cutaneous vessels with marked collagen deposition, which is Periodic Acid-Schiff diastase positive, colloid ferrum negative, and was immune reactive with collagen IV. Vasculitis and fibrin thrombi were not appreciated. DIF was negative.

Conclusion

Patients diagnosed with CCV typically have other concomitant medical and/or psychological disorders ranging from cardiovascular disease to autoimmune disease requiring them to take medication on an ongoing or intermittent basis but that was not a case with our patient. Despite this fact, there remain no clear associations between other disease processes or medication usage and the development of CCV. The underlying pathophysiology for the development of these telangiectasias is unclear and the etiology is unknown. A proposed mechanism is that following endothelial cell injury, veil cells (immature dendritic cells) are activated and a reparative fibrosis ensues, involving deposition of abnormal and disorganised collagen in blood vessel walls. Treatment options are limited. Pulsed dye laser therapy has been suggested and was successful in few cases warranting further exploration. In summary, this is a disorder of dermal bloods vessels, likely under diagnosed by clinicians but that can be confirmed by its characteristic histological features.

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Abstract N°: 5281

Metamorphosis with Metaverse: the 'virtual' way ahead for the dermatologists amongst evolving Artificial Intelligence

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Introduction & Objectives:

Artificial Intelligence(AI), the so called *fourth industrial revolution*, is a virtual dimension based on machine learning and convolutional neuron networks(CNN). Dermatology, being an image-based field of medicine, retains a prevailing position in the AI evolution for the field of diagnosis, therapeutics, predicitive clinical models etc. The aim of the study was to systematically assess the applications of AI and it's different technologies (Virtual Reality- VR, Augmented Reality- AR , Mixed Reality- MR) in the field of diagnosis and therapeutics for the dermatological practices.

Materials & Methods:

A literature review was conducted to determine the relevant considerations for the dermatology. Here we review the dermatological applications of AI for diagnosis of cutaneous disorders, teledermatology, virtual clinical trials , dermatoscopic assessment, dermatopathological uses and pre decision making for dermatosurgery. Also it's current capabilities and potential limitations as well as challenges surrounding performance assessment and interpretability was evaluated .

Results:

Automated AI diagnosis of skin lesions is ready to be tested in real world clinical environment and has the potential to provide diagnostic aids. Recent diagnostic studies have revealed the superiority of AI in classifying dermoscopic images of melanoma and other cutaneous malignancies, which could teraform the practices at the fundamental level. Using 3D models and patients' clones, virtual clinical trials could be augmented as well.Although models standardization, calibrations , ethical issues and defense against security threats are major barriers to be solved.

Conclusion:

Being the visual speciality field , developments in 3D visualization of the skin surface images and patients' clones – the so called Dermoverse , the mirror world are the advanced hi tech immersive universe ready to revolutionize the way dermatologists practice . Pragmatic studies are needed to evaluate AI performance (alone and in combination with physicians) compared with standard care. This signifies the energetic involvement of dermatologists across the globe undoubtedly.

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Abstract N°: 5294

Pembrolizumab-induced bullous pemphigoid

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Introduction:

Bullous pemphigoid (BP) is the most common autoimmune blistering skin disease of the elderly. Several medications have been identified to induce or trigger BP. Pembrolizumab is an immune checkpoint inhibitor targeting programmed cell death protein-1 (PD-1) receptors on lymphocytes and in recent years has become the first-line therapy for a variety of advanced malignancies. Diagnosis of drug-induced BP is similar to that of idiopathic BP. Differently from other BP induced by traditional medications, BP related to pembrolizumab may continue for several months after drug withdrawal. The incubation period of BP induced by PD-1 inhibitor is usually longer, from 20-80 weeks.

Results

We present a 71-year-old Caucasian woman with history of lung cancer (adenocarcinoma, PD-L1 expression in 80% tumor cells). The first cycle of pembrolizumab (200 mg/body) was initiated in April 2020 and then every 3 weeks. After 26 cycles (78 weeks) of therapy an acute exacerbation occured after increasing the dose of pembolizumab to 400 mg. On clinical examination, disseminated bullae filled with serous and hemorrhagic fluids on an erythematous background and erosion with hemorrahagic crusts were present on trunk and extremities associated with severe pruritus. Nikolsky's sign was negative. A punch biopsy of the skin revealed a subepidermal cleft and inflammatory infiltrate with eosinophils consistent with BP. Direct immunofluorescence of perilsional skin revealed the linear deposition of immunoglobulin G with C3 deposition at the dermo-epidermal juntion zone. Indirect immunofluorescence was negative. Enzyme-linked immunosorbent assay (ELISA) was positive for anti-BP180 and anti-BP230 IgG autoantibodies. She was treated with prednisone (0.5 mg/kg/day) with a tapering course, dapson (1.5 mg/kg/day) and topical clobetasol propionate. Complete regression of symptoms and cutaneous lesions was achieved after 3 weeks of treatment. Next pembrolizumab cycle was delayed but the drug was not discontinued.

Conclusion

Even though BP is a rare side effect of treatment with pembrolizumab, the skin of the treated patients should be monitored carefully because of the unpredictable timeline of disease progression. In most cases, pembrolizumab induced BP is managed with oral corticosteroids and topical treatments without altering the treatment strategy for malignancy as it was in our case. However, discontinuation of immunotherapy is recommended in severe or refractory cases, and therapy is reinitiated after achieving BP control.

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Abstract N°: 5433

Delta opioid receptor expression correlates with signs of biological skin ageing in Asian women

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Introduction & Objectives:

There is growing evidence that opioid receptors (OPr) and their endogenous opioid agonists are expressed and released in different skin structures. Cutaneous opiate receptors have recently been linked to the occurrence of skin ageing signs in vivo. Cutaneous opioid receptors are involved in skin homeostasis and control keratinocyte differentiation, adhesion, and migration. While the evidence for the implication of OPr in ageing is growing, there is no study directly exploring changes in in vivo cutaneous OPr expression with increasing age. The objective of this study was to investigate OPr expression in Asian volunteers since for Asian people hyperpigmentation, above and beyond wrinkling, is an important sign of ageing, compared to Caucasian people.

Materials & Methods:

30 normal healthy volunteers from the southern part of China ranging form 22 to 63 years old had small excisional biopsies taken from the sun-exposed extensor area of the lower arm and the non-photoexposed area of the upper inner arm. The sun-exposed areas of each individual were compared with the unexposed areas, and studies were performed on the biopsies to evaluate epidermal layer thickness, expression of m-opioid receptors (MOPr) and d-opioid receptors (DOPr), melanin expression, and the density of peripheral epidermal nerve fibers by PGP 9.5. Wrinkles and lentigenes were evaluated from photographs.

Results:

The evaluation of the epidermal thickness did not reveal a significant atrophy of the epidermis with increasing age. There was significant epidermal hypertrophy caused by chronic photodamage on the extensor surface of the lower arm. There is a tendency for less MOPr expression in epidermis in ageing skin, independent from the sun-exposure. Moreover, the reduction of DOPr in epidermis with increasing age is very significant and occurs independent from photoageing. The increase of melanin, lentigenes, and wrinkles with age is significantly correlated with epidermal DOPr expression, not with MOPr expression. Finally, the ageing skin expressd less non-myelinated, PGP 9.5 positive epidermal C-fibers than the young skin.

Conclusion:

Sun-exposed epidermis shows a photoinduced epidermal hypertrophy, which is consistent with a lichenification of the skin after chronic photoexposure. However, the expected age-induced epidermal atrophy could not be measured. The peripheral epidermal nerve fibers appeared to be reduced with advancing age, which is consistent with age-related peripheral neuropathy and increasing sensory problems. The most significant finding was the downregulation of DOPr in the epidermis of ageing skin that was independent of photoageing. Therefore, DOPr

expression could be a marker for real biological ageing unaffacted by chronic photoexposure. DOPr expression was also inversely correlated with the development of wrinkles and lentigenes, as well as the deposition of melanin. Based on these results, we hypothesize that regulation of DOPr expression could be used for improvement of aged skin, including hyperpigmentations. However, since these changes in expression are novel they warrant further investigation to understand the functional implication and potential for therapeutic manipulation to ameliorate signs/symptoms of aging.

Figures:

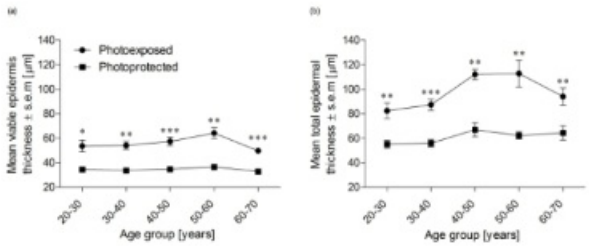

Figure 1: Thickness of (a) the viable epidermis and (b) the full epidemis in photoexposed vs. photoprotected skin. Mean data are obtained from n = 5-6 volunteers within each age group. One-tailed paired t-tests show significant differences in the thickness within each age group (: p < 0.01, ***: p < 0.001).**

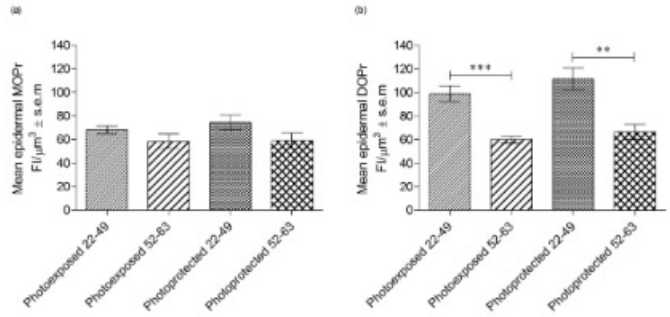

Figure 2: Tissue volume-normalized fluorescence intensity (FI) describing the epidermal expression of (a) the μ-opioid receptor and (b) the δ-opioid receptor vs. age in photoexposed and photoprotected skin. Two-tailed unpaired t-tests show a significant decrease in δ-opioid receptor expression in the skin of 52-63 year old volunteers vs. that of 22-49 year old volunteers, but no significant difference in μ-opioid receptor expression (: p < 0.01, ***: p < 0.001).**

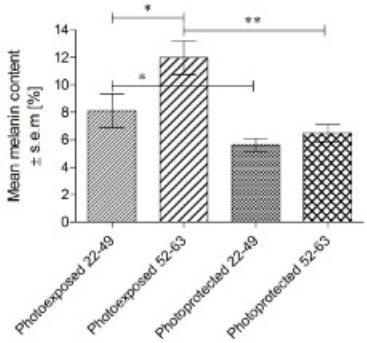

Figure 3: Melanin content vs. age in photoexposed and photoprotected skin. Two-tailed unpaired t-tests show a significant increase in melanin content in the photoexposed skin of 52-63 year old volunteers vs. that of 22-49 year old volunteers, but no significant age-related difference in the photoprotected skin (*: p < 0.05). One-tailed paired-tests show expected significant differences between photoexposed and photoprotected skin (*: p < 0.05, **: p < 0.01).

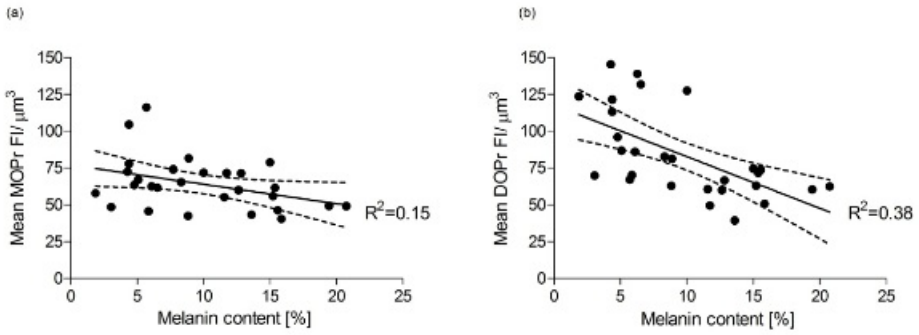

Figure 4 a,b: Epidermal expression of (a) the μ-opioid receptor and (b) the δ-opioid receptor vs melanin content in photoexposed skin.

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Abstract N°: 5509

Cutaneo-mucosal manifestations in organ transplant recipients

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Introduction & Objectives:

Organ transplant recipients (OTRs) are a population at high risk of dermatological side effects ,which can be classified into infectious and neoplastic complications and side effects to immunosuppressive treatments. Their early recognition and appropriate treatment is an important component of the clinical management of OTRs and should be optimally dealt with by dermatologists.

the objective of our study is to research the cutaneous and mucous manifestations consecutive to the organ transplant, and to evaluate their frequency.

Materials & Methods:

Descriptive retro-prospective study over a 21-year period extending from January 2002 to March 2023. We collected all the organ transplant recipients followed in our dermatology department, consulting in the event of the appearance of skin manifestations or in the context of systematic annual monitoring

Results:

40 patients were collected but the total number retained is 30 are excluded 3 patients died and 7 patients lost sight of, the average age is 46 years with minimum of 20 and maximum of 71 years we noted a male predominance 20 male 66 .6% and 10 women 33.3%. All the patients had no skin cancer ATCD or photoprotection habits, all our patients had a phototype 4, the immunosuppressive treatments used are :corticosteroid therapy was noted in 36%, azathioprine 23%, ciclosporin 43.3 , mecophynolate mofetil 70%, tacrolimus 43%. The most frequent causal diseases in our samples is nephropathy indeterminate 35%. the infectious manifestations found in our series are viral infections, in particular warts: in 16.7%, bacterial mainly folliculitis 6.9%, fungal and parasitic 10% . Gingival hypertrophy was found in only one patient, induced acne was found in 6.9%, in our series there were no cases of neoplasia.

Conclusion:

this work has allowed us to trace the various complications related to organ transplantation in our hospital training, which remain acceptable complications and similar to the common conditions of the general population. These results are reassuring and allow us to preserve the same therapeutic protocols of immunosuppressive treatment.

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Abstract N°: 5520

A Comparative Evaluation of Intralesional Steroid, its Combination with Hyaluronidase, and Topical Silicone Gel Sheet in the Treatment of Keloids

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Introduction & Objectives:

Keloids occur as a result of excessive scar formation due to deregulated process of wound healing. They are psychologically debilitating and have high recurrence rates. The aim of our study was to compare the results of therapy with intralesional triamcinolone acetonide monotherapy, its combination therapy with Hyaluronidase, and with topical Silicone gel sheet.

Materials & Methods:

A randomized controlled trial was conducted involving 102 patients with keloids, divided into three groups. The patients in group A were treated with intralesional triamcinolone acetonide (10mg/ml), group B with triamcinolone acetonide and 1500 IU of hyaluronidase, group C with triamcinolone acetonide and topical Silicone gel sheet. The efficacies of monotherapy vs combined therapies were assessed and compared using the Vancouver scar scale.

Results:

In this study, the best response, as assessed by reduction in Vancouver scar scale was 85% seen in group B, followed by 75% in group C and 68.75% in group A. The difference between groups was significant and the rate of recurrence was least in group B.

Conclusion:

Combination regimen of triamcinolone acetonide with hyaluronidase appeared to give the best response with minimum recurrence rate, which indicates its high efficacy and safety in the treatment of keloid.

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Abstract N°: 5526

When we only see the tip of the iceberg

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Introduction:

Odontogenic cutaneous fistulas are rare lesions that represent the canalization of chronic apical periodontitis towards the cutaneous surface. They often appear as firm, erythematous nodules with skin retraction, which may or may not exhibit purulent drainage. The differential diagnosis is extensive and includes cutaneous tumors, skin infections, pyogenic granuloma or congenital lesions, among others.

Clinical case:

A 66-year-old male with no significant medical history presented to the Dermatology clinic for evaluation of an asymptomatic skin lesion on the left malar region that appeared six weeks ago. The lesion had occasional bleeding. There were no previous traumas reported in that location.

The clinical examination revealed a six millimeters erythematous nodule with a superficial crust located on the left malar region. Slight retraction of the adjacent skin was observed. No other skin lesions were present on the facial region or other locations. The presumptive diagnosis was either tumor etiology (squamous cell carcinoma) vs pyogenic granuloma. A radical excision of the lesion was performed. The histological findings were consistent with a cutaneous ulcer with granulation tissue and no malignancy in the excised tissue.

After the excision of the lesion, a recurrent erythematous nodule appeared in the scar area. Subsequently, two additional excisions of the lesion were performed due to further recurrences, along with topical treatment using cryotherapy, imiquimod and topical timolol, but the lesion persisted.

For this reason, an ultrasound of the skin and soft tissues was conducted, revealing a fistulous tract connecting the cutaneous lesion to the maxillary bone. Suspecting an odontogenic cutaneous fistula, the investigation was completed with either orthopantomography, cone-beam dental computed tomography and magnetic resonance imaging, which revealed an odontogenic cyst in tooth number 23. The patient was assessed by the Maxillofacial Surgery and Dentistry services. Endodontic treatment of the affected tooth canal was performed, resulting in an early improvement of the cutaneous lesion. Subsequently, the treatment will be completed with apicectomy and cystectomy by the Maxillofacial Surgery service. Following the etiological treatment with endodontics, the cutaneous lesion has shown significant improvement and has not recurred thus far.

Conclusion:

Odontogenic cutaneous fistulas are frequently misdiagnosed, leading to unnecessary medical treatments or surgical procedures. A high index of suspicion for this condition could aid in early diagnosis. Therefore, odontogenic cutaneous fistulas should be included in the differential diagnosis for nodules in the perioral region that present with either skin retraction, purulent drainage or recurrence despite treatment. Additionally, we emphasize the role of dermatological ultrasound in the diagnosis and monitoring of these lesions.

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Abstract N°: 5535

Determination of ammonium ion density on the surface of the palmar skin along with skin surface pH and calcium ion density

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Introduction & Objectives: In previous investigations we found regularly a relation between ammonium ion density and skin surface pH in the forearm region as a localisation with comparatively little influence from outside. Also, a correlation to calcium ion density could be found suggesting a relation between the two ions. Given this data the question arises whether such results can be confirmed in the palmar skin region subject to much more influences such as sweat glands or environmental factors. Therefore, the aim of the present study is to determine ammonium ion density along with skin surface pH and calcium ion density in the palmar region. To obtain a broader information a photometric and an electrochemical approach should be chosen for ion determination.

Materials & Methods: The investigations consisted of a pilot study and a second larger study both including volunteers after written informed consent. In the pilot study the photometrical and electrochemical assessment was standardized for determination of ammonium and calcium ion density in the palmar skin region and the magnitude of the values were compared with the forearm and forehead region. In the second study ammonium ion density was assessed again photometrically and electrochemically in the palmar region along with skin surface pH and calcium ion density also determined photometrically and electrochemically. The analysis of the data from the second study consisted of a correlation analysis (Pearson and Spearman) to detect relations between the parameters as well as a comparison of the results obtained by the photometric and electrochemical methods.

Results: The results obtained in the pilot study showed that the ions could be assessed photometrically and electrochemically and that the ammonium and calcium ion densities were much higher in the palmar region than in the forearm or forehead region. The second larger investigation revealed a correlation between ammonium ion densities and skin surface pH, which was highest with the electrochemical measurement (r=-0,602; p=0,008, Spearman). Also, a correlation between ammonium and calcium ion densities could be found when determining them photometrically (r=0,526; p=0,017). With respect to the comparison of the methods higher ammonium ions densities were assessed photometrically in comparison to the electrochemical assessment. The calcium ion density was almost identical for both methods.

Conclusion: The much higher ion densities in the palmar region compared to the forearm or forehead region suggest a significant influence of a local factor such as sweat gland activity on the skin. The values obtained from the main study confirmed in principle a relation between ammonium ion density and pH of the skin surface and to some extent between ammonium ion and calcium ion densities in the palmar localisation. The data also suggests that the results from the two methods applied for assessment of ammonium ion density contain different information. As the photometrical values are higher and the electrochemical measurement is likely to be more selective, it can be concluded that the photometric values contain additional information not immediately associated with the ammonium ions. Following studies should investigate which molecules contribute to the higher ammonium values assessed photometrically.

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Abstract N°: 5575

Dermatology in the era of social networks: a web-based Italian survey

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Introduction & Objectives: Social networks are websites or applications that allow the general public to create and share content, such as photos and videos, and to build social connections. These platforms have experienced expansive growth with 59.9% of the world's population now using social platforms in 2023. The aim of our study was to investigate the impact of social networks on awareness and prevention of dermatological diseases, by using a web-based survey.

Materials & Methods: We designed an online questionnaire made up of 13 questions using Google Forms online platform. From February 2023 to March 2023 participants were recruited through invitations placed on social networks (Facebook, Instagram, and WhatsApp). Participation in the web-based survey was completely voluntary and anonymous, and prior to participation, subjects were adequately informed about the questionnaire's purposes and provided informed consent.

Results: Among 881 participants, 860 provided informed consent prior to participation; 8 subjects were minors and were thus excluded. Participants who completed the survey were between 19 and 64 years old (mean age of 29.67 years), with 79.34% women and 20.66% men. Three quarters of the subjects became aware of the questionnaire through social networks (77.93%), mainly Instagram (82.98%). About one third of the participants (33.69%) reported to suffer from a dermatological disease. The vast majority of subjects (92.84%) considered it useful to disseminate health-related content for preventive purposes through social networks. Enrolled patients declared that the social platform they used the most was Instagram (77.93%); among social networks, Instagram was considered to be the richest in content related to skin disease prevention (69.72%) followed by Facebook (7.04%) and others. 114/852 participants (13.38%) declared they had undergone a dermatological examination after being exposed to prevention content on social networks; among these subgroup, 25 subjects (21.93%) declared they had been diagnosed with a dermatological condition, with 2 (1.65%) being diagnosed with skin cancer.

Conclusion: The aim of our study was to investigate the impact of social networks on awareness and prevention of dermatological diseases. A noteworthy finding is that exposure to prevention content on social networks led a significant number of participants to undergo a dermatological examination, resulting in a diagnosis of dermatologic disorders in a non-negligible proportion of cases. The results of this study suggest that social networks may be a useful tool to successfully spread dermatological content and facilitate early detection of dermatological conditions, due to their potential to reach a wider audience than traditional communication channels. As for the study limitations, the collected sample lacked homogeneity in terms of age and gender, was relatively small and collected during a quite short period of time.

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Abstract N°: 5604

Spectrum of facial papular lesions

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Introduction & Objectives:

Papular lesions over face have a wide range of differential diagnoses. The clinical differentiation among these often requires clinicopathological correlation. We hereby report ten cases presenting with such presentations.

Materials & Methods:

CASE	AGE/SEX	FEATURES	SKIN BIOPSY	DIAGNOSIS	TREATMENT
1	54/F	Multiple skin-coloured, shiny, papulovesicles which on puncturing oozes clear fluid over the malar area of face, nose, ranging in size from 2-3mm since last 2 years. History of summer exacerbation.	Suggestive of eccrine hidrocystoma	Multiple eccrine hidrocystomas	1% atropine eye drops for local application twice daily for 1 month.
2	42/F	Multiple shiny, papulovesicles with clear fluid present over the cheeks, nose and forehead, ranging in size from 2-4mm for last 03 months, increasing on exposure to heat and cooking	Suggestive of eccrine hidrocystoma	Multiple eccrine hidrocystomas	1% atropine eye drops for local application twice daily for 1 month.
3	37/F	Solitary clear fluid filled tense cystic lesion 1.5 cm in diameter over outer canthus of the left eye for last 03 years.	Unilocular with double layer of cuboidal-columnar epithelium, located superiorly to an outer myoepithelial cell layer	Apocrine hidrocystoma	Surgical excision with narrow margins
4	50/F	Multiple discrete erythematous monomorphic papules over bilateral cheeks, forehead, chin, and neck region	Suggestive of Lupus miliaris disseminatus faciei	Lupus miliaris disseminatus faciei	Cap Isotretinoin (20 mg daily) for five months.

		past 2 years.			
5	34/F	Multiple, discrete erythematous monomorphic papules over cheeks, forehead, chin since 3 years.	Suggestive of Lupus miliaris disseminatus faciei	Lupus miliaris disseminatus faciei	Cap Doxycycline 100mg twice a day for 06 months with CO2 Laser ablation for larger lesions.
6	42/M	Solitary yellowish red nodule with central depression, about 1cm in diameter over nose since past 3 years.	Multiple circumscribed sebaceous lobules with a peripheral basaloid layer. No obvious pleomorphism, hyperchromasia or necrosis.	Solitary Sebaceous adenoma	Surgical excision with narrow margins
7	50/M	Multiple yellowish papules and nodules with central depression since past 2 years.	Multiple enlarged, normal sebaceous glands	Sebaceous hyperplasia	Oral cap Isotretinoin 20 mg daily for 03 months
8	36/M	Solitary erythematous to violaceous hyperkeratotic nodule on nose, 1.0 cm in diameter since 4 months	Acanthotic epidermis encircling superficial ectatic capillaries lined with normal-appearing endothelial cells	Angiokeratoma	CO2 laser ablation
9	35/F	Solitary 0.5cm, nodule with central umbilication and elevated edges present over the forehead of 02 years duration No lymphadenopathy.	Islands of basaloid cells with hyperchromatic nuclei, increased number of mitoses extending from the epidermis into the dermis.	Basal cell carcinoma	Wide local excision
10	57/M	Nodule, size 1x1 cm, bleeds on touch, over left lateral side of forehead since 1 year. No lymphadenopathy	Suggestive of Basal cell carcinoma	Basal cell carcinoma	Wide local excision

Results & Conclusion:

Facial papular lesions may have varied etiologies. It is crucial to understand the morphology, distribution, appearance, history of exacerbating factors and drug history in all patients. Skin biopsy plays a major role in clinching the diagnosis.

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Abstract N°: 5646

Giant congenital melanocytic nevus of the scalp: a case series and review of the literature

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Introduction & Objectives:

Congenital melanocytic nevus is a rare condition caused by a neural crest disorder. It may be associated with complications such as malignant melanoma, neurocutaneous melanosis, and have a major psychosocial impact on the patient due to its appearance. We report three cases of giant congenital melanocytic nevus of the scalp. The aim of this report is to increase clinical awareness of this entity, highlight histopathologic, and emphasize the importance of clinicopathologic correlation for diagnosis.

Materials & Methods:

Case series and review of the literature.

Results:

The first case is of a 11-year old white female presented with a large (17,2 cm × 11,5 cm), grayish plaque associated with a mammillated surface at the occipital scalp since birth. Furthermore, palpation of the scalp as a whole found marked bogginess and thickening that instantly returned to normal after releasing pressure. Skin biopsy of the lesion and the seemingly non-lesioned scalp were performed, both providing the histopathologic findings of mesenchymal melanocytic proliferation with a fusocellular component of neural appearance, with immunohistochemistry positive for S-100, MELAN-A and HMB-45.** The second case shows a 23-year old brown female presented with a large brown-gray cerebriform plaque on the right side of her scalp since birth, that showed continuous growth. And the third case displays a 4-year old white female with a large large gray cerebriform plaque on the occipital scalp since birth, also showing melanocytic lesions throughout the body. In all three cases, after correlating the clinical and histopathologic findings, they were all diagnosed as congenital melanocytic nevi.

Conclusion:

Giant congenital melanocytic nevus can develop complications such as malignant melanoma, while those on head may present with central nervous system involvement by neurocutaneous melanosis, with seizures, developmental delay, or malignant melanoma of meninges.** Due to the malignancy potential associated with additional neurological involvement, all giant congenital melanocytic nevus on the scalp should go through a thorough investigative workup. Since the estimated risk of developing melanoma is between 5% and 10%, the management of such cases requires individualization. Options include surgical or non-surgical procedures with clinical follow-up, staying vigilant to any changes in the aspect of the lesion, such as color or texture.

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Abstract N°: 5669

Revisiting Pediatric leprosy in the Indian post-elimination era

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Introduction: Leprosy in children carries an epidemiological significance and can be considered as an index of the prevalence of disease as well as reflects the efficiency of ongoing disease control programmes. Vulnerability of children to infection with Mycobacterium leprae lies in two major facts: nascent immunity and intra-familial contacts.

Objectives: To study the Clinico-epidemiological profile of pediatric leprosy patients.

Materials and methods: Retrospective study of new cases of leprosy in children (<14years) who presented to tertiary care centre of Gujarat over 3 years.

Results: Out of the total 300 leprosy patients, 4.67% (n=14) belonged to the pediatric age group (<14 years). Males (71.43%, n=10) outnumbered females (28.57%, n=4) with male: female ratio of 2.5:1. The mean age at presentation was 12.15 (±1.82) years, with most patients being in 12–14 years age group. Household contacts were identified in 35.71% (n=5) of cases and the majority of contacts were multibacillary. The most common type of leprosy found in children was borderline tuberculoid (42.86%, n= 6) followed by borderline lepromatous (28.57%, n=4) and tuberculoid (14.29%, n=2). There was 1 (7.14%) patient each of indeterminate leprosy and type 1 lepra reaction. Deformities were found in 21.43% (n=3) patients, with trophic ulcer being the commonest followed by claw hand. Both skin and neurological involvement were present in 71.43% (n=10) patients. Slit skin smear was positive in 78.57% (n=11) patients. Out of 14 patients, 13 completed the full course of leprosy multidrug therapy. Side effects encountered during treatment included clofazimine induced pigmentation in 28.57% (n=4) and ichthyosis in 35.71% (n=5) patients.

Limitations: Small sample size

Conclusion: Regular school surveys for early detection of cases is an important tool in achieving goal of elimination of pediatric leprosy. Clustering of familial multibacillary cases suggests that family contact tracing is mandatory in all cases of childhood leprosy.

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Abstract N°: 5729

Cryosurgery as an Effective Treatment for Penicillamine-induced Elastosis Perforans Serpiginosa: A Case Report

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Introduction & Objectives: Elastosis perforans serpiginosa (EPS) is a rare skin disorder characterized by the elimination of altered elastic fibers that originate in the dermis, resulting in transepidermal lesions. Typically, it appears as small hyperkeratotic, reddish to skin-colored papules with a central keratotic plug that evolve into a serpiginous pattern, usually on the neck and face. It is most commonly observed in young adults during the second decade of life. There are three types of EPS: reactive (25-30% of cases), which is associated with genodermatoses (most commonly Down syndrome) and connective tissue diseases (such as Ehlers-Danlos syndrome and Marfan syndrome); secondary, which is caused by the intake of penicillamine (penicillamine-induced EPS); and idiopathic EPS (65% of cases), which occurs without an associated disease. Treatment options for EPS are limited and often ineffective, making it a challenging condition to manage. The aim of this case report is to highlight cryosurgery as a potential treatment option for EPS and contribute to the limited literature available on the use of cryosurgery for this rare condition.

Materials & Methods: We present a case of a patient with EPS, unresponsive to multiple treatments, which responded successfully to cryosurgery.

Results: A 24-year-old male patient reports a three-year history of scaly, itchy papules located on the neck. The patient was chronically treated for 11 years with D-penicillamine for Wilson's Disease. The lesions were unresponsive to treatment with corticosteroids, 5-Fluorouracil Cream and fractional carbon dioxide laser. Physical examination revealed multiple erythematous hyperkeratotic papules with a central keratotic plug arranged in a serpiginous pattern, on the anterior cervical region. A biopsy performed on a papular lesion revealed notable transepidermal elimination of nuclear debris and eosinophilic degenerated elastic fibers from the dermis via an epidermal channel. The clinical and pathological findings were consistent with EPS secondary to D-penicillamine. The patient is currently under treatment with cryosurgery, applied as double freezing–thawing cycles in sessions with three-week intervals. He is still being followed up and achieved visible improvement of the lesions at the end of the third session. We observed that since the first session the lesions were decreased and flattened, with reduction of erythema and scaling.

Conclusion: EPS is a challenging skin disorder with limited and often ineffective treatment options. Cryosurgery appears to accelerate the elimination of altered elastic fibers by inducing blisters and promoting subsequent re-epithelialization. This case report suggests that cryosurgery may be a viable and safe treatment option for EPS. However, further research is necessary to develop and refine this strategy, as well as to explore other novel treatment modalities, in order to improve the quality of life of those affected.

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Abstract N°: 5742

Multiple miliary osteoma cutis related to targeted therapy medication in a patient with chronic myeloid leukemia

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Introduction & Objectives:

Osteoma cutis (OC), described for the first time in 1858 is characterized by bone tissue formation in the skin. (1) The process can occur primarily (idiopathic) or secondary to inflammatory, traumatic, drug or neoplastic processes. (2) We describe a case of multiple miliary osteoma cutis (MMOC) in a patient with a history of malignant hematologic neoplasm in management with targeted therapy medication.

Materials & Methods:

A 60-year-old patient with a history of chronic myeloid leukemia (CML) in treatment with dasatinib for a year, previously imatinib for 8 years, presented with asymptomatic skin lesions on her cheeks that appeared 7 months prior to consultation. On physical examination, there were grouped, hard-consistency papules and small nodules on both cheeks. A punch biopsy of a lesion on the cheek was performed, which reported the presence of bone tissue with fatty marrow in the dermis, for which a diagnosis of osteoma cutis was made. The patient did not want pharmacological or surgical management of the lesions. No preexisting skin lesions or trauma were identified.

Results:

Osteoma cutis (OC) is a rare benign extra skeletal bone tissue formation in the dermis and subcutis. (1) The process corresponds to the crystallization of calcium hydroxyapatite of osteoblasts in the skin in an aberrant way, and it can occur primarily (idiopathic) or secondary to inflammatory, traumatic, drug or neoplastic processes. (2) OC is more frequent in young women or postmenopausal and related to some specific genetic syndromes. (3,4) There are few case reports in the literature, which make the diagnosis and treatment of this pathology more challenging since it is not standardized and based on the experience of the existing case reports. (4) OC has been classified in isolated, plaque-like, widespread, and MMOC. (5) The pathogenesis of the OC is not clear, although it has been suggested that either mesenchymal cells differentiate into osteoblasts that migrates to the skin or it corresponds to metaplasia of the fibroblasts in the skin, due to long-standing inflammation, that originates osteoblasts and lately osteogenesis. (6) MMOC presented classically as small (1-3 mm), hard, skin-colored papules usually asymptomatic in the face or scalp, and less frequent in the trunk, breast, extremities, and buttocks. (2,7) The diagnosis confirmation is made on histological bases. (4,8,9) Histopathological, MOC lesions show calcification, trabecular bone and bone marrow in the dermis and hypodermis, with osteocytes and osteoblasts within the bone aberrant tissue, which is different from calcium salts present in calcinosis cutis. (1) The treatment of MMOC is not standardized, but it is mostly based on surgical procedures.

Conclusion:

MMOC is a rare benign disease of the skin with no standardized treatment. We present a case of MMOC associated with dasatinib as treatment to CML, which has not been reported previously.

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Abstract N°: 5786

Air pollutant and gut microbiota–derived metabolite – trimethylamine – is associated with systemic inflammation in psoriasis.

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Introduction & Objectives:

Increasing evidence shows that gut bacteria-produced molecules as well as air pollution may be involved in development or exacerbation of psoriasis. Plasma trimethylamine (TMA) is a gut bacteria metabolite of choline and carnitine. However, other origins of TMA are also possible. TMA is used in the production of plastics or disinfectants. It is also an air pollutant. TMA oxidation to TMAO (trimethylamine-N-oxide) occurs mainly in the liver by the action of flavin monooxygenase 3.

Materials & Methods:

One hundred and twenty patients with mild to severe plaque psoriasis were included in the study. Intestinal barrier integrity was assessed with the serum concentrations of claudin-3, a modulator of intestinal tight junctions and an intestinal fatty acid-binding protein, a marker of enterocyte damage. The concentrations of TMAO and TMA were measured with high-performance liquid chromatography. The following Complete Blood Count-derived indices were calculated: neutrophil count/lymphocyte count (neutrophil to lymphocyte ratio; NLR), platelet count * NLR (systemic immune-inflammatory index; SII).

Results:

Patients with psoriasis presented higher concentration of TMA (1292.4 vs 813.5 ng/ml; $p < 0.05$) and TMAO (327.9 vs 195.7 ng/ml; $p < 0.01$). There was a significant positive correlation between plasma TMA and inflammatory parameters: C-reactive protein ($r = 0.496$; $p< 0.05$), neutrophil to lymphocyte ratio ($r = 0.537$; $p< 0.05$), systemic immune-inflammatory index ($r = 0.653$; $p< 0.05$). Factors associated with increased concentration of TMA in psoriasis include older age, increased biomarkers of gut barrier integrity, decreased estimated glomerular filtration rate and presence of nonalcoholic fatty liver disease.

Conclusion:

Trimethylamine, but not its liver metabolite TMAO, exerts a proinflammatory effect in patients with psoriasis. Several factors affect TMA concentration, namely age, function of the intestinal barrier, liver, and kidneys. Trimethylamine could be a potential link between gut dysbiosis, environmental pollution and pathogenesis of psoriasis.

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Abstract N°: 5829

Multiple basal cell carcinomas as a result of radiotherapy

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Introduction

Basal cell carcinoma (BCC) is the most common skin cancer with an increasing incidence worldwide. Predilection sites are head and neck in 80-85% of cases, followed by the trunk in 10% of patients. The leading risk factors are UV exposure and ionizing radiation. During 1950s and 1960s, radiation-induced epilation was used as an efficient treatment method for tinea capitis.

Results

We report a case of an 80-year-old man with a 16-year history of the successive occurrence of multiple BCCs on the scalp, face, and neck. He also had the history of tinea capitis treated by radiotherapy during childhood. At presentation during clinical and dermoscopic examination approximately twenty-five BCCs were observed, predominantly on scalp. The most common BCC lesion was the nodular subtype, followed by the pigmented and superficial subtypes. Histopathological examination confirmed the diagnosis of BCC in multiple lesions and one squamous cell carcinoma (SCC). In personal history most important comorbidity was hairy cell leukemia. The therapeutic approach was surgery and 5-fluorouracil 5% cream

Conclusion

Radiation-induced epilation was used as an efficient method for treatment of tinea capitis. One of the side effects was appearance of BCC in radiation exposed areas. Surgical excision is the gold standard for BCC treatment. Also, 5-fluorouracil 5% cream may be a good option for patients with multiple BCCs. We present satisfactory results after combined treatment in our patient.

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Abstract N°: 5862

Widespread ulcers in a healthy elderly patient

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Introduction & Objectives:

Pyoderma gangrenosum is a neutrophilic dermatosis frequently associated with systemic disorders which predominantly occurs in the fifth and sixth decade of life.

Materials & Methods:

We discuss the case of an 83-year-old female patient who presented to our department with several painless erythemato-violaceous plaques with multiple purulent orifices of varying sizes, localized on the arms, back, and chin. The patient had no history of systemic disease or prior surgeries.

Results:

Lymphoproliferative conditions, cutaneous tuberculosis and pyoderma gangrenosum were considered as differential diagnoses. The biopsy revealed findings compatible with pyoderma gangrenosum.

The patient received topical and low dose systemic corticosteroids (due to gastrointestinal intolerance) with little improvement, so we decided to start treatment with colchicine.The therapy was well tolerated and the ulcers started to heal in a cribriform pattern.

Conclusion:

We present a case of pyoderma gangrenosum, particular through the extent of the disease, late age of onset (which limits treatment options), the absence of any commonly reported associated diseases and good response to colchicine therapy.

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Abstract N°: 5865

Comparing the Quality of ChatGPT- and Physician-Generated Responses to Patients' Questions

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Introduction & Objectives: Chat Generated Pre-trained Transformer ('ChatGPT' (Open AI, San Francisco, USA) is a free artificial intelligence (AI)-based natural language processing tool that generates complex responses to inputs from users. ChatGPT in its current form is not designed to provide medical advice. The objective of this study was to determine whether ChatGPT is able to generate high quality responses to patient-submitted questions in the patient portal.

Materials & Methods: Thirty one patient-submitted questions as well as their corresponding responses from their dermatology physician were extracted from the electronic medical record for inclusion in the analysis. Questions without context or meaningful content that were felt to not be amenable to ChatGPT input (e.g. "what's next?" "can you call me?") were excluded. All identifiers in the patients' questions and the providers' responses were removed to maintain confidentiality. The patient-submitted questions were input into ChatGPT (version 3.5), and the outputs were extracted for analysis, with manual removal of verbiage pertaining ChatGPT's limitation of not being able to give medical advice. Eight blinded reviewers (n=5 physicians, n=3 non-physicians) selected their preference between the physician- and ChatGPT-generated responses in terms of 'overall quality,' 'readability,' 'accuracy,' 'thoroughness,' and 'level of empathy,' and rated each of those parameters from one to five on a Likert scale (1=very poor, 2=poor, 3=acceptable, 4=good, or 5=very good).

Results: Among both physician and non-physician reviewers, the physician-generated response was preferred over the ChatGPT response in the significant majority of cases (the physician response was preferred 75.58% of the time among physician reviewers [p=0.00002] and 60.22% among non-physician reviewers [p=0.033]). The ChatGPT-generated response was considered inferior to the physician-generated response in terms of both 'readability' and 'level of empathy' among both physician and non-physician raters. Physician reviewers rated the 'overall quality,' 'readability,' 'accuracy,' and 'level of empathy' of the physician-generated responses as significantly higher than the ChatGPT-generated responses (4.33, 4.45, 4.47, and 4.03 out of 5 for the physician-generated responses, respectively; compared to 3.35, 3.81., 3.87, and 3.07 for the ChatGPT-generated responses [p= 0.004, 0.013, 0.011, and 0.006]). There were no significant differences in the responses selected by physician compared to non-physician reviewers.

Conclusion: The reviewers found that in general, physician-generated responses were preferred over the responses generated by the current version of ChatGPT. Despite the excitement regarding the accuracy and complexity of ChatGPT generated responses to various types of inquiries, the results of this study suggest that the current version of this technology may not yet be acceptable to answer medical questions.

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Abstract N°: 5977

Refining the process of acute dermatological referrals via teledermatology in a busy University Hospital

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Introduction & Objectives:

Acute referrals to our dermatology department are received via a digital application called PANDO. This allows clinical information and photographs to be sent in an NHS encrypted and data protected format. In 2017 the Royal College of Physicians (RCP) published guidelines outlining acute clinical presentations requiring specialist referral and those where management was deemed to be within the remit of all physicians1. The dermatological manifestations anticipated to be managed by all physicians include: venous eczema/leg ulcers, established eczema and psoriasis, morbilliform drug/viral rash, herpes zoster/viral induced rash1. Our main aim was to assess the most common conditions referred to our dermatology team and the appropriateness in comparison to RCP guidance.

Materials & Methods:

We collected data over a 4-month period with a total of 110 referrals received. We recorded the level of clinical experience of the referrer, if an appropriate photo was provided, the condition referred and outcome of referral.

Results:

In 84% of referrals, an attached image pertinent to the clinical query was included. In 61% of referrals an inpatient review by dermatology was required. The five most common groups of conditions referred were: Inflammatory, Infective, Neoplastic, Drug Reactions and Benign Lesions. 40% of total referrals were classified as inappropriate (43/110). These included referrals that were inappropriate according to the RCP guidance; had inadequate information to enable assessment and also diagnostic queries for incidental chronic lesions.

Conclusion:

Although teledermatology should not aim to replace in-person review for acute dermatology referrals, with limited personnel resources in UK dermatology departments, efficient triaging of referrals is vital.

RCP Referring Wisely guidance aims to standardise referral patterns and appropriateness across different medical specialities. Of the 40% of all referrals deemed inappropriate, 25% did not meet the RCP standards and the remaining 15% of referrals either lacked clinical details or were for non-acute issues. Despite photographs and clinical information shared via PANDO, 61% of patients required an inpatient review to reach a diagnostic or management outcome. We believe these results could be attributed to a lack of pertinent information in the initial referral.

We propose utilising interdisciplinary meetings to relay our findings and educate on common dermatological manifestations. The British Association of Dermatology has released guidelines on necessary information for a referral when utilising teledermatology2. We recommend using this to set a minimum clinical information requirement for acute teledermatology referrals in our hospital. In summary, we believe that provision of educational tools and clear guidelines will improve quality of referrals leading to more efficient management of acute dermatological referrals.

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Abstract N°: 6014

Sneddon Wilkinson's subcorneal pustulosis: about a case of a rare disease

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Introduction & Objectives:

Subcorneal pustular dermatosis or Sneddon-Wilkinson disease is a pathology belonging to the spectrum of neutrophilic dermatoses. Rare, its diagnosis is all the more difficult given the clinical and histological similarities with other skin diseases.

Patient and observation:

We report the case of a 63 year old female patient, with no particular medical history and no previous medication, who was admitted with a pruriginous bullous and pustular rash that started in the folds and spread to the rest of the body. Clinical examination found a conscious and stable patient presenting with post-bullous erosions, confluent in polycyclic plaques on the trunk, folds, and flexion sides of the limbs; associated with pustules and hypopyon blisters, without initial mucosal or palmoplantar involvement. Skin biopsy showed an intraepidermal subcorneal pustule, direct and indirect immunofluorescence were negative, the rest of the assessment showed no anomaly. We reached the diagnosis of Sneddon-Wilkinson disease and initiated treatment with colchicine 1mg/d with favourable evolution.

Discussion:

The originality of our work lies in the rarity of Sneddon-Wilkinson disease and its differential diagnosis issue with other dermatoses, in particular IgA pemphigus.

Sneddon-Wilkinson disease is a rare entity, mostly affecting women between 40 and 60 years, but possible at all ages. It usually evolves by relapse-remission and typically presents as flaccid, hypopyonous nonfollicular pustules with little to no pruritus, often coalescing to form annular or polycyclic plaques. Lesions occur on the trunk, folds, and flexion areas of the limbs and usually spare the palmoplantar regions and mucous membranes.

Histology reveals a unilocular subcorneal neutrophil-filled intraepidermal amicrobial pustulosis, with negative direct and indirect immunofluorescence, constituting the main element of distinction from IgA pemphigus, which has similar clinical and histological features.

The search for monoclonal gammopathy, autoimmune diseases and neoplasia should be systematic considering the possible association. Treatment of choice is dapsone, but other therapeutic options are dapsone and retinoids.

Conclusion:

Sneddon Wilkinson disease is a rare neutrophilic dermatosis. Given its multiple similarities with IgA pemphigus, knowledge of the distinguishing features is essential for proper diagnosis and management.

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Abstract N°: 6056

A Clinico-Epidemiological Study Of Dermatoses Affecting The Genitalia In Patients Of 15-60 Years Age-Group Attending Skin Opd In A Tertiary Care Centre

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Introduction & Objectives: Dermatoses involving genital areas can be divided into two groups: venereal and non-venereal dermatoses. Venereal dermatoses may be ulcerative, non-ulcerative and urethritis. Non-venereal dermatoses are classified into several groups based on pathogenesis: Inflammatory, infections and infestations, congenital disorders, benign abnormalities, premalignant and malignant lesions, adverse cutaneous drug reactions and traumatic. Each group includes various disorders

Objectives-To determine the types of dermatoses affecting genitalia and categorize them into venereal and non venereal types

Prevalence of venereal and non-venereal dermatoses and relative frequency of different subtypes

Materials & Methods: It is an institution based cross sectional study for one year including patients with genital lesions attending skin and STD OPD and fulfilling inclusion and exclusion criteria

Inclusion Criteria-Patient of 15 years to 60 years age group with genital dermatoses

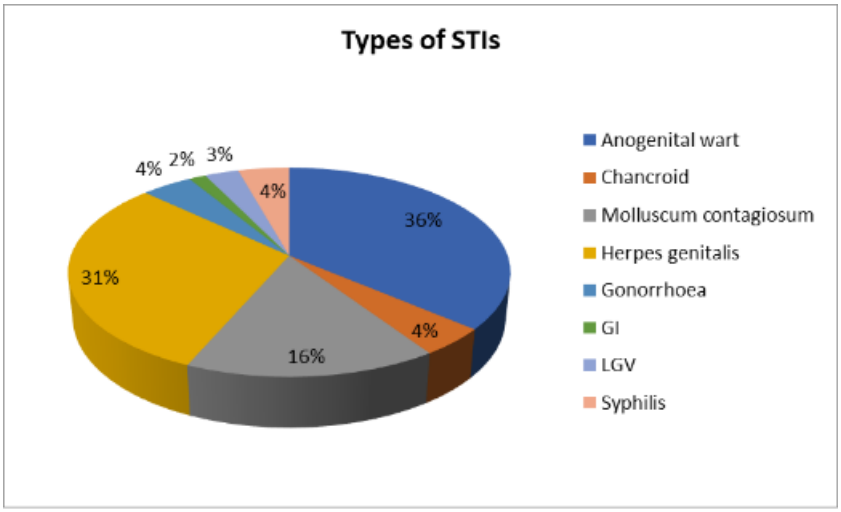
Exclusion Criteria-Non consenting &Terminally ill patients

Results: Out of total 385 cases, 240 were male and 145 were female with a sex ratio of 1.66:1. Highest prevalence was among ***15 to 29 years***old.

High risk factor: 83 High risk behavior subjects included those who had multiple sex partners migratory population, alcoholics and transport workers.

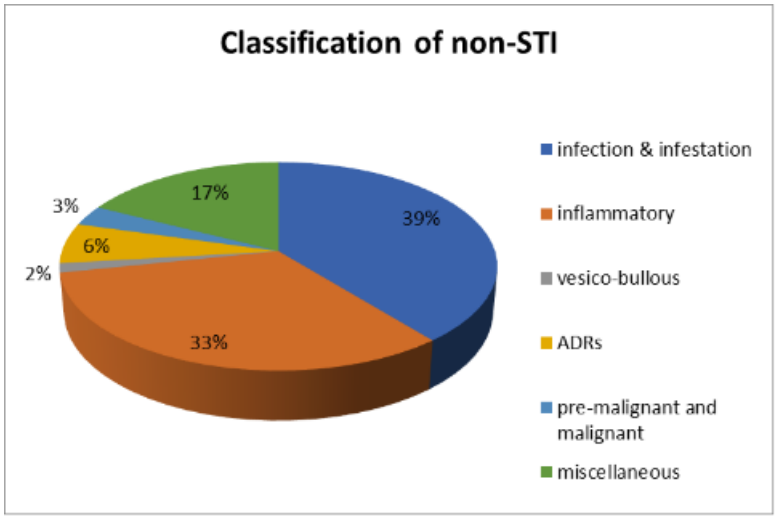
Dermatoses affecting the genitalia: Out of 385 total cases, 69 had STI and 350 had non-STI.

Types of STI:



STI and HIV: 3 cases were HIV positive and 2 of them had giant condyloma acuminatum 1 had giant molluscum.

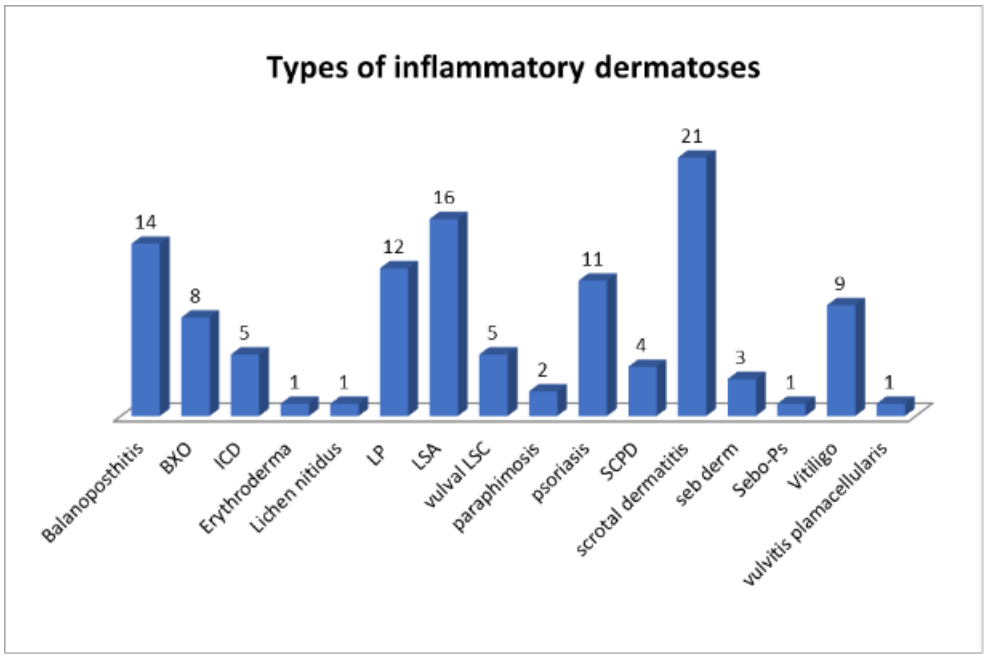
Non-sexually transmitted dermatoses: Infections and infestations were most common followed by inflammatory dermatoses and miscellaneous group. There were 22 cases of adverse drug reactions (ADR),



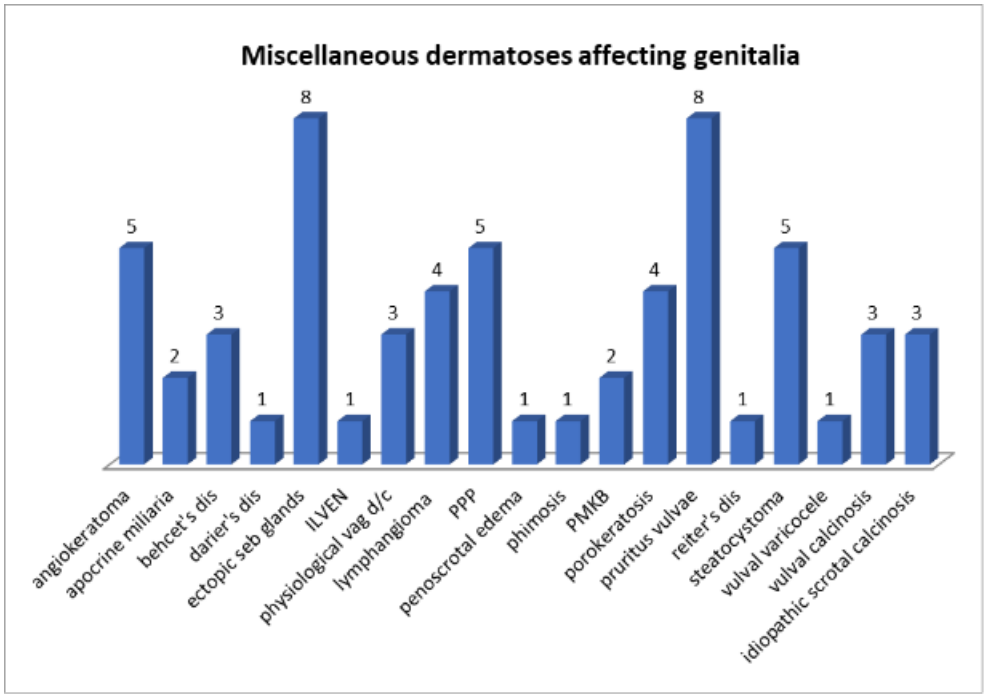
Infections and infestations: Out of137 patients with infections and infestations, Candidiasis was commonest followed by scabies and dermatophyte infection.

Infections and infestations	No of cases (%)
Candidiasis	56 (16)
Filariasis	1 (0.3)
Folliculitis & furuncle	6 (1.71)
Scabies	52 (14.86)
Dermatophytosis (Tinea)	11 (3.14)
TB	3 (0.86)
H.Zoster	4 (1.14)
Leprosy	1 (0.3)
Necrotizing fasciitis	3 (0.86)
Total	**137**

Inflammatory dermatoses



Miscellaneous:



Vesico-bullous diseases: 5 cases of pemphigus involved genitalia; 3 were P.vulgaris and 2 were P.vegetans.

Adverse drug reactions: 22 cases of ADRs had genital involvment, 14 were fixed drug eruption and 8 were SJS-TEN

Premalignancies and malignancies: Out of of 11 cases in this group, 9 were squamous cell carcinoma(SCC) and 2 were bowenoidpapulosis. Penile SCC was commones

Correlation of genital dermatoses with high risk behavior

	STI	Non-STI
High risk behaviour	**44**	**39**
Non-High risk behaviour	**25**	**277**

Odds ratio	12.5005
95 % CI:	6.8988 to 22.6508
z statistic	8.328
Significance level	P < 0.0001

results showed correlation between STI and high risk behavior was statistically significant.

Conclusion:

Most common associated systemic disorder was Type 2 Diabetes mellitus

Ano-genital wart was commonest STI followed by herpes genitalis and molluscum contagiosum

Most common non-venereal genital dermatosis was candidiasis followed by scabies and LSA

Some rare cases

porokeratosis-4

genital TB-3

PKMB-2

bowenoid papulosis-2

Hansen’s disease-1

filariasis-1

Darier’s disease-1

sebopsoriasis-1

apocrine miliaria-1

In most of the studies, genital dermatoses, either due to venereal or non venereal causes, were studied. But in the present study, we made an attempt to elicit all the dermatoses affecting the genitalia

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Abstract N°: 6217

A case of paraneoplastic dermatomyositis preceding the discovery of an aggressive B lymphoma

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Introduction & Objectives:

Dermatomyositis (DM) is an inflammatory pathology whose association with certain cancers(kc) is well known,it can appear before,at the same time or after the diagnosis of the latter.The neoplasia most often found are solid neoplasia and much more rarely hematological malignancies.

We report the case of a DM that developed a few months before the discovery of a large cell B lymphoma .

Results:

A 45-year-old Patient with no previous history had photo-distributed erythematosquamous skin lesions with palpebral edema, banded erythema of the dorsal surface of the hands and painful periungual erythema associated with myalgias ,and proximal muscle deficit with elevated muscle enzymes and a myogenic pattern on ENMG for a few months. The diagnosis of dermatomysitis was made, antibodies specific to myositis were negative, tumor markers were negative and a thoraco-abdomino-pelvic scanner (TAP) showed the presence of an adrenal myelolipoma. The patient was put on prednisone at a dose of 1mg/Kg/d and underwent removal of the myelolipoma. After 4 weeks, the patient reported epigastralgia and abdominal pain, which were initially attributed to methotrexate; hence the switch to the subcutaneous route. In addition to the persistent pain, the patient developed a rapidly enlarging painful cervical adenopathy that was biopsied.A gastroduodenal fibroscopy revealed fundic stasis and a large, hard duodenal fold that was biopsied.Both biopsies were consistent with large-cell B-cell lymphoma. A CT scan showed a complex lesion consisting of duodenal thickening with multiple abdomino-pelvic adenopathies, some of which were necrotic, and a large peritoneal effusion; the cytological study of the later was that of a neoplastic ascites.

The patient was referred to haematology for emergency chemotherapy with cyclophosphamide, vincristine and prednisone but he quickly developed significant jaundice due to cholestasis secondary to the compression of the bile ducts, the installation of an biliary drainage was impossible given the deterioration of his general condition, the patient died a few days later by multivisceral failure.

Conclusion:

The search for solid neoplasia, but also for haemopathy, is an essential step at the time of diagnosis of dermatomyositis. It is important to know how to repeat this work-up during the evolution of dermatomyositis because the risk of cancer remains high in the 5 years following the diagnosis

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Abstract N°: 6244

vulvar syringomas - common lesions at an unusual site

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Introduction & Objectives:

Syringomas are benign tumours that originate from eccrine sweat gland ducts. They commonly occur in young women, usually after puberty. Clincally, they present as small, firm, flesh-colored-to-yellowish papules, that commonly involve the face, neck and chest in a symmetrical distribution.

Materials & Methods:

We report a case of a 43 year-old female, who presented with multiple, firm, asymptomatic, flesh-colored papules symmetrically distributed along the labia majora and labia minora, bilaterally, measuring between 1 to 3 mm diameter, that appeared approximately 3 years before. A differential diagnosis between syringomas, steatocystoma multiplex, epidermal cysts and Fox-Fordyce disease was made.

Under local anesthesia with 1% lidocaine, a 4 mm-punch biopsy was performed, and the tissue sample was sent to the Pathology Department for histopathological examination.

Results:

The histopathological examination revealed the diagnosis of vulvar syringoma, with epithelial cells arranged in cords and nests, and ductal structures of variable sizes and shapes, within an abundent fibrous stroma in the upper dermis. Considering the benign nature of the lesions and the absence of symptoms, no treatment was necessary.

Conclusion:

Syringomas with vulvar involvement are a very rare finding, with a few cases reported. They are usually asociated with pruritus, being the main complaint of the patients.

Differential diagnosis of vulvar syringomas should include Fox-Fordyce disease, multiple epidermal cysts, condyloma acuminata and senile angiomas. Also, histopathologically, syringomas must be differentiated from more aggresive tumours, such as microcystic adnexal carcinoma or desmoplastic trichoepitelioma.

Treatment options, consist of physical methods of ablation or topical treatment with atropine suflate or tretinoin, but, considering the benign nature of the lesions, no treatment is necessary, unless there is cosmetic concern or marked pruritus.

Therefore, syringomas should be considered in the differential diagnosis of vulvar neoplasms and they should be biopsied for a proper diagnosis.

We considered sharing this case of vulvar syringomas because of the rarity of the localization and the lack of association with syringomas in other body regions.

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Abstract N°: 6328

A case of primary ectopic axillary breast carcinoma

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Introduction & Objectives:

Ectopic breast tissue represents the most frequent congenital abnormality. It may develop anywhere along the milk lines joining the axilla to the groin. Primary ectopic breast carcinoma is uncommon and clinically challenging to be detected given its localization.

Materials & Methods:

Herein, we report a case of primary ectopic breast carcinoma of the axilla in a 60-year-old woman.

Results:

A woman in her 60s presented with a 4-year history of a painless mass of the left axilla. Her past medical or family history was unremarkable. Physical examination revealed a painless firm subcutaneous tumor measuring approximately 7 x 4 cm in size, with an erythematous and ulcerated surface that was adherent to the overlying skin. On examination, there were no palpable breast masses or peripheral lymphadenopathies. Histopathological examination revealed in the epidermis, a pagetoïd infiltration made of carcinomatous cells that are organized in nests and glandular structures. The dermis is the site of a carcinomatous infiltration of lobular architecture made of atypical cells. The immunohistochemical study showed mammaglobin positive cells. A diagnosis of primary ectopic breast carcinoma of the axilla was made. Mammographic and ultrasound examinations of the breasts were performed and returned without abnormalities. The patient was referred to the carcinological surgery department for further management. The histopathological report after local excision and left axillary lymph nodes dissection had concluded an infiltrating ductal carcinoma of the breast on an ectopic breast with positive lymph nodes. Bone and computed tomography scans were normal. Then the patient received an adjuvant treatment consisting of chemotherapy and radiotherapy.

Conclusion:

Interestingly, primary ectopic breast carcinoma of the axilla is uncommon and clinically difficult to be detected given its localization. Clinically, the tumour usually appears as a palpable fixed axillary lump. Skin appearance may be normal, with sores, ulcers, bleeding, depression, with or without discharge. Hence, the diagnosis may be challenging to distinguish from other diseases in the axilla, especially in the case of the aberrant type, as in our patient. We attest to a huge divergence between a prognosis comparable to that of breast carcinoma at the same stage of the disease or a poor prognosis with a high rate of lymphatic spread and metastasis. Therefore, physicians should be aware of this rare entity to avoid treatment delay and further studies are required to establish a higher grade of recommendation for its management.

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Abstract N°: 6392

Are sunscreens as transparent as they seem, or have they a murky factor?

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Introduction & Objectives:

For 95 years sunscreens have been available to protect the skin from the harsh effects of ultraviolet (UV) radiation. Their ever-increasing use is owing to successful public health campaigns and a shift in patients' attitudes towards personal health responsibility. Recently, the safety profile of sunscreen has been questioned, as well as the impact of sunscreen on the environment. Two major types of sunscreens are recognised: inorganic (physical) filters that deflect UV radiation, and organic (chemical) filters that absorb it. Organic UV filters have been found present in surface water, wastewater, and even in drinking water around the world.1 They have been identified in marine biota including fish, leading to global health concern regarding the implications of bioaccumulation and biomagnification. Such potentially harmful filters include oxybenzone, avobenzone, octocrylene, octinoxate, octisalate, and homosalate.2

Materials & Methods:

A review of sunscreen ingredients from 10 reputable skincare brands in the UK was completed. Ingredients of SPF50+ sunscreen products available to buy on the brands' websites were analysed. Tinted and travel-sized sunscreens were excluded, along with products without online ingredient lists, leaving a total of 107 products for review.

Results:

Sunscreen containing UV filters implicated in environmental harm totalled 52% (n=56). Octocrylene (39%) and homosalate (36%) were the most common.

Conclusion:

As dermatologists, we regularly discuss photoprotection with patients. While there is uncertainty surrounding the sustainability of organic UV filters, these discussions may become more complex in some instances. At present, there is very little evidence linking inorganic filters zinc oxide and titanium dioxide to environmental harm.3 The option of using the physical barrier of inorganic filters may be attractive to those who are environmentally conscious. However, some disadvantages to this strategy exist, such as the less appealing consistency, and specifically regarding titanium dioxide, the lack of protection within the UVA spectrum. Photoprotection is paramount in preventing erythema, photoaging and skin cancers, and its importance should never be detracted from. However, sunscreen is only one part of a comprehensive photoprotection strategy. Counselling patients regarding behaviours for avoiding UV radiation, as part of a wider plan for photoprotection, is imperative and safe, and should be used in conjunction with appropriate sunscreen use. We eagerly await further studies on sunscreen sustainability.

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Abstract N°: 6449

Composition and functional effects of human hair follicle microbiota

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Introduction & Objectives:

The unique microbiota that resides in human hair follicles (HFs) varies significantly from the one found on the skin surface, and a disruption in this ecosystem (dysbiosis) is often associated with several HF diseases. However, traditional HF microbiota sampling methods include confounding inputs from the skin surface, assess the HF microbiota incompletely, and/or do not investigate the role of the microbiota in human HF physiology. Hence, this study aimed to comprehensively map the HF microbiota and assess its functional role in the HF environment.

Materials & Methods:

Laser-capture microdissection, shotgun sequencing, and fluorescent *in situ* hybridization were used to map the human scalp HF microbiota in defined HF compartments, identifying significant compartment-, tissue lineage- and donor age-dependent variations in microbiota composition. In addition, *ex vivo* HF cultures were treated with *SEP1* bacteriophages and butyrate to assess the impact on HF biology.

Results:

Cutibacterium acnes, Malassezia restricta and *Staphylococcus epidermidis* were the most abundant viable (as evaluated by propidium monoazide treatment) and variable HF microbiota between compartments, thereby suggesting follow-up investigation of these microbes as therapeutic targets. Indeed, e*x vivo* infection of scalp HFs with *S. epidermidis*-specific lytic bacteriophages induced HF dysbiosis (decrease in *C. acnes*) and downregulated HF growth and development, metabolism and melanogenesis gene and protein expression. This suggests that microbiota products may modulate defined HF functions. Accordingly, treatment with butyrate, a key metabolite of core HF microbiota, including *S. epidermidis*, delayed catagen and promoted HF autophagy, mitochondrial activity (MTCO1), melanogenesis (gp100), and dermcidin expression *ex vivo*.

Conclusion:

This comprehensive characterization of the human HF microbiota reveals important spatial variations in its abundance and viability. Further, it suggests that these microbes modulate human HF function, and thereby invite exploration of these as therapeutic targets for management of HF-associated dermatoses associated with dysbiosis, with potential effects also on hair growth and pigmentation.

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Abstract N°: 6752

Generative AI Data Augmentation and Synthetic Images for Improved Skin Disease Classification

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Introduction & Objectives: A fundamental issue plaguing public and private research efforts is that labeled training data for real-world dermatology applications is limited and difficult to access, given longstanding privacy and strict data-sharing policies. Inspired by the recent early success of generative AI, we propose to use diffusion probabilistic models (DPMs) for image augmentation as part of supervised machine learning pipelines to complement existing internal and external validation datasets. Existing data augmentation techniques represent one of the effective ways to improve the quantity and diversity of training data by manipulating image datasets in the pixel or feature space. In this paper, we look to advance augmentation techniques by building upon the emerging success of text-to-image diffusion probabilistic models in augmenting the training samples of our macroscopic skin disease dataset.

Materials & Methods: To study the potential of diffusion probabilistic models (DPMs) for skin disease classifications, we fine-tuned them on six different disease conditions: basal cell carcinoma and melanoma as malignant classes, actinic keratosis, and atypical melanocytic nevus as pre-malignant classes, and lentigo and seborrheic keratosis as benign classes. While most of the generated skin disease images are of high quality, it is not unusual to obtain generated images of medium or low quality. To isolate high-quality images from lower qualities, we present a data curation pipeline to filter high-quality synthetic images.

Results: We show that this generative data augmentation approach successfully maintains a similar classification accuracy of the visual classifier even when trained on a fully synthetic skin disease dataset, and can even improve certain performance when a hybrid data set of original images and synthetic images is combined. On a top-3 accuracy basis, incorporating synthetic images alongside original images in a hybrid data set yielded the highest accuracy of 85.01%, as compared to 84.48% for only original images and 84.09% for only synthetic images. Similar to recent applications of generative models, our study suggests that diffusion models are indeed effective in generating high-quality skin images that do not sacrifice the classifier performance and can improve the augmentation of training datasets after curation.

Conclusion: We demonstrate the impressive generative capabilities of probabilistic diffusion models in generating macroscopic skin disease images. We show how it is possible to condition the probabilistic diffusion-based generation on text prompt inputs in obtaining fine-grained synthetic images. Furthermore, we propose a closed-loop data augmentation pipeline to automatically curate the generated images while complementing real-world skin disease datasets. Finally, our classification task of six skin diseases highlights how synthetic images are reliable data sources given that they have been demonstrated beneficial for skin disease classification. This result underlines the importance of the recent generative modeling success for medical applications as an effective means of data sharing without infringing on confidentiality issues.