## Pityriasis lichenoides et varioliformis acuta: a diagnostic challenge

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# **Introduction & Objectives:**

Pityriasis lichenoides refers to the spectrum of pityriasis lichenoides chronica (PLC) and pityriasis lichenoides et varioliformis acuta (PLEVA). The latter is an unusual cutaneous inflammatory disease and even though its etiology has been controversial; it typically follows a benign course. It has a male predominance, and its incidence and prevalence are unknown. The differential diagnosis of PLEVA includes multiple inflammatory and infectious disorders, posing a challenge for clinicians.

The objective of this case is to highlight the clinical and histological features of PLEVA, as well as its differential diagnosis.

### **Materials & Methods:**

We present the case of a 58-year-old male who presented with a 1-week history of lesions involving more than 90% of total body surface. He denied fever and other systemic symptoms.

On examination he had multiple coalescing erythematous macules and numerous scaly round erythematous plaques with hemorrhagic and necrotic crusts, located on the trunk and proximal extremities. Besides a moderate elevation of CRP levels, laboratory parameters where within normal limits.

# **Results:**

The patient was started on doxycycline 100 mg/day and betamethasone 0.05% cream twice daily, with a presumptive diagnosis of PLEVA. Skin biopsy revelaed parakeratosis, spongiosis, vacuolar alteration of the basal layer and wedge-shaped lymphocytic infiltrate. Immunohistochemical stains showed CD8 positive T lymphocytes and were negative for CD30, ruling out lymphomatoid papulosis and confirming PLEVA. The patient had a satisfactory evolution with complete remission after 3 weeks of treatment.

# **Conclusion:**

This case highlights the clinical and histological findings of PLEVA, because in order to provide an accurate diagnosis and an appropriate treatment, it is essential for dermatologists to be familiar with this entity, its differential diagnosis and the spectrum of pytiriasis lichenoides.

## Unusual variants of Sweet Syndrome: presentation of two cases

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# **Introduction & Objectives:**

Sweet syndrome is a rare, acute febrile neutrophilic dermatosis with uncertain incidence. It is classified into 3 subtypes: classic or idiopathic, associated with malignancy and drug-induced. However, unusual atypical clinical (bullous, necrotizing, cellulitis-like, pustular and of the dorsal hands) and histopathological (subcutaneous, histiocytoid, cryptococcoid, lymphocytic and eosinophilic) variants have been described. The objective of this study is to describe the clinical and histopathological characteristics of 2 patients with unusual variants of Sweet Syndrome.

### **Materials & Methods:**

Two cases of atypical Sweet Syndrome are reported, who attended our service during the past year.

### **Results:**

Case #1: 42-year-old female, with a history of bipolar disorder, who presents with fever, erythematous, edematous papules and plaques located on the anterior chest and upper limbs, and painful erythematous nodules with edema, located on the anterior surface of both legs. Laboratories: leukocytosis, neutrophilia 74%, thrombocytosis, elevated C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR). Skin biopsy of the supraclavicular region: epidermis with vacuolization of the basal layer, marked edema of the papillary dermis, dense nodular and diffuse inflammatory infiltrate formed by lymphocytes and numerous neutrophils. No evidence of vasculitis. Skin biopsy of the anterior leg: septal and lobular panniculitis, predominantly septal with widening of the interlobular septa, inflammatory infiltrate formed by lymphocytes, histiocytes, multinucleated giant cells and neutrophils isolated or in collections in the interlobular septa, Miescher´s radial granulomas and vasculitis. Definitive diagnosis: Subcutaneous Sweet Syndrome.

Case #2: 72-year-old female, with no known history, who presented fever of 38.5°C, papules and erythematous infiltrated plaques on the face, neck, thorax and upper limbs, and bilateral inguinal lymph nodes. Laboratories: anemia, severe thrombocytopenia, hypoalbuminemia, LDH 2480, ESR 100 and CRP 17.2. Skin biopsy: rectified epidermis with isolated necrotic keratinocytes, edema of the papillary dermis, dense nodular and diffuse infiltrate formed by neutrophils and mature mononuclear cells with a blastoid or myeloid appearance, numerous extravasated erythrocytes with absence of vasculitis. It is suggested to perform immunohistochemistry (myeloperoxidase and CD68). Peripheral blood smear: hypochromic normocytic anemia, erythroblasts 4%, blasts 56%. Bone marrow aspirate: acute myelomonocytic leukemia subtype M4. Definitive diagnosis: Histiocytoid Sweet Syndrome secondary to acute myeloid leukemia.

### **Conclusion:**

Two exceptional cases of unusual variants of Sweet Syndrome are presented. The subcutaneous and histiocytoid variants are rare histopathological forms, with few cases described in the literature that are usually associated with malignancy.

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Analysis of mortality in patients with hidradenitis suppurativa, chronic urticaria, psoriasis and atopic dermatitis in the dermatology services of tertiary hospitals in Spain, based on big data technology: DERMACLEAR study.

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## **Introduction & Objectives:**

Hidradenitis suppurativa (HS), chronic urticaria (CU), psoriasis (PsO), and atopic dermatitis (AD) are recurrent cutaneous immunological diseases (CIDs) that are associated with an increased risk of mortality, although it is unclear whether this is due to these pathologies, the treatments or to the higher prevalence of comorbidities. This communication aims to provide an overview of the proportion and mean age of deceased patients and causes of death in clinical practice within these pathologies.

### **Materials & Methods:**

DERMACLEAR is a multicentre, national, and retrospective study. The electronic medical records (EMRs) of patients with HS, CU, PsO, and AD, treated at 7 centres in Spain from 2016-2021, were reviewed and processed using an Artificial Intelligence (AI)-based analysis. Patient characteristics, age at death and cause of death were collected.

# **Results:**

A total of 49,779 patients with CIDs were identified at Dermatology services during the study period, 8.3% had HS, 13.4% CU, 58.8% PsO, and 19.6% AD. Mean age was 53 years (y), 57% were women, and mean BMI was 29kg/m2. At database lock, 11.2% of patients had died with a mean age of 75 y (Table 1). The National Institute of Statistics (INE) estimated life expectancy at birth in Spain was around 83 y (except for 2020, when COVID-19 lowered it by 1.5 y). Based on these data patients with these 4 pathologies who died had a life expectancy at least 8 y lower than the general Spanish population. A comparison of pathologies showed that HS patients died considerably younger: mean age of death for HS was 63 y, 76 for UC, 76 for PsO, and 75 for AD. However, PsO was the pathology with the highest mortality rate (13.4%) (Table 1). Deaths were mainly caused by cardiovascular diseases (34.7%). INE reported that diseases of the circulatory system were also the leading cause of death in Spain between 2016- 2021. During 2016-2019, cancer and respiratory diseases were the 2nd and 3rd leading causes of death. In 2020-2021, infectious/parasitic diseases (COVID-19) were the 3rd leading cause of death, and respiratory diseases were the 4th (Figure 1). However, we found that cancer, chronic lower respiratory diseases and COVID-19 accounted for 2.0%, 2.9% and 1.2%, of deaths respectively (Table 1).

Further studies are needed to explore whether CIDs represent an independent risk factor for premature death, or whether heavy smoking (37.6%), obesity (35.3%), and other comorbidities can fully explain our results.

### **Conclusion:**

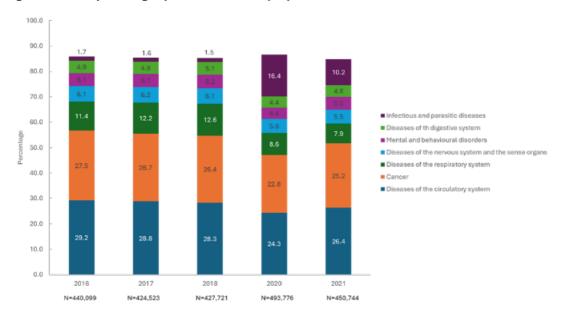
AI tools that use natural language recognition allow the collection and processing of enormous amount of data. The heterogeneity of the EMRs may, however, affect the results extracted. DERMACLEAR allows, for the first time, the study of mortality rates and causes of death for almost 50,000 patients with these 4 pathologies from 7 dermatology services in Spain. Achieving homogeneous data in future AI research studies requires careful data entry into patients' EMRs.

Table 1. Characteristics of death patients

	HS	CU	PsO	AD	All subjects
	N=4124	N=6660	N=29262	N=9733	N=49779
Deceased patients, n (%)	434 (10.5)	549 (8.2)	3932 (13.4)	665 (6.8)	5580 (11.2)
Age (years) at death, mean (SD)	63.3 (13.4)	76.0 (14.8)	75.7 (13.3)	75.0 (15.0)	75.0 (13.9)
Cause Of Death, n (%)					
Heart disease	192 (44.2)	195 (35.5)	192 (44.2)	249 (37.4%)	1939 (34.7)
Hypertension	76 (17.5)	127 (23.1)	76 (17.5)	112 (16.8)	1124(20.1)
Septicemia	13 (3.0)	19 (3.5)	13 (3.0)	22 (3.3)	229 (4.1)
Nephritis, nephrosis, or nephrotic syndrome	9 (2.1)	27 (4.9)	9 (2.1)	23 (3.5)	229 (4.1)
Chronic lower respiratory tract disease	13 (3.0)	21 (3.8)	13 (3.0)	36 (5.4)	163 (2.9)
Cancer	9 (2.1)	14 (2.6)	9 (2.1)	15 (2.3)	113 (2.0)
Pneumonia	7 (1.6)	8 (1.5)	7 (1.6)	6 (0.9)	103 (1.8)
Chronic liver disease and cirrhosis	10 (2.3)	6 (1.1)	10 (2.3)	10 (1.5)	100 (1.8)
Suicide	9 (2.1)	11 (2.0)	9 (2.1)	11 (1.7)	98 (1.8)
Unintentional accident	15 (3.5)	3 (0.5)	15 (3.5)	8 (1.2)	72 (1.3)
COVID19	4 (0.9)	6 (1.1)	4 (0.9)	13 (2.0)	66 (1.2)
Diabetes mellitus	5 (1.2)	11 (2.0)	5 (1.2)	8 (1.2)	42 (0.8%)
Parkinson disease	2 (0.5)	3 (0.5)	2 (0.5)	7 (1.1)	40 (0.7)
Cerebrovascular disease	1 (0.2)	6 (1.1)	1 (0.2)	3 (0.5)	37 (0.7)
Intestinal vascular disease	3 (0.7)	1 (0.2)	3 (0.7)	7 (1.1)	35 (0.6)
Influenza	2 (0.5)	3 (0.5)	2 (0.5)	2 (0.3)	15 (0.3)
Alzheimer's disease	2 (0.5)	2 (0.4)	2 (0.5)	1 (0.2)	12 (0.2)
Unknown/not specified	62 (14.3)	86 (15.7)	62 (14.3)	132 (19.8)	1163 (20.8)

AD, atopic dermatitis, CU, chronic urticaria; HS, hidradenitis suppurativa; PsO, psoriasis; SD, standard deviation

Figure 1. Deaths by disease group\*. Years 2016-2021\* (INE)



\*Diseases that caused 25% of deaths during the study period have been included \*Data for year 2019 are not available INE, Instituto Nacional de Estadística

# Dupilumab Provides Rapid and Continuous Improvement in Prurigo Nodularis Signs and Symptoms Over Time: Results From PRIME/PRIME2

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**Introduction & Objectives:** Dupilumab has demonstrated efficacy in the improvement of prurigo nodularis (PN) signs and symptoms in adults. However, it is important to understand the patterns of itch and lesion improvement as disease response can change over the course of treatment. The current study evaluated the disease response over 24 weeks of dupilumab treatment in the PRIME/PRIME2 studies.

**Materials & Methods:** LIBERTY-PN PRIME (NCT04183335) and PRIME2 (NCT04202679) are randomized, double-blind, 24-week, phase 3 trials of dupilumab in adult patients with moderate-to-severe PN. Patients were randomized to receive 300 mg dupilumab (n = 153) or matched placebo (n = 158) every 2 weeks for 24 weeks. In this analysis, patients were assessed for a 75% improvement in prurigo activity score (PAS-75) and an Investigator's Global Assessment score for PN Stage of 0 or 1 (IGA PN-S) at Weeks 4, 8, 12, and 24, and 4-point improvement in Worst Itch Numerical Rating Scale (WI-NRS) every week for 24 weeks. All reported p-values are nominal and no adjustments were made for multiple testing.

**Results:** In the 311 patients evaluated, rapid and significant improvements were seen in patients receiving dupilumab vs placebo as early as Week 4 in the proportion of patients achieving PAS-75 (15% vs 7%;  $P \le 0.05$ ) and Week 2 in 4-point improvement in WI-NRS (8% vs 2%;  $P \le 0.05$ ). Numerical improvements were also seen in the proportion of patients achieving an IGA PN-S of 0/1 at Week 4 (9% vs 5%; ns). The proportion of patients achieving these improvements continually increased over time from Weeks 12 (PAS-75 [43% vs 18%;  $P \le 0.0001$ ], WI-NRS [43% vs 23%;  $P \le 0.001$ ], and IGA PN-S of 0/1 [30% vs 14%; $P \le 0.001$ ]) to Week 24 (PAS-75 [64% vs 26%;  $P \le 0.0001$ ], WI-NRS [65% vs 31%;  $P \le 0.0001$ ], and IGA PN-S of 0/1 [50% vs 23%; $P \le 0.0001$ ]). Overall safety was generally consistent with the known safety profile of dupilumab.

**Conclusion:** Dupilumab treatment resulted in rapid and continuous improvements in signs and symptoms, for up to 24 weeks, indicating the importance of treatment persistence to benefit from the consistent improvements reported over time.

## A rare case of neutrophilic figurate erythema in an adult and a literature review

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## **Introduction & Objectives:**

Neutrophilic figurate erythema (NFE) is a rare benign inflammatory disease that is characterized by an annular rash on the trunk or limbs with primarily neutrophil infiltrate but absence of signs of vasculitis on histopathology. It is more common in female patients with ages ranging from 21 to 79 years. Here we reported a middle-aged woman with a recurrent annular and arciform erythema for more than 30 years.

### **Materials & Methods:**

### **Results:**

A 52-year-old woman presented with recurrent erythema persisting for over 30 years, accompanied by itching. Lesional pain, fever, joint pain, or diarrhea were denied. Previous diagnoses included erythema multiforme and mycosis fungoides prior to her consultation with us. The skin rashes are waxing and waning. She underwent surgery for a gastric stromal tumor three years ago with an otherwise unremarkable medical history. Physical examination revealed edematous papules, plaques, and erythema distributed across the trunk and extremities, varying in size and partially merging with targetoid, arciform, and round configurations. No tenderness was found. Scratching marks, scales, and pigmentation were noted.

Laboratory tests of the blood were positive for herpes simplex virus (HSV) types 1 and 2, both IgM and IgG. ANA was detected at a titer of 1:100. Chest computed tomography showed a solid nodule with a size of 2.2×1.8cm. A gastrointestinal endoscopy did not reveal any abnormalities. Skin histopathology revealed mild epidermal hyperkeratosis with multifocal parakeratosis, partial spongiosis in the spinous layer, numerous neutrophils, and a few to moderate lymphocytes around small blood vessels in the superficial to mid-dermis, with no evidence of vessel wall involvement. Eosinophils were sparse. Based on the medical history and the laboratory findings, a diagnosis of NFE was established, and treatment with thiamphenicol and famciclovir was initiated.

Skin lesions are typically distributed on the extremities and trunk in adults, while infants may also have facial involvement. Both adults and infants present with multiple, annular, polycyclic, or arciform skin lesions, with scales adherent to the lesions being commonly observed in adults yet notably absent in infants. Adults seem to experience more itching and pain than infants. Generally, histopathological results reveal absent epidermal changes in infants, whereas adults may present with spongiosis and parakeratosis. Mixed inflammatory cell infiltrates within the dermis are observed in both groups. However, as compared to infants, adults are more likely to have extravasation of red blood cells and dermal papillary edema. According to our study, the number of lesions might not be the only difference between adults and infants.

### **Conclusion:**

NFE is a rare condition that should be differentiated from centrifugal erythema and other neutrophilic dermatoses like sweet syndrome, urticarial vasculitis, and so on. A thorough physical examination, laboratory screening, and histopathology are vital for diagnosing NFE. The chronic course and recurrent features of the disease result in atypical lesional manifestations during flare-ups and remission periods, emphasizing the significance of long-term

and meticulous follow-up.

## A case report of telangiectasia macularis eruptiva perstans

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### **Introduction:**

Telangiectasia macularis eruptiva perstans (TMEP) is a rare form of mastocytosis. The typical lesions are telangiectatic macules with background color ranging from light to dark brown. TMEP is more frequently in adults, although there are reports of cases affecting children.

### **Case report:**

A 46-year-old man presented with asymptomatic cutaneous lesions. He stated that the skin lesions evolved over a period of two year. He denied any symptoms. Physical examination revealed small erythematous macules with telangiectasia on the surface measuring about 0.5-1 cm located in the back, chest, arms and thighs. They became slightly papular and redder upon friction, alcohol drink and hot exposure. There was no hepatosplenomegaly and palpable lymph nodes. The laboratory tests, which included complete blood count, blood glucose, HbA1c, serum creatinin and liver function tests, were all within normal limits. Dermoscopy of the skin lesion shows branching vessels that forms a reticular pattern and white dots encircled by the branching vessels.

### **Conclusion:**

Although insidious and without symptoms at the beginning, TMEP is a rare form of mastocytosis seen typically in adults. Dermatologists must be aware of this condition, so the diagnosis can be made at an early stage, improving the patient's quality of life.

### Granuloma annulare and nasolacrimal duct obstruction

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Granuloma annulare (GA) is a common, benign, inflammatory skin disease of unknown etiology. Typically, it is clinically characterized by papular lesions, usually distributed in ring-shaped configurations. GA most commonly occurs on the extremities, infrequently on the scalp and rarely in the periorbital region.

Histologically, the findings correspond to a necrobiotic granuloma, surrounded commonly by a radial arrangement of infiltrated lymphocytes and histocytes.

Most cases resolve spontaneously and do not cause any complications.

Nasolacrimal duct obstruction (NLDO) is a blockage of the lacrimal drainage system. NLDO can be unilateral or bilateral, congenital or acquired. Causes of secondary acquired NLDO include infectious, inflammatory, neoplastic, traumatic and mechanical disorders.

The most common symptom of NLDO is the uncontrolled tears overflow (epiphora).

A 22-year-old man presented with an arciform plaque measuring 5 cm in diameter in the left preauricular area and slightly hyperpigmented annular plague 2 cm in diameter near inner canthus of left orbit for 2 years. A punch biopsy was done on his preauricular lesion.

A biopsy specimen showed a palisading infiltration of histiocytes and lymphocytes around and between altered collagen fibres in the dermis. Giant cells were also observed. Based on these findings, he was diagnosed with GA.

At the next visit, the patient reported excessive tearing from the left eye for the past year. The patient was referred for consultation to the ophthalmologist.

Unilateral NLDO was diagnosed. Ophthalmologists were unable to identify any possible known causes of NLDO in this patient.

The patient was prescribed a course of topical steroids followed dacryocystorhinostomy.

We did not find any cases of a coexistence of GA and NLDO in the available resources. We believe that knowledge of this possible combination will be useful for both dermatologists and ophthalmologists.

# elafin level in cutaneous lichen planus

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# Elafin level in cutaneous lichen planus

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# **Introduction & Objectives:**

Lichen planus (LP) is a chronic, inflammatory, autoimmune disease that affects the skin, oral mucosa, genital mucosa.

Elafin is an epithelial host-defense protein that is absent in normal skin but highly expressed in keratinocytes of inflamed skin. Overexpression of Elafin has been reported in various infective, inflammatory and malignant skin disorders, as cellulitis, psoriasis, Behçet's syndrome, graft versus host disease.

The aim of this study is to investigate the role of Elafin in LP pathogenesis

### Materials & Methods:

This case control study included thirty LP patients and thirty healthy controls. 10 cc blood samples were withdrawn from study participants to serum level of Elafin using enzyme-linked immunosorbent assay (ELISA) technique.

**Results:** Serum Elafin level was significantly higher in LP patients as compared to healthy controls; the mean level values were (32.56 vs. 5.60) in LP cases and healthy controls respectively with a statistically significant p-value < 0.001. Serum Elafin level showed non-statistically significant association with participants' age, gender, disease duration or family history.

Conclusion: Elafin could be part of the inflammatory autoimmune pathogenesis of LP

## **Progress of Exosomes in Allergic Skin Diseases**

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## **Progress of Exosomes in Allergic Skin Diseases**

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[Abstract] Allergic skin diseases refer to a group of chronic inflammatory skin diseases in which the body exhibits an excessive immune response and tissue and organ damage after exposure to allergens. Due to the complex etiology, frequent relapses, and difficulties in treatment, clinicians are urgently seeking solutions to this problem. Extracellular vesicles are nanoscale vesicles that are released by different cells and found in different bodily fluids. They can transport proteins, lipids, and nucleic acids from secreting cells to recipient cells, taking part in immune response, apoptosis, cell proliferation, and cell-cell communication. dermatitis, and drug eruptions, with the goal of developing new treatment approaches for research on allergic skin diseases. Extracellular vesicles may be involved in the pathogenic processes of many allergic skin disorders and could be targets for therapeutic intervention, according to mounting data. With the goal of offering new therapeutic approaches for allergic skin disease research, this article addresses the pathogenic mechanisms of extracellular vesicles and their possible therapeutic roles in common allergic skin diseases like atopic dermatitis, chronic spontaneous urticaria, allergic contact dermatitis, and drug eruptions.

[Keywords] Exosomes; Allergic skin diseases; Atopic dermatitis; Urticaria; Contact dermatitis; Drug eruption

### **Sarcoidosis Linked to Cosmetic Fillers**

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# **Introduction & Objectives:**

Filler injections, widely used in aesthetic medicine, currently favor hyaluronic acid derivatives for their satisfactory results in reducing wrinkles, enhancing lips, and treating scars. They are still known for their low risk of serious adverse effects, ensured by their biocompatibility and biodegradability. However, it is essential to recognize that various complications can occur following these injections.

### **Materials & Methods:**

We report a case of cutaneous sarcoidosis induced by filler products.

## **Results:**

A 55-year-old female, without any particular medical history, consulted us for the appearance of asymptomatic subcutaneous nodules on the face evolving for 2 months. The patient reported having received mesotherapy a year ago. However, she underwent hyaluronic acid injections for filling under-eye circles and nasolabial folds, 3 weeks before the onset of symptoms. Dermatological examination revealed the presence of millimeter-sized subcutaneous nodules, firm and painless, arranged linearly on the forehead, lower eyelids, nasolabial fold, and peribuccal region. A skin biopsy was performed, revealing non-necrotizing granulomatous inflammation consistent with the diagnosis of sarcoidosis.

### **Conclusion:**

Filler injections are becoming increasingly popular for aesthetic purposes. However, all injectable products used as dermal fillers can lead to foreign body granuloma formation, with an incidence ranging from 0.01 to 1.0%. Granulomas can occur at any time, from 6 months to several years after injection. Although hyaluronic acid is generally considered safe and biocompatible, inflammatory reactions can occur, especially with overcorrection, injection into a sensitive anatomical area, or in patients predisposed to inflammatory reactions. The pathophysiology of granulomatous complications post-injections is complex and involves several mechanisms. Among them, the cellular immune response plays a key role, with activation of T lymphocytes and macrophages in response to filler product fragments. This activation can lead to the formation of granulomas and chronic inflammation. Regarding cases of post-filler cutaneous sarcoidosis, a few cases have been reported in the literature. The association between sarcoidosis and filler injections is still poorly understood, but it is postulated that injected products may trigger an inflammatory response resulting in sarcoid granuloma formation in genetically predisposed individuals. In our case, the patient presented with cutaneous sarcoidosis with non-necrotizing granulomas in the peribuccal area after injections in the nasolabial folds. This observation raises questions about the relationship between aesthetic injections and the development of cutaneous sarcoidosis, as well as the underlying mechanisms of this association.

The discussion of granulomatous complications of hyaluronic acid injections, particularly post-filler cutaneous

sarcoidosis, is an important topic to explore in the context of aesthetic medicine. Once informed written consent is obtained, careful evaluation of medical history and close monitoring of patients after similar aesthetic procedures are essential for appropriate management of potential complications.

# Lichen Planus Pigmentosus Successfully Treated with Roflumilast Cream 0.3%

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### Introduction:

Lichen planus pigmentosus is a rare variant of lichen planus with uncertain etiology1. The pathophysiology of lichen planus pigmentosus is thought to be immune mediated with CD4+ and CD8+ cells causing destruction of keratinocytes2 and presents as round or oval, dark brown, gray, or blue-gray macules and patches symmetrically located on sun- exposed areas1. Treatments for lichen planus pigmentosus include topical corticosteroids, topical calcineurin inhibitors, oral corticosteroids, tranexamic acid and isotretinoin1. Roflumilast 0.3% cream is a potent topical phosphodiesterase (PDE4) inhibitor approved in 2022 by the FDA for the treatment of psoriasis including intertriginous disease and in 2023 as a foam formulation for the treatment of seborrheic dermatitis. Roflumilast is more potent than apremilast and crisaborole, with roflumilast more closely mimicking the three key binding sites of cAMP to PDE43,4. We report a case of lichen planus pigmentosus that was pruritic and refractory to topical corticosteroids and topical tacrolimus. Once daily treatment with roflumilast cream 0.3% resulted in marked improvement in symptoms and disease presentation.

## Materials & Methods:

A 36-year-old male patient presented to clinic with a several year history of a pruritic rash on the medial thighs consistent with lichen planus pigmentosus. Upon examination, there were several round, hyperpigmented brown, gray macules and papules. Prior treatments, including clobetasol, were ineffective. A punch biopsy was performed and confirmed lichen planus pigmentosus. Upon diagnosis, the patient was started on tacrolimus 0.1% ointment twice daily. At 3-month follow up, there was no improvement. The patient initiated roflumilast 0.3% cream once daily. Further steroid use was not advised due to the location and risk of atrophy, stria, and infection.

### **Results:**

After 3-months of roflumilast 0.3% once daily, the patient returned to clinic reporting a reduction of pruritus. Upon examination, there were irregular round and oval shaped hyperpigmented light brown and gray macules and papules on the bilateral medial thighs. The patient elected to continue roflumilast 0.3% once daily since symptoms had resolved. After 3 more months, the patient returned to clinic reporting improvement in the lesions. There was a reduction in lesion number with some remaining faint light brown macules. The patient was very pleased and will continue roflumilast as needed.

## **Conclusion:**

This case report of a 36-year-old male with lichen planus pigmentosus refractory to topical corticosteroids and tacrolimus ointment was successfully treated with topical roflumilast 0.3% cream once daily resulting in resolution of pruritus and normalization of skin pigmentation. These results suggest that roflumilast cream 0.3% can be a safe and well tolerated treatment option for patients with lichen planus pigmentosus who warrant the needed for alternative treatments. Further clinical evaluation is necessary to evaluate topical roflumilast cream 0.3% as a potential treatment option for lichen planus pigmentosus.

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## Assessment of PD-1 and PD-L1 tissue expression levels in lichen planus patients: a case-control study.

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**Introduction & Objectives:** Programmed cell death protein-1 (PD-1) is an immune checkpoint protein, PD-1 interaction with PD ligand-1 (PD-L1) is essential for maintaining immunological tolerance. The study aimed to study and compare the levels of PD-1 and PD-L1 in lesional and nonlesional skin of lichen planus (LP) patients and compare these levels to normal healthy controls to assess their role in the pathogenesis of LP.

**Materials & Methods:** This case-control study involved 30 patients with LP and 30 healthy age- and sex-matched controls. After clinical assessment of the severity by LP severity index score (LPSI), skin biopsies were taken from lesional and nonlesional skin of LP patients and from normal skin in healthy controls for assessment of the tissue levels of PD-1 and PD-L1 by ELISA.

**Results:** The tissue levels of both PD-1 and PD-L1 were significantly higher in healthy controls than in both lesional and nonlesional skin of LP patients (P<0.001). Also, significantly higher PD-I and PD-L1 levels in nonlesional skin than in lesional skin of LP patients were reported (P<0.001). No significant correlations were found between lesional and nonlesional PD-1, PD-L1 levels, or LPSI score.

**Conclusion:** Based on the fact that PD-1/PD-L1 interaction is important to maintain tolerance and protection against autoimmune diseases, in addition to our study results that revealed lower levels of PD-1/PD-L1 in LP skin than in healthy skin, we can conclude that PD-1/PDL-1 may be incriminated in the pathogenesis of LP.

## Asymptomatic fine wrinkled dermatosis in a man

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# **Introduction & Objectives:**

### Materials & Methods:

#### **Results:**

Mid-dermal elastolysis (MDE) is a rare acquired elastic tissue disorder presenting challenges in diagnosis and treatment.

We present a case of a 60-year-old man who presented to the dermatology consult with a dermatosis that started on his trunk and had gradually expanded to his proximal upper limbs over 10 years. His past medical history included factor V Leiden mutation, a pulmonary embolism 7 years ago, a myocardial infarction 30 years before, and fibromyalgia. Despite no pruritus or pain, he expressed dissatisfaction with his skin's appearance. Various treatments, such as emollients with urea, topical corticosteroids, prednisolone, and oral fluconazole, were ineffective throughout the years. On physical examination, symmetrical erythematous patches of fine wrinkles on his trunk and proximal arms were seen. Histopathologic examination of a biopsy done on his dorsum with H&E staining was unremarkable. Orcein staining showed a focal loss of elastic fibers in the mid-dermis. A diagnosis of MDE type III was made. Tretinoin cream 0.5mg/g for 2 months was tried with minor improvement; there was no dermatosis progression, yet the patches' wrinkled appearance remained unchanged.

MDE is limited to the skin and has no systemic involvement, although it is associated with numerous concomitant or preceding diseases, particularly autoimmune disorders. The precise pathophysiology of MDE has yet to be understood entirely. It involves an enhanced elastolytic activity and a decrease in elastic fiber renewal. Triggers for this enhanced elastolytic activity are not fully comprehended and may include genetic background, chronic inflammation, and autoimmunity.

On physical examination, symmetrically distributed patches of well-circumscribed fine wrinkles (type I), perifollicular papular protrusions (type II), or persistent reticular erythema and wrinkling (type III) can be found on the trunk and proximal limbs. Although MDE is generally more common in middle-aged women, type III, like in our case, is more common in older males (>50 years).

Histopathologic examination with elastica stains is pathognomonic, revealing a band-like or focal loss of elastic fibers in the mid-dermis, with sparing of papillary and deeper reticular dermis and around the appendages. MDE belongs to the group of "invisible" dermatoses to the dermatopathologist, with no significant changes in H&E staining. Clinicopathological correlation is essential to perform additional elastica stains that allow the diagnosis of this disease.

Differential diagnoses include anetoderma, cutis laxa, pseudoxanthoma elasticum-like papillary dermal elastolysis, and annular elastolytic giant cell granuloma.

Treatment is challenging since, so far, no treatment allows complete recovery of the lost elastic tissue. UV radiation is thought to play a role in the pathogenesis of MDE; therefore, sun protection is recommended. Various topical and systemic treatments have been attempted, including corticosteroids (topical and systemic), tretinoin,

hydroxychloroquine, vitamin E, clofazimine, colchicine, dapsone, and mycophenolate mofetil, with modest improvement reported.

This case highlights a case of mid-dermal elastolysis in a 60-year-old man, highlighting the diagnostic challenges and treatment attempts over ten years. It also stresses the importance of clinicopathological correlation for accurate diagnosis.

# **Conclusion:**

## Psoriasis of the lips: an unusual localization

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## **Introduction & Objectives:**

Psoriasis, a chronic inflammatory dermatosis, affects 1–3% of the population and is influenced by genetic, immunological, and environmental factors. While commonly found in areas of friction like elbows, knees, and the scalp, diagnosing psoriasis can be challenging, especially in rare locations like the lips. We report a case of lip psoriasis in a 37-year-old man.

### **Materials & Methods:**

A 37-year-old man presented with a 2-year history of scaling and cracking of the lips. The lesions eventually involved both lips completely, but the surrounding skin remained uninvolved during this period. The patient reported burning sensations and pain, especially during eating and when exposed to cold. There was no personal or family history of psoriasis or any other dermatological conditions, and no history of smoking. Dermatological examination revealed erythema, silvery scales, and fissuring on both lips. Additionally, erythematous plaques with desquamation were present on the hands for about 2 months. A skin biopsy revealed epidermal hyperplasia, elongation and fusion of rete ridges, and hyperkeratosis, confirming psoriasis. Treatment involved hydrocortisone aceponate for cheilitis and topical steroids with salicylic acid for hand lesions, resulting in significant improvement at the 15-day follow-up.

### **Results:**

The presented case highlights the rare manifestation of psoriasis involving the lips, a site uncommonly affected by this chronic inflammatory dermatosis. Typically, psoriasis primarily affects areas of friction, such as the elbows, knees, scalp, and nails, with involvement of the lips being infrequent. Lip psoriasis often presents with scaling, cracking, and fissuring, accompanied by discomfort such as burning sensations and pain, particularly during activities like eating or exposure to cold temperatures. The absence of predisposing factors suggests a primary presentation. Actinic dermatitis, cheilitis, chronic candidiasis, chronic eczema and leucoplakia can all be confused with perioral psoriasis. Clinical examination and histopathological findings supported the diagnosis of psoriasis. In this case, hydrocortisone aceponate was utilized for cheilitis, along with topical steroids and salicylic acid for the hand lesions. The observed improvement at the 15-day follow-up underscores the effectiveness of the chosen treatment regimen in alleviating symptoms and resolving lesions.

### **Conclusion:**

Psoriasis of the lips is a rare manifestation, posing diagnostic challenges due to its infrequent occurrence and atypical location. Clinicians should consider psoriasis in lip lesions, especially without clear predisposing factors. Early recognition and appropriate management are crucial for favorable outcomes. Further research is needed to enhance understanding and management strategies for this uncommon manifestation of psoriasis.

Study of the proportion and characteristics of patients with hidradenitis suppurativa, chronic urticaria, psoriasis and atopic dermatitis in tertiary hospitals in Spain, based on big data technology: DERMACLEAR study.

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## **Introduction & Objectives:**

Hidradenitis suppurativa (HS), chronic urticaria (CU), psoriasis (PsO), and atopic dermatitis (AD) are recurrent cutaneous immunological diseases that require long-term clinical management. These pathologies are associated with high morbidity and compromise the patients' quality of life. Early diagnosis, management, and effective treatment are crucial. The aim of this study is to provide an overview of the proportion, and the clinical and demographic characteristics in patients with at least one dermatologic visit attended in 7 tertiary hospitals in clinical practice in Spain.

### **Materials & Methods:**

DERMACLEAR is a multicentre, national, and retrospective study. The electronic medical records (EMRs) of patients with HS, CU, PsO, or AD, with at least one registered visit to 7 centres in Spain from 2016 to 2021, were processed using an Artificial Intelligence (AI)-based analysis using machine learning and Natural Language Processing. The demographic and clinical characteristics of patients were collected.

### **Results:**

We analysed those patients diagnosed with one of the 4 study pathologies, treated in Dermatology or other departments of the participating centres. Of 49779 patients identified, 8.3% (n=4124) had HS, 13.4% (n=6660) CU, 58.8% (n=29262) PsO, and 19.6% (n=9733) AD. The mean age was 52.9±19.4 years (range: 18-105 years), and 56.5% were women. In those patients for whom information could be extracted (N=434), the mean BMI was 29.0±7.5 kg/m2. According to data detailed in the EMRs and extracted by the AI, almost 70% of patients suffered or had suffered from concomitant infections and infestations, and respiratory disorders were recorded in 59.1%. During the 6-year study, the mean number of visits to medical services was 20.1±24.7, 19.8±21.7, 23.1±25.1 and 14.3±17 in patients with HS, CU, PsO and AD, respectively. At the database lock, 11.2% of patients had died, mainly due to cardiovascular disease (34.7%).

### Conclusion:

The use of AI tools based on natural language recognition allows the collection and processing of an enormous amount of data. However, the heterogeneity of the medical records poses limitations that may condition the results extracted. The DERMACLEAR study allows, for the first time, to study the burden of these 4 pathologies in

almost 50000 patients from 7 Spanish centres. Our results highlight the importance of carefully entering information into patients' EMRs to obtain homogeneous data and ensure quality AI research studies in the future.

# Generalized Morphea and Extragenital Lichen Sclerosus et Atrophicus Overlap Syndrome: A Rare Finding in an Elderly Patient

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# **Introduction & Objectives:**

Extragenital lichen sclerosus et atrophicus (LSA) is an uncommon disease, and its coexistence with morphea has been reported but remains even rarer. It is speculated that the two diseases share a pathogenic mechanism, although their etiology remains uncertain.

We report a very uncommon case of rapidly progressing, multiple disseminated scleroatrophic cutaneous lesions, histopathologically and clinically demonstrating an overlap between LSA and morphea. We discuss the course of this case, its possible etiologic factors, and its response to treatment as a contribution towards better understanding the pathogenic mechanism and potential therapeutic targets of these two diseases.

### **Case Presentation:**

A 71-year-old woman presented with painless and non-itchy sclerodermiform plaques that developed over three months, starting as erythematous patches on her leg and progressing to her thighs, trunk, and upper extremities. She had no personal or family history of skin/autoimmune disorders, trauma, infection, or toxic exposure. The patient began new oral medications for mild cognitive impairment three months before noticing the eruption: a neuropeptide and calf blood protein-free dialysate. Dermatological examination revealed a widespread eruption characterized by flat, slightly scaly, porcelain-white patches with keratin plugs, sclerosis and atrophy, some merging into extensive plaques. Linear lesions in certain areas exhibited the Koebner phenomenon. Genital lesions were asymptomatic and unknown to the patient, predominantly smooth-whitish plaques with loss of labia minora. Despite widespread skin lesions, laboratory tests and imaging were normal. Histopathology confirmed LSA-morphea overlap. Treatment included a two-month course of oral methylprednisolone and methotrexate, NB-UVB phototherapy, physiotherapy, and topical agents such as corticosteroids and vitamin D analogs. At a ten-month follow-up, the outcome was remarkably positive, with most existing lesions completely disappeared, those remaining showing a significant decrease in both consistency and size, and no new lesions were observed.

### Conclusion:

Morphea and LSA typically manifest in middle age, with LSA commonly affecting the genital area and causing significant symptoms. In rare cases of extragenital involvement, the neck and shoulders are often most affected. A study showed that 38% of 76 patients with morphea also had genital LSA, but the true prevalence of the overlap syndrome with both LSA manifestations remains unknown.

Here, we describe a rare case of widespread extragenital LSA overlapped with morphea, with the particularities of late onset after the age of 70, absence of genital symptoms, widespread disease with a predominance of abdominal skin involvement, rapid progression over several months, no underlying disease, and a spectacular

improvement with mainly external therapy. Regarding etiology, an inductive role of alloprotein drugs could be speculated.

# A Cross-Sectional Study of Epidemiological and Clinical Aspects of Pityriasis Rosea along with Dermoscopic Analysis and Histopathology Correlation

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# **Introduction & Objectives:**

Pityriasis Rosea (PR) is a common, yet enigmatic, dermatological condition characterized by a distinctive clinical presentation. Despite its prevalence, the aetiology and pathogenesis of PR remain elusive. We aim to study the epidemiological and clinical aspects of patients with PR, study dermoscopic findings and carry out histopathological correlation.

### **Materials & Methods:**

A cross-sectional study of 50 patients was conducted. A detailed clinical history was taken and an examination was done followed by a dermoscopy. Quantitative data like age and duration of disease are presented with the help of standard deviation. Qualitative risk factors, like gender, age groups, symptomatology, site of lesion, findings or cutaneous examination, dermoscopy findings, and histopathology findings, are presented with the help of frequency and percentages.

## Results:

PR shows male preponderance and mean age of occurrence being  $30.8 \pm 15.7$  years. Forty percent of patients had an atypical clinical presentation. The most frequently seen dermoscopy findings were diffuse red background (58%), peripheral collarette scale (62%), and peripheral dotted vessels (50%). On histopathology, the most common findings were spongiosis (44%), parakeratosis (38%), irregular acanthosis (34%), perivascular lymphocytic infiltrate (56%), and red blood cell extravasation (36%).

# **Conclusion:**

While the diagnosis of PR is clinical, it is difficult in atypical cases where dermoscopy comes to the aid. It also helps identify the age of lesions, thus helping decide the treatment strategy for patients. Biopsy remains the gold standard in ruling out other differentials of PR.

atypically afebrile gomm-button disease provoked by bbv152 (covaxin) sars-cov-2 vaccination.

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# **Introduction & Objectives:**

The aim of this presentation is to highlight the case of atypical afebrile Gomm-Button disease ( Sweet's syndrome ) provoked by BBV152 COVAXIN vaccination against SARS-CoV-2.

To the best of our knowledge, this is the third case of Gomm-Button disease provoked by this specific vaccine. What is more, painful nodular erythema and ulcers with no presenting pyrexia or constitutional symptoms, made it very challenging to establish the diagnosis. Classic Gomm-Button disease ( Sweet's syndrome ) or acute febrile neutrophilic dermatosis, is an uncommon inflammatory disease that typically presents with acute onset painful skin, edematous erythematous papules, plaques and nodules, often accompanied by fever, leukocytosis.

**Materials & Methods:** A 58 year old female without any concomitant diseases presented with painful nodular erythema and ulcers on the face, forearms and thighs, with no fever > 38C. Through examination of the medical history of the patient led to the conclusion that the disease was triggered by vaccination taken 7 days prior to the first symptom.

### **Results:**

Histopathology displayed dense neutrophilic infiltrate in the upper dermis and Non-Granulomatous panniculitis, thus confirming Gomm-Button disease. ESR was normal. CRP was elevated.

Patient was treated with Oral Corticosteroids, colchicine and doxycycline. After 6 days of treatment, there was spectacular improvement in terms of both signs and symptoms, which additionally confirmed the diagnosis.

## **Conclusion:**

It emphasizes the need for sharing the knowledge and experience on the subject of Gomm-Button disease, its variable and atypical clinical manifestations and the possible provoking factors and underlying causes to facilitate prompt daignosis and introduction of appropriate treatment.

## An illustrative case of Sweet syndrome with severe neurological manifestation

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# **Introduction & Objectives:**

We describe a case of a 27 year old male with Sweet syndrome with the rare neurological manifestation of Neuro-Sweet disease.

#### Materials & Methods:

N.A

### **Results:**

A 27 year old male with no significant past medical history was admitted to our tertiary hospital for multi-system inflammatory symptoms. This included constellation of bilateral symmetrical inflammatory arthritis, oral ulcers, lymphopenia, anemia, cervical lymphoadenopathy, transaminitis, fever and alopecia. He also presented with acute onset of indurated erythematous dermal plaques over the face and lips which our Dermatology team was consulted for. Skin biopsy revealed diffuse dermal infiltrate of neutrophils consistent with Sweet syndrome. He subsequently developed altered mental status and was found to have subacute onset meningoencephalitis with raised intracranial pressures, cerebrospinal fluid lymphocytic pleocytosis and T2/FLAIR hyperintensities in bilateral mesial temporal lobes, pons and left basal ganglia. Infective work-up was all negative and he was treated as Neuro-Sweet disease with excellent response to corticosteroids.

### **Conclusion:**

We are presenting this case of Sweet syndrome with its rare neurological manifestation to bring about awareness to the multi-systemic involvement that this neutrophilic dermatosis could present with.

## Occurrence of pyoderma gangrenosum during tocilizumab treatment in a patient with rheumatoid arthritis

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### Introduction:

Pyoderma gangrenosum (PG) is a rare neutrophilic dermatosis, classically presenting with one or multiple aseptic skin ulcers. It is commonly associated with inflammatory digestive or rheumatological diseases. We report a case of PG that occurred during treatment with tocilizumab for rheumatoid arthritis.

### Case presentation:

A 69-year-old woman with a history of pulmonary fibrosis on 10 mg/day of corticosteroids and seropositive rheumatoid arthritis diagnosed 4 years ago, in remission following treatment with an anti-IL-6 agent tocilizumab at a dose of 8 mg/kg every 4 weeks. Ten months after the introduction of the biologic therapy, the patient developed a 3 cm diameter ulceration on the right leg with raised inflammatory borders. Bacteriological samples were negative. Laboratory tests were normal. Histopathological examination confirmed pyoderma gangrenosum, showing a neutrophilic dermal infiltrate. Tocilizumab was temporarily discontinued, and the patient was treated with topical corticosteroids and healing dressings. Complete epithelialization of the ulceration was achieved after 6 weeks.

# **Discussion:**

Biologic treatments are used in managing refractory forms of PG. However, in very rare cases, they may be responsible for the onset of this condition. The most implicated molecules are anti-TNF-alpha agents. The time between the initiation of treatment and the development of PG varies, from a few weeks to several months. The pathophysiological mechanisms of this paradoxical reaction are poorly understood, although an imbalance in the pro- and anti-inflammatory balance in favour of inflammatory cytokines appears to play a predominant role.

Tocilizumab, a humanised antibody directed against the IL-6 receptor, has been implicated in a few paradoxical psoriasiform reactions. To our knowledge, only one case of PG with this biotherapy has been reported in the literature (Borgia et al. 2021).

### **Conclusion:**

Our observation describes an exceptional case of PG during tocilizumab therapy for rheumatoid arthritis, suggesting a potential novel paradoxical effect of this biologic agent. Its pathogenesis remains to be elucidated.

## CARD14-associated papulosquamous eruption: A Diagnostic and Therapeutic Challenge in Dermatology

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### Introduction:

Introduction: Autoinflammatory keratinization diseases are a group of dermatological disorders with a genetic basis and pathogenic mechanisms that trigger abnormal skin keratinization.

Case presentation: We present the case of a 3-year-old child with erythematous scaly plaques on all body segments and significantly affected quality of life. Initially diagnosed with psoriasis and plaques resistant to treatment with methotrexate, a possible involvement of an autoinflammatory disease was suspected, leading to an approach that included requesting serum markers of infection and inflammation, taking radiographs to assess joint involvement, complete blood count, renal profile, liver profile, and general urine examination, all without anomalies and borderline vitamin D. Psoriatic arthritis was ruled out, and HLA B27 and rheumatoid factor with acute phase reactants were requested, as well as a bone series, all showing no significant alterations. Additionally, there were no signs of scleritis or uveitis, and immune response was evaluated with serologies for Herpes type I and II, negative EBV, and positive IgG for CMV. Serum isohemagglutinins, flow cytometry, and immunoglobulins showed no alterations. Skin biopsy revealed a psoriasiform pattern, and genetic sequencing identified a pathogenic variant in the CARD14 gene: c.349G>A, p.Gly117Ser. Treatment with etanercept was initiated, resulting in clinical improvement and a notable increase in the patient's quality of life in just four weeks.

**Discussion:** CARD14-associated papulosquamous eruption presents a clinical spectrum that resembles both psoriasis and pityriasis rubra pilaris. Although the pathogenic mechanisms are not fully understood, hyperactivation of the nuclear factor KB is postulated as a possible trigger for the release of cytokines and chemokines by keratinocytes. Regarding treatment, the patient showed an adequate response to etanercept.

## **Conclusion:**

The diagnosis of autoinflammatory diseases of keratinization, such as CARD14-associated papulosquamous eruption:, represents a challenge in dermatology. Genetic evaluation is essential to confirm the diagnosis. Continuous research is required to better understand these entities.

## Clinical course and treatment outcomes of pityriasis rubra pilaris: a single-center experience

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# **Introduction & Objectives:**

Pityriasis rubra pilaris (PRP) is a rare inflammatory papulosquamous skin disorder of unknown etiology. Given the scarce literature data, unclear pathogenesis and lack of management guidelines, PRP remains a challenge for dermatologists regarding diagnosis and treatment.

We aimed to analyze the epidemiological and clinical characteristics, therapeutic modalities and disease outcomes of PRP patients treated at our clinic over a 10-year period.

### **Materials & Methods:**

This retrospective study encompassed 39 eligible patients with a confirmed diagnosis of pityriasis rubra pilaris, hospitalized in our clinic from January 2013 to November 2023. Both incident and prevalent, as well as adult and pediatric cases, were included in the analysis. Data were obtained from the patients' medical records.

## Results:

The male-to-female ratio of our cohort was 1.3:1. Most male patients (86.4%) displayed the features of the classic adult, type I PRP. On the other hand, there were six cases of juvenile PRP, all of which were female patients. The average age at diagnosis was 52.2 years, with men being significantly older compared to women (63.0 vs. 38.3, p=0.001). The median duration of skin changes before diagnosis was 2 months (interquartile range 1-3), longer in women than in men (3 vs. 1.3 months, p=0.012). In addition to the typical localization of lesions on the trunk and extremities seen in most patients (97.4%), the scalp was affected in 69.2% of cases, while palmoplantar keratoderma was seen in 76.9%. Erythroderma was present in 44.7% of patients, who were older (64.5 vs. 42.8, p<0.001) and more often men (63.6% vs. 18.8%, p=0.008) compared to the non-erythrodermic group. Pruritus was also more frequently noted in men than women (63.6% vs. 25.0%, p=0.025). The majority of patients (94.9%) received a form of systemic therapy – acitretin (87.2%), methotrexate (66.7%), both (56.4%) or PUVA therapy (12.8% of cases), in addition to topical treatment. Almost half of the patients (19/39, 48.7%) experienced a disease flare or relapse, more often those older than 50 (OR 7.0, CI 1.3-38.4, p=0.026). Remission ensued in 21 (70%) of the monitored subjects (N=30), in an average of  $16.4 \pm 10.4$  months.

### **Conclusion:**

In our population of patients with PRP, certain differences between the sexes were observed – men were older at the time of diagnosis, had a shorter duration of skin changes, and erythroderma and pruritus were more commonly present. A significant share of juvenile forms among female patients may have contributed to some of the observed differences. On the other hand, older patients presented with erythroderma more frequently and had a higher chance of disease flare or relapse.

Taking into account the rarity of this disease, a small number of cohort studies have provided comprehensive data on patients with PRP, therefore our study could contribute to the expansion of knowledge and experience in its diagnosis and treatment.

## Erythema multiforme: An uncommon manifestation of COVID-19 infection

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### Introduction

COVID-19, while primarily characterized by respiratory symptoms, has been associated with numerous cutaneous manifestations with most prevalent: maculopapular rash, urticarial rash, vesicular rash, chilblain like lesions, purpura and livedo reticularis. Herein, we report a case of erythema multiforme (EM) occurring in the setting of COVID-19 infection.

### **Case Presentation:**

A previously healthy 22-year-old patient presented to our emergency department with a febrile rash of three days duration. On clinical examination multiple erythematous papules and ovoid plaques were observed, symmetrically distributed on elbows, dorsum of the hands and knees. The rash was associated with pain but spared the palms, soles, and mucous membranes. The patient reported a recent history of COVID-19 infection, diagnosed 20 days prior, for which he did not receive any medication. A punch biopsy was performed that revealed vacuolar necrosis of keratinocytes at the basal layer of the epidermis, accompanied by dense lymphocytic infiltrate of the upper dermis, confirming the suspected diagnosis of EM linked to covid 19 infection. So, treatment with topical and systemic corticosteroids was initiated, which lead to a rapid improvement.

### **Discussion:**

EM is a hypersensitivity reaction type IV typically triggered by various infectious agents (Herpes Simplex Virus (HSV), Epstein Barr Virus EBV) as well as certain medications (Non-Steroidal Anti-inflammatory Drugs (NSAIDs), sulfonamides). EM manifests in two primary forms: major (more extensive rash and mucosal involvement) and minor (predominantly acral lesions). EM rash consists of papules and plaques which evolve into the characteristic "target-like lesions". The rash is symmetrically distributed on the extensor surfaces of the upper and lower limbs, as well as the palms and soles. However, involvement of other areas such as the face, chest, and back can also occur. Symptoms such as malaise and fever may precede the rash, which is often accompanied by pruritus or pain.

To date, a few cases of EM as a rare sequalae of COVID-19 infection have been documented in the literature, most of them describing a single self-limited episode. Notably, cases of recurrent EM following COVID 19 have been reported as well, resembling the pattern seen in EM associated with HSV infections.

Certain cases of EM following COVID-19 have been associated with medications used for the management of the infection, with hydroxychloroquine being the most frequently implicated agent.

In conclusion clinicians should remain vigilant for the development of cutaneous manifestations in patients with a recent history of COVID-19.

## Hypertrophic Lichen Planus in a 38-year-old Male: A Case Report

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# **Introduction & Objectives:**

Hypertrophic lichen planus (HLP) is a papulosquamous eruption presenting with extremely pruritic hyperkeratotic flat-topped papules, plaques, and nodules.

### **Materials & Methods:**

### **Results:**

This is a case of 38-year-old male who presented with a 2-month history of generalized erythematous-to-hyperpigmented papules, patches, and plaques topped with white-to-gray oyster shell-like scales on a background of hyperpigmented macules and patches. There was no involvement of the conjunctival, otic, oral, and genital mucosae, and palmar and plantar aspects of the hands and feet. Dermoscopy showed reticular pearly white structures corresponding to the Wickham striae, comedo-like openings, blue-gray dots, brownish-black dots, and scales. Histopathologic examination revealed marked compact hyperkeratosis, wedge-shaped hypergranulosis, irregular saw-toothed epidermal acanthosis, scattered dyskeratotic keratinocytes, and superficial perivascular lichenoid infiltrate of lymphocytes, histiocytes, and melanophages. The patient was managed as a case of HLP. He was started on methotrexate 10 mg per week, bath psoralen photochemotherapy (PUVA) three times a week, betamethasone valerate 1mg/g cream twice a day for 2 weeks alternating with tacrolimus 0.1% ointment twice a day for another 2 weeks, 10% lactic acid, emollients, and sunscreen. After 6 months of treatment, there was almost 80% improvement of lesions and relief of pruritus.

### **Conclusion:**

Low-dose methotrexate combined with bath PUVA, topical corticosteroids, and topical calcineurin inhibitor as a steroid-sparing agent may be used as a treatment regimen in patients with HLP.

# Beyond the Surface: Exploring Dupilumab's Efficacy in Palmoplantar Pustulosis and the Critical Role of Th2 Inflammation

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# **Introduction & Objectives:**

Palmoplantar pustulosis (PPP) is characterized as a chronic skin disorder, evident through the development of sterile pustules and erythematous scaling on the palms and soles. The management of PPP presents considerable challenges for clinicians, attributed to the limited efficacy of current small molecule and biological therapies. Recent studies have associated PPP's etiology with Th2 immune responses, and preliminary case studies have indicated that dupilumab may provide a viable treatment option for this condition. This study, therefore, seeks to evaluate the serologic profiles of PPP patients and the efficacy and safety of dupilumab as a treatment option.

### **Materials & Methods:**

This investigation involved a cohort of ten individuals diagnosed with PPP who were administered dupilumab. The treatment was initiated with a 600 mg loading dose, followed by 300 mg every four weeks. Treatment responses, measured by PPPASI75 scores, were documented at the 16-week interval, with all subjects receiving at least one year of follow-up. Furthermore, serum samples from an expanded group—comprising 11 PPP patients, 15 with atopic dermatitis, 14 with psoriasis, and 19 healthy controls—were analyzed using the Olink® Target 96 Inflammation Panel to compare inflammatory profiles among these groups.

# Results:

In our study, 9 of 10 participants suffering from palmoplantar pustulosis (PPP) achieved a PPPASI75 response after 16 weeks of dupilumab treatment, with no adverse events reported. Proteomic analysis using the Olink platform highlighted increased serum concentrations of CCL19, MCP-4, CCL11, and CXCL5 in PPP patients relative to healthy donors, and a notable enhancement of the 'IL-17 signaling pathway'. When compared to psoriasis patients, those with PPP showed significant decreases in IL-17C and TNF levels, whereas no significant differences were observed when compared with atopic dermatitis patients. Moreover, the serum biomarker profile of PPP patients exhibited parallels with those of atopic dermatitis and psoriasis patients, though with less similarity to psoriasis.

## **Conclusion:**

Dupilumab demonstrated both efficacy and safety in treating PPP, possibly due to the Th2 signatures in the serum of PPP patients and the molecular similarities between PPP and atopic dermatitis.

## A rare case of Grover disease associated with multiple basal cell carcinomas

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# **Introduction & Objectives:**

Grover's disease (GD), also known as transient acantholytic dermatosis, is a dermatological condition characterized by transient eruptions of pruritic papules and vesicles predominantly affecting the trunk. This disease primarily affects males and is associated with multiple histopathological variants, all of which share the common distinguishing features of acantholysis and dyskeratosis. Although the etiology of GD is unknown, it has been linked to internal malignancies based on case reports and clinical observations.

Here, we present a unique case of a patient with the coexistence of GD with Darier-like features and multiple basal cell carcinomas (BCCs).

### **Materials & Methods:**

A 62-year-old Caucasian female presented to our clinic with a disseminated eruption of pruritic papules that had developed and progressed continuously over the last 6 years. It was initially diagnosed and treated as intertrigo but subsequently extended to involve the thorax and abdomen. During this time, the patient developed seven histopathologic confirmed BCCs. There was no known family history of skin diseases or cancers. Given the personal history and the peculiar clinical presentation with central hyperkeratotic papules, a biopsy was performed. Histopathological examination revealed acantholysis and dyskeratotic cells consistent with GD, displaying Darier-like characteristics.

### **Results:**

This case underscores the rarity and diagnostic challenges associated with GD, particularly in the context of its Darier-like variant and concurrent multiple BCCs. To our knowledge, there are no reported cases documenting the coexistence of multiple BCCs with GD. Furthermore, the predominance of GD in males makes this case particularly exceptional. The difficulty in distinguishing GD from non-melanoma skin cancers, especially on the trunk, emphasizes the importance of comprehensive evaluation, including histopathology, to guide appropriate management. Given the well-established association between BCCs and immunosuppression, and considering there are some case reports of GD associated with non-skin cancers, our patient necessitated careful assessment to rule out any underlying malignancies.

# **Conclusion:**

In conclusion, this study underscores the rarity and diagnostic challenges associated with GD, particularly in the context of its coexistence with Darier-like features and multiple BCCs. Although GD is generally considered a benign condition, it can be associated not only with internal malignancies but also with cutaneous cancers such as BCCs. This highlights the importance of a multidisciplinary approach and thorough skin examination in patients

with GD to promptly detect and manage any potential underlying malignancies.

# Diagnostic Puzzle: Lichen Planus & Morphea & Psoriasis Vulgaris

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# **Introduction & Objectives:**

Lichen planus is an acute or chronic inflammatory dermatosis affecting the skin and/or mucosal surfaces. It is idiopathic in most cases, but T-cell-mediated immunity appears to play a key role. Drugs, metals, or infections (hepatitis C virus) lead to changes in cell-mediated immunity.

Localized scleroderma, or morphea, is a chronic disorder involving the connective tissue. It is not related to systemic sclerosis, and the etiology is unknown. Some patients with classical morphea develop sclerosis following a Borrelia burgdorferi infection.

Psoriasis is a chronic inflammatory skin disease with a multifactorial etiology. It is classified as an immune-mediated polygenic dermatosis, triggered by bacterial infections, trauma, or drugs.

## **Materials & Methods:**

We report the case of a 56-year-old female patient who presented with two oval-shaped patches of approximately 10 cm in diameter, located posteriorly and laterally on the thorax, progressing over the past 2 years. Physical examination revealed two well-defined ivory-colored indurated plaques with a hyperpigmented border. The two diagnostic suspicions were morphea and scleroatrophic lichen. The Borrelia burgdorferi serology was negative. A punch biopsy with histopathological evaluation established the diagnosis of morphea.

Moreover, physical examination revealed a generalized eruption composed of shiny, purple-colored, flat-topped, pruritic, polygonal papules, located in the armpits, under the breast, and on the upper and lower limbs, progressing affirmatively for 2 weeks. The patient also had oral involvement: whitish, asymptomatic, bilateral striae with a "lacy" pattern affecting the jugal mucosa but without nail abnormalities. Dermoscopy highlights thin, pearly-white structures arranged in a reticular pattern (Wickham striae). There is no evidence of a hepatitis C infection.

The patient was also diagnosed with clinical psoriasis vulgaris, but no biopsy was performed.

# **Results:**

The patient was offered systemic corticosteroid therapy, which was stopped because of its side effects, such as fluid retention and facial swelling. Then, she underwent multiple PUVA photochemotherapy sessions, along with a corticosteroid cream. The lesions improved, but without complete disappearance. We decided to initiate methotrexate at a low dose.

# **Conclusion:**

We opted to present this case due to its complexity of intricate diagnoses: generalized lichen planus, localized scleroderma, and psoriasis vulgaris. This is an atypical and rare coexistence of three common skin diseases that, to our knowledge, have not been described so far in the English literature.

In order not to miss any disease, the examination should include the entire skin surface, along with nails, hair, and mucosal surfaces. The appropriate diagnosis is revealed by histopathological analysis. Eventually, multimorbidity requires a more restrictive treatment, with few effective therapeutic options.

# Primary or secondary erythromelalgia? A case report

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#### Introduction:

Erythromelalgia is a rare acrosyndrome, characterized clinically by the triad "redness-warmth-pain", located mainly in the extremities of the lower limbs, with a course of paroxysmal attacks, which may be primary or secondary to several pathologies.

## Case presentation:

Patient aged 67, with a history of chronic gastritis and sciatic pain, who has presented for 6 years with a symptomatology consisting of erythema, heat and burning sensation in the toes, calmed by cold water, then extension of this symptomatology to the feet. The symptoms evolved in paroxysmal attacks, triggered by exertion and calmed by cold water. On examination, the patient was in good general condition, with an unremarkable dermatological examination. In addition, the patient had undergone several gastrointestinal fibroscopies with anatomopathological studies in favour of antral gastritis with moderate atrophy and no signs of malignancy, except for one dated June 2020, which was in favour of gastric independent cell carcinoma. The patient underwent a new gastrointestinal fibroscopy with CT-PET, which is ongoing, and was referred to neurology for appropriate analgesics.

# Discussion:

Erythromelalgia remains a rare acrosyndrome, clinically diagnosed, guided by the factors that trigger attacks (heat, exertion or walking), and the relief of symptoms by cold, with attacks lasting from a few hours to a few days, sometimes several weeks. From an etiological point of view, there are 2 types of erythromelalgia: the first is primary erythromelalgia, sporadic and most often found in young subjects, and the second is secondary erythromelalgia (either due to a myeloproliferative syndrome, neoplasia, systemic diseases, infectious or metabolic diseases, neuropathies, drugs). In our patient's case, erythromelalgia secondary to gastric neoplasia was evoked, even though the onset of symptoms was not consistent with the gastric biopsy. While waiting to rule out this possibility, erythromelalgia secondary to sciatic pain may also be evoked, and cases have been reported. Therapeutically, curative treatment of the underlying disease or discontinuation of the causative drug can improve the symptoms of secondary erythromelalgia, but in the case of primary forms, treatment is more difficult and involves a panoply of analgesics.

# conclusion:

Erythomelalgia remains an interesting acrosyndrome because of its easy diagnosis, based on clinical criteria, and its multiple etiologies, which classify it as primary or secondary, and lead us to look for its etiologies in elderly subjects with comorbidities.

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# Granuloma annulare: a study of epidemiological and clinical features

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# **Introduction & Objectives:**

Granuloma annulare (GA) is a granulomatous inflammatory dermatosis of unknown origin that mainly affects children and young adults. Little is known about the epidemiology and pathogenesis of this dermatosis. The aim of this study was to investigate the epidemiological and clinical features of GA, as well as its therapeutic management.

#### **Materials & Methods:**

A retrospective study of GA cases collected over a 15-year period, from 2007 to 2023, was carried out in our dermatology department.

#### **Results:**

A total of 20 patients were included, with a mean age of 38.6 years (3 to 71 years). The sex ratio (M/F) was 0.36. Medical history included diabetes (4 cases), hypothyroidism (1 case), dyslipidemia (1 case), anemia (1 case) and cirrhosis (1 case). The average consultation time was 10.5 months. The clinical forms observed were localized GA with isolated or confluent papules in small annular plaques (12 cases), subcutaneous GA: subcutaneous nodules (4 cases) and generalized annular granuloma (4 cases). Lesions were located on the backs of hands (11 cases), forearms (4 cases), backs of feet and legs, elbows, and trunk (3 cases each), knees, thighs, armpits and neck (1 case each). The rest of the clinical examination was normal in all cases. Histological confirmation was performed in all cases. All patients received Topical corticosteroids. Treatment with synthetic antimalarial drugs was prescribed in 4 patients, and 1 patient with a generalized form received disulone. The evolution was marked by slow regression of lesions (16 cases) after an average of 4 months, with secondary relapse in 8 cases. Four patients were lost to follow-up.

#### **Conclusion:**

In this study, the epidemiological and clinical characteristics were in accordance with the published data. GA is a predominantly female inflammatory dermatosis, occurring at any age, but especially affecting children and young adults. Clinically, there are four main forms of GA: generalized, perforating, localized and subcutaneous (deep). The last two are the most common in children. Several forms may coexist in the same patient. Typically, it is characterized by firm, well-limited, skin-colored, or pinkish papules or small nodules that form annular plaques. These lesions usually occur on the dorsal surfaces of the hands and feet. Positive diagnosis is essentially clinical. However, in atypical forms, skin biopsy can contribute to the diagnosis. Given the spontaneous regression, treatment is not necessary. Topical or intralesional corticoids, imiquimod cream, topical calcineurin inhibitors or cryotherapy can be prescribed to hasten lesion resolution. For disseminated forms, systemic treatment with synthetic antimalarials or disulone may be prescribed.

# Generalized granuloma annulare in a child: a case report

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# **Introduction & Objectives:**

Granuloma annulare is a benign inflammatory dermatosis of unknown origin, occurring mainly in children and young adults, with a female predominance. Typical lesions are made up of small single or multiple papules with an annular distribution, most often on the extremities. The generalized form occurs in 15% of cases and is rare in children.

#### Materials & Methods:

#### **Results:**

A 7-year-old child with no previous pathological history presented to our Dermatology department with asymptomatic brownish, round, macular and papular lesions, 5mm in diameter, on both lower limbs, which had been evolving for three months. The rest of the clinical examination was normal. A skin biopsy showed a lymphocytic and histiocytic inflammatory infiltrate in the dermis, arranged in a palisade and interstitial pattern around the collagen fibers. Anatomoclinical correlation supported the diagnosis of granuloma annulare. Topical corticosteroids were prescribed, with almost complete regression of the lesions within two months.

## **Conclusion:**

Granuloma Annulare Generalized is defined by a number of lesions greater than 10, or extensive plaques on the skin. This form is mainly seen in adults, and is predominantly female. Unlike in adults, the association of this form with systemic pathologies or immunodepression has not been reported. The evolution is generally prolonged (2 to 3 years), with rare spontaneous resolution. Several treatments have been tried, including topical corticosteroids, phototherapy, hydroxychloroquine and disulone, with variable and inconsistent results. Our case is unusual because of the occurrence of a disseminated form in a child, and the relatively rapid improvement of lesions with topical corticosteroids.

# Trilateral blaschkoid linear lichen planus associated with covid 19 vaccination

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# **Introduction & Objectives:**

Linear lichen planus (LLP) is a rare variant of lichen planus (LP) that is characterized by lichenoid, pruritic, violaceous papules, arranging in a linear pattern along the lines of Blaschko and represents around the 0.5% of LP cases. Children are mostly affected but can also be seen in adults. The pathophysiological connection to Blaschko lines is still under investigation. The exact underlying cause of LLP is unknown but it has been associated with metastatic CA, previous infections, vaccinations and various other autoinflammatory disorders.

#### Materials & Methods:

This is a case of a 50 year old female patient that presented with a ten-month history of recurrent unilateral, itchy, erythematous, flat-topped papules with a linear distribution along the Blaschko lines of the right arm, right abdominal site and right hip emerging at the same time. The patient in this case revealed recent vaccination with 3 doses of Pfizer covid-19 vaccination and a persistent backache with right sided trochanteric pain over the past year. A punch biopsy was performed and histopathology revealed a lichenoid interface dermatitis type with the presence of cytoid bodies at the dermoepidermal junction, as in lichen planus (figures 1,2). Serological investigations revealed a raised SACE (**Serum Angiotensin Converting Enzyme**), while the rest of tests were normal2. A serial of further investigations for the raised SACE were normal. An MRI of their spine and pelvis showed mild sacroiliac arthropathy, right sided trochanteric bursitis and intervertebral arthropathy in the level of O5-L1. The team treated successfully the patient with topical clobetasol proprionate 0,05% cream combined with pimecrolimus 1% cream on different days.

# Conclusion:

LLP in middle-aged adults especially when distributed in multiple sites of Blaschko's lines is rare1. The etiology still remains unclear. In this specific case, the history of three doses of the Pfizer -COVID vaccination enhances the theory of positive correlation between LP and COVID-19 vaccinations, as presented before3. The authors of this report encourage future professionals to investigate further the cutaneous reactions to Sars-Cov -vaccinations related or not to the number of doses. Additionally, as emerged in the case the significance of a raised SACE remains to be seen in the literature. Regarding the coexistence of underlying inflammatory arthropathy in the site of linear lichen planus this also needs to be examined and one might say that it enhances the theory that they share common autoinflammatory pathophysiology and potentially therapy choices4.

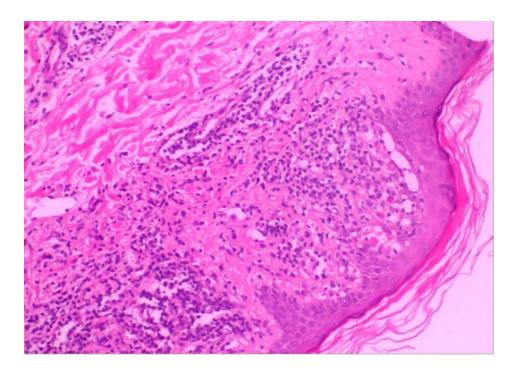


Figure 1: Liquefactive degeneration in the basal cell layer (hydropic degeneration) (H-E)

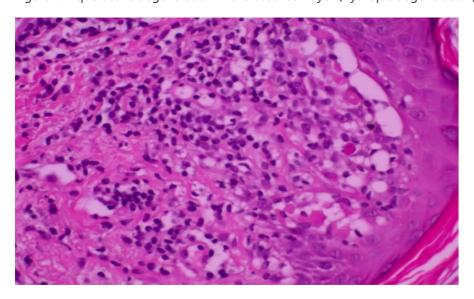


Figure 2: Colloid (civatte) bodies in the epithelium or superficial lamina propria (H-E)

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**Demodicosis: A myriad of clinical presentations** 

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Introduction & Objectives: Demodex infestation causes diverse skin manifestations that are included under the umbrella term demodicosis. A reduction in local skin immunity, changes in facial skin microenvironment, and an imbalance between Demodex mite and other commensal micro-organisms appear responsible for making this commensal mite pathogenic. This retrospective study was conducted to enlist the various clinical manifestations seen with demodicosis.

Materials & Methods: All clinically suspected cases with more than five demodex mites visualized in a square centimeter area on standardized skin surface biopsy seen from January 2023 through December 2023 were retrospectively recruited. Detailed information regarding age, gender, disease duration, and morphology of lesions was noted.

Results: Eleven patients comprised of four men and seven women met the inclusion criteria. During the study duration twenty-five patients suspected to have primary or secondary demodicosis were subjected to standardized skin surface biopsy, however in only eleven patients it was positive. Clinical presentations varied from patients presenting with only a history of sensitive skin (2), pityrosporum folliculorum (3), peri-oral/ orbital dermatitis like demodicosis (3), papulopustular demodicosis (2), and nodulocystic demodicosis (1). Six patients had a history of topical corticosteroid abuse for a variable time duration ranging from one to six months. In two patients the lesions were distributed asymmetrically leading to a suspected diagnosis of demodicosis. All patients showed significant improvement with topical ivermectin monotherapy.

Table 1: Demographic and clinical characteristics of patients

Case Number	Age/Gender	Clinical presentation	Additional information
1	30/F	Pityrosporum folliculorum	-
2	25/M	Papulo-pustular demodicosis	Topical corticosteroid abuse
3	23/F	Sensitive skin	-
4	36/F	Peri-oral dermatitis like demodicosis	Topical corticosteroid abuse
5	18/F	Papulo-pustular demodicosis	Asymmetrical involvement
6	46/F	Sensitive skin	-
7	22/M	Pityrosporum folliculorum	Topical corticosteroid abuse
8	40/F	Nodulocystic demodicosis	Topical corticosteroid abuse, asymmetrical involvement
9	45/M	Peri-oral dermatitis like demodicosis	-
10	20/F	Pityrosporum folliculorum	Topical corticosteroid abuse
11	16/M	Peri-oral and peri- orbital dermatitis like demodicosis	Topical corticosteroid abuse

## M=Male, F=Female

Conclusion: Demodex mite resides as a normal commensal flora on facial skin, however an increase in its number results in variable clinical manifestations. In addition, there can be a secondary increase in rosacea, acne, and peri-oral dermatitis. Primary demodicosis by definition should lack an underlying disease and must respond to acaricidal monotherapy. Although suspected in 25 cases, diagnostic confirmation with standardized skin surface biopsy could be done in eleven patients only. Topical corticosteroid abuse appears to be a significant predisposing factor. A thorough knowledge of demodicosis and its manifestations is essential for appropriate management.

# challenges in the diagnosis of oral lichen planus - own clinical experience

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## **Introduction & Objectives**

Around 25% of adults experience mouth ulcers, which can be caused by various factors, including lichen planus, a chronic inflammatory and autoimmune disorder affecting the oral cavity. According to literature, differential diagnosis of oral lichen planus and oral lichenoid lesions can be aided by the use of direct immunofluorescence (DIF). The diagnostic criteria for oral lichen planus, which were first published in 1978, are still being refined, with the most recent diagnostic algorithm proposed in 2019 based on clinical signs and medical history. Our study aimed to develop a new multivariate predictive model by combining medical history and DIF.

#### **Materials & Methods**

The study included patients who presented to the Department of Dermatology in 2019-2022 with erosive lesions in the oral cavity or were referred there by their dentists. The following variables were collected: DIF IgG, DIF IgA, DIF IgM, DIF C3, DIF F1, DIF F2, histopathology, gender, age on the day of lesion onset, stress during the study period, stress at onset, localization of white patches and erosions, previous treatment, taking supplements, herbs, or any medication, dental status, smoking, using mouthwash. Statistical analysis was performed using Statistica 13. For neural networks we used default parameters of the Statistica software.

#### **Results**

The study group consisted of 80 patients: 63 (78.8%) women and 17 (21.2%) men. Lichen was confirmed by histopathology in 4 (5.0%) of the study participants and not confirmed in 57 (71.2%); it was not excluded in 30 subjects (37.5%) and excluded in 31 (38.8%). The incidence of DIF IgG, DIF IgA, DIF IgM, DIF C3, DIF F1, DIF F2 positivity did not differ significantly between either subjects with confirmed or unconfirmed lichen, or between subjects with lichen excluded or not excluded. Data Mining module suggested four significant predictors to create a multivariate model for dependent variable 'lichen planus not excluded by histopathology' and none for 'lichen confirmed'. It were: stress at onset (0.017), white patches under a tonque (p=0.029), erosions on mandibular gingiva (0.041), and erosions under a tonque (0.049). Neural networks created on this basis had 74% correct classifications for learning, 85% for testing, and 71% for validation (Figure 1).

# Conclusion

In some populations, DIF is not a significant predictor of the diagnosis of lichen planus, regardless of whether strict diagnostic criteria for this disease were used in histopathological examination or whether results potentially indicative of lichen planus were also included. By using neural networks, interview data can establish a diagnosis with approximately 70% certainty compared to histopathology as the reference test. Further optimization of variables included in the model may allow for the creation of a clinically useful tool.

# **Unusual Presentation of Wells Syndrome**

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# **Introduction & Objectives:**

Wells syndrome is an uncommon cutaneous condition characterized by recurrent granulomatous dermatitis accompanied by eosinophilia. Although its occurrence is infrequent, its diverse clinical presentation and benign nature can pose challenges in terms of diagnosis and treatment. We present a clinical case of Wells syndrome with an atypical presentation.

#### **Materials & Methods:**

A 59 year – old male patient presents with a two-year history of pruritic lesions, initially on the lower limbs and later with a widespread distribution. He reports episodes occurring every 2 days, lasting approximately 48 hours each, accompanied by subjective fever during each episode. The lesions spontaneously resolve with residual hyperpigmentation. Recently, facial edema has been associated with the episodes. The patient relates the symptoms to temperature changes and denies other triggers. He has been treated with antihistamines with partial improvement. Upon physical examination, the patient showed multiple erythematous and edematous, infiltrated, circular plaques measuring 3-5 cm in diameter involving the retroauricular region, trunk, and the extremities symmetrically (Fig. 1). In the histopathological study, a perivascular and periadnexal mononuclear inflammatory infiltrate is observed extending to the subcutaneous tissue, forming groups of eosinophils degranulating, appearing as 'flame' figures. Direct immunofluorescence shows superficial and deep perivascular C1q (++) positivity (Fig.2).

# **Results:**

The Wells syndrome, identified in 1971 as 'recurrent granulomatous dermatitis with eosinophilia,' has an unclear cause, though it's believed to result from a type IV hypersensitivity reaction to various internal and external triggers. The clinical presentation varies widely among individuals, posing challenges in distinguishing it from other skin conditions. Typically, it appears as reddened patches, often slightly itchy or burning, and can progress to form blisters, bullae, or nodules. Over time, these lesions may harden and resemble morphea. The clinical lesions tend to be localized, not as extensive, symmetric, and striking as in our patient. Tissue eosinophilia is a common finding, ranging from 15% to 67%. Characteristic histological features include 'flame figures,' which indicate localized clusters of disintegrating eosinophils as seen in our clinical case. Treatment usually involves topical and systemic corticosteroids, though alternative therapies such as cyclosporine, dapsone, tacrolimus, antihistamines, interferons, TNF alpha inhibitors, sulfasalazine, PUVA therapy, colchicine, antimalarial drugs, and minocycline are also options.

# **Conclusion:**

Our clinical case highlights the importance of recognizing the variability in the presentation of Wells syndrome. The atypical evolution of the lesions, along with the addition of intermittent systemic symptoms, underscores the need to maintain a high index of clinical suspicion to provide early intervention.

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# Deciphering Cutaneous Sarcoidosis: Case Study and Review of Dermatologic Phenotypes'

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# **Introduction & Objectives:**

Sarcoidosis, a systemic granulomatous disorder, frequently involves the skin, manifesting in approximately 20-35% of patients with systemic disease. However, in a subset of cases, cutaneous lesions serve as the sole presentation of sarcoidosis, accounting for approximately 10% of diagnoses. The clinical spectrum of cutaneous sarcoidosis is vast, encompassing various morphological presentations such as papules, plaques, nodules, scar sarcoidosis, lupus pernio, erythema nodosum, ulcerations, and alopecia. Despite the diversity of presentations, certain morphologies, including follicular, verrucous, ichthyosiform, hypomelanotic, and annular lesions, are reported infrequently, making their true incidence challenging to ascertain.

This study explores the varied clinical presentations of solitary cutaneous sarcoidosis without systemic involvement through a literature review. We focus on diverse morphological variants and diagnostic challenges highlighted in studies by Reddy et al., Mohan et al., and Roche et al. Our aim is to enhance clinician awareness of the protean manifestations of cutaneous sarcoidosis for early diagnosis and optimal management.

#### Materials & Methods:

A 47-year-old female with a medical history of chronic uncontrolled diabetes mellitus and hypertriglyceridemia presented with a five-year history of scattered atrophic erythematous papules and plaques over the nose and both cheeks. Dermatological examination revealed well-demarcated, indurated papules without secondary changes. Hematological and biochemical investigations were conducted, including fasting blood sugar and triglyceride levels. Additionally, chest radiography was performed to evaluate systemic involvement, and pulmonary function tests were conducted to assess respiratory function. A 4.5-mm skin punch biopsy was performed from a representative lesion, and histopathological examination was carried out, including special stains for acid-fast bacilli and fungi.

# **Results:**

Histopathological examination of the skin biopsy revealed hyperkeratosis and diffuse non-caseating epithelioid granulomas in the dermis, surrounded by lymphatic infiltration, consistent with sarcoidosis. There was no evidence of systemic involvement on chest radiography, showing a clear cardio mediastinal shadow and unremarkable lung fields. Pulmonary function tests yielded normal results. Special stains for acid-fast bacilli and fungi were negative, indicating the absence of infectious etiologies. Treatment with topical tacrolimus ointment was initiated, leading to significant improvement in the patient's cutaneous lesions.

#### **Conclusion:**

Cutaneous sarcoidosis presents diagnostic challenges, resembling other dermatological conditions. Heightened vigilance regarding morphological manifestations is crucial for accurate diagnosis. Histopathological examination confirms the diagnosis, especially in cases with unusual features. Further research and clinical studies are needed to refine therapeutic strategies.

Sarcoidosis, termed "the great imitator," manifests with variable cutaneous manifestations. Enhanced awareness

of sarcoidosis occurrence aids in averting misdiagnoses. Understanding morphological presentations is essential for prompt diagnosis and effective management. Diagnosis confirmation depends on identifying non-caseating epithelioid granulomas in histological findings.

# Anti-IL-15 neutralizing antibody counteracts vitiligo in a humanized mouse model

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# **Introduction & Objectives:**

Vitiligo is a common skin depigmentation disorder, characterized by loss of skin pigment with an estimated prevalence of 0.5-2% worldwide. It is believed that vitiligo is caused by cytotoxic T cells infiltrating the epidermis. Indeed, melanocyte specific CD8+ resident memory T (TRM) cells are enriched in the perilesional skin of vitiligo patients (Cheuk S. et al, Immunity 2017, Boniface K. et al, J Invest Dermatol 2018). These cells constitute a reservoir of cytotoxic T cells that attack melanocytes, causing depigmentation of the skin. Since TRMs are long-lived cells, they are presumed to be responsible for the perpetual nature of this disease.

The formation and survival of TRMs are regulated by cytokine IL-15 (Mackay L.K. et al, Nat Immunol 2013, Mackay L.K. et al, Immunity 2015). Indeed, high levels of IL-15 and the IL-15 receptor a subunit (IL-15Ra) have been detected in vitiligo patients, and the levels of IL-15 correlated with disease severity. We developed TEV-53408, a human anti-IL-15 antibody that specifically binds and neutralizes IL-15. The present study evaluated the effect of TEV-53408 on TRMs and skin depigmentation in a humanized IL-15 knock-in (hIL-15KI) mouse model of vitiligo.

# **Materials & Methods:**

A vitiligo model was established in hIL-15KI mice by immunization with a peptide derived from the melanocyte-specific enzyme tyrosinase-related protein 2 (TRP2), along with immune stimulants (You S. et al, Clin Exp Immunol 2013). Immunization was performed in the foot pad and subsequently intradermally in the tail skin and resulted in depigmentation of the tail skin and accumulation of CD8+ TRMs in the skin.

TEV-53408 was administered subcutaneously to hIL-15KI mice, starting 2 weeks following the last immunization, as 3 weekly injections at 5 mg/kg. The mice were euthanized 24 hours after the last TEV-53408 administration. Depigmentation of the tail skin was assessed, and T cell analysis was performed.

#### **Results:**

TEV-53408 attenuated depigmentation of the tail skin and suppressed the accumulation of skin TRMs in vitiligo-induced hIL-15KI mice. Furthermore, ex vivo stimulation of skin-localized CD8+ T cells with TRP2 peptide revealed that treatment with TEV-53408 reduced levels of IFNg+ activated CD8+ T cells compared to cells derived from saline-treated mice. This assay demonstrated the melanocyte-specific immune response that was developed in this model, and its inhibition by TEV-53408.

## **Conclusion:**

TEV-53408 is a potent and specific neutralizing antibody, that has demonstrated on-target efficacy in a vitiligo hIL-15KI mouse model. These findings support the rationale for clinical development of this novel IL-15 antagonist as a treatment for vitiligo.

# **Evaluation of a Novel PAR2-Targeted Monoclonal Antibody for Skin Inflammatory Conditions**

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# **Introduction & Objectives:**

Skin inflammatory conditions pose a significant challenge, and the development of effective treatments remains important. This study investigated the efficacy of TEV-56192, a novel humanized human-proteinase-activated receptor 2 (PAR2)-specific monoclonal antibody in preclinical models of skin inflammation and barrier disruption. PAR2, a G protein-coupled receptor expressed on various skin cell types, is upregulated during inflammation and contributes to disease progression by exacerbating inflammation, impairing barrier function, and promoting itch. By targeting PAR2, TEV-56192 has the potential to offer a novel therapeutic approach for these conditions.

## **Materials & Methods:**

We employed ex vivo human skin organ cultures (hSOCs) to assess the effects of TEV-56192 on barrier disruption and inflammation. Three models of barrier disruption were utilized: tape stripping (TS) for partial physical barrier removal, sodium dodecyl sulfate (SDS) application to mimic chemical irritation, and ultraviolet B (UVB) exposure to model sunburn. Following barrier disruption, skin viability was assessed using the

3- [4,5- dimethylthiazol- 2- yl]-2,5 diphenyl tetrazolium bromide (MTT) assay. To evaluate barrier integrity, transepithelial water loss (TEWL) was measured. Thymic Stromal Lymphopoietin (TSLP) levels in the culture supernatants were measured by ELISA to quantify inflammatory response. Hematoxylin and eosin (H&E) staining and Masson trichrome staining were performed to examine morphological changes in the hSOCs.

To evaluate efficacy of TEV-56192, genetically modified knockin humanized PAR2 (hF2RL1 KI) rats were generated. Imiquimod was applied topically once daily for 9 consecutive days on the skin of the back of female hF2RL1 KI Wistar rats to induce skin inflammation and scratching. Severity of the inflammation was assessed by a modified Psoriasis Area and Severity Index (PASI) score. The degree of scratching was quantified as the total number of bouts of scratching in the observation period.

# **Results:**

In ex vivo hSOCs, TEV-56192 treatment demonstrably improved skin barrier function, supported skin cell viability across three barrier disruption models: TS, SDS application, and UVB exposure and effectively prevented histological alterations in the skin caused by these disruption methods. Secretion of TSLP, a key biomarker of skin inflammation and itch, was induced by the perturbations and blocked (p<0.05) by TEV-56192. In vivo, treatment with TEV-56192 blocked (p<0.05) scratching behavior indicating reduced itch, and blocked development of skin lesions as measured by the PASI scores, in the imiquimod-induced skin inflammation rat model.

## **Conclusion:**

TEV-56192 is an effective PAR2 antibody that has demonstrated beneficial effects in both ex vivo and in vivo models of skin inflammation and barrier alteration. These findings highlight the therapeutic potential of TEV-

56192 in treating skin indications dominated by skin inflammation and itch sensation.

# A novel mouse model for chronic skin fibrosis induced by Mitomycin C

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<sup>1</sup>Rubedo Life Sciences

# **Introduction & Objectives:**

Over 50% of all cancer patients receive radiation therapy and/or DNA-damaging drugs known to cause skin damage, including dermatitis, ulceration and in some cases chronic skin fibrosis. These treatments have been reported to induce cellular senescence in the skin, which is thought to perpetuate inflammation via the senescence associated secretory phenotype. There are currently very limited treatment options to manage cancer therapy side effects on the skin. Although radiation-induced skin fibrosis models have been reported, the availability of a suitable irradiator is a significant barrier to most investigators. Thus a reproducible and convenient mouse model is needed to facilitate the development of novel therapeutics.

#### Materials & Methods:

The chemotherapeutic DNA-crosslinking agent mitomycin C (MMC) was applied topically once a day for four consecutive days on the back of the mouse.

Clinical observations and skin scoring was conducted twice a week for 6 weeks.

Histological and proteomic profiling of skin samples was conducted at multiple time points.

Mice with MMC induced dermatitis were treated with a topical betamethasone and the novel senolytic compound RLS-1496. Clinical observation, skin scoring, histology and transcriptomic analysis was conducted at multiple time points.

#### **Results:**

We report a convenient and reproducible model of dermatitis and chronic skin fibrosis induced by topical application of the MMC, which resulted in local skin irritation, inflammation, fibrosis and cellular senescence. The MMC treated area developed erythema and desquamation that peaked at 2 weeks post MMC treatment, with skin thickening and fibrosis persisting for at least 6 weeks post MMC treatment. Histological assessment highlighted a resemblance to scleroderma cases, with loss of sebaceous glands, mild to moderate infiltration of inflammatory cells, and an increase of predominantly type 1 collagen and focal type 3 collagen in the hypodermis. In addition, immunohistochemical and transcriptomic analyses indicated increased cellular senescence. Betamethasone treatment recapitulated clinical observations, including skin thinning but no amelioration of the fibrotic phenotype. Whereas treatment with the novel senolytic compound RLS-1496 decreased skin erythema and desquamation. Transcriptomic analysis of RLS-1496 treated mouse skin was conducted, and analysis will be presented.

# **Conclusion:**

This work provides a robust and convenient inflammatory and fibrotic skin model with cellular senescence characteristics, and provides a large time window to test novel therapeutics.

# Linear sebaceous hyperplasia: clinical and histological characteristics

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# **Introduction & Objectives:**

Sebaceous gland irregularities play a central role in various dermatological conditions, including: sebaceous hyperplasia, seborrheic dermatitis, and nevus sebaceous, among others. Understanding these conditions is crucial for accurate diagnosis and treatment. We present a case of linear sebaceous hyperplasia, an entity inside the spectrum of hamartomatous lesions, which is clinically and histologically distinct from nevus sebaceous.

**Materials & Methods:** We report a case of a 39-year-old woman presenting with a pinkish lesion on her left ear helix, which had grown during the previous months on a linear plaque made up by multiple smooth papules that had been present since adolescence. Personal and family history were unremarkable.

**Results:** Histopathological examination showed mild epidermal hyperplasia and the presence of small but mature sebaceous glands, some of them draining directly into the epidermal surface. Some small rudimentary hair follicles were present. Apocrine glands were not noted. Immunohistochemical staining did not evidence loss of mismatch proteins (MLH1, MSH2, MSH6 and PMS2).

Linear sebaceous hyperplasia (LSH) has been reported infrequently in the literature. It typically manifests as multiple, linearly arranged, non-confluent small papules, often appearing during the first two decades of life. LSH lesions have been described affecting the face, chest and genitalia It must be distinguished from solitary SH and nevus sebaceous (NS), the latter normally appearing at birth as velvety yellowish plaques located on the scalp. Histologically, unlike NS, it features mature sebaceous glands, although a peripheral row of undifferentiated sebocytes can be observed. Epidermal hyperplasia is typically mild, and rudimentary hair follicles may be observed. Notably, LSH lacks apocrine glands.

LSH and NS share some clinical, histological similarities and probably underlying molecular events through the RAS/RAF/MAPK pathway. However, no secondary neoplasms have been described in LSH. This may be explained by its greater differentiation degree and reduced cell potentiality.

**Conclusion:** LSH is a lesser-known lesional type clinically and histologically different from NS. Although both entities represent sebaceous hamartomas with common features, relevant differences in their clinical presentation and behaviour must be stressed.

# Pancreatic panniculitis: a case report

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# **Introduction & Objectives:**

Initially described by Hans Chiari in 1883, pancreatic panniculitis (PP) is a rare skin manifestation. Herein, we report a case in a 50 years old woman with good evolution.

## **Case report:**

A 50-year-old woman with a history of obesity, hypertension, hypertensive heart disease, and hypothyroidism was admitted to our hospital for acute pancreatitis. A dermatology consultation was requested for acute-onset skin lesions concurrent with her abdominal pain. Dermatological examination revealed bilateral and asymmetrical inflammatory, erythematous to violaceous, warm and tender nodules on both lower extremities, around the ankles and pretibial regions, which progressed to ulceration and discharge of viscous, reddish-brown fluid. Several diagnoses were discussed, including pancreatic panniculitis, erythema nodosum, and panniculitis due to alpha-1 antitrypsin deficiency. Laboratory assessments showed leukocytosis with a count of 13,420 cells/mm3 with PNN predominance at 11 220 cells/mm3, and significant inflammatory syndrome with CRP levels at 300 mg/L. Hepatic cytolysis and cholestasis, and lipase levels at 12,997 IU/L were also present. The histopathological examination of a nodule revealed lobular panniculitis primarily composed of lymphohisticocytic elements accompanied by adipocyte necrosis, exhibiting an aspect of 'adipocyte ghosts' and saponification, confirming the diagnosis of pancreatic panniculitis. Treatment consisted of managing pancreatitis along with daily local wound care and application of 50% trichloroacetic acid. The patient's skin lesions showed significant improvement following the resolution of her pancreatitis within a 3 weeks follow-up.

# **Discussion:**

Pancreatic panniculitis commonly affects adults in the middle age of life with a male predominance. Paradoxically, our patient is a 50-year-old woman. It is characterized by tender, erythematous to violaceous nodules that commonly appear on the upper and lower extremities, and progress to liquefaction and necrosis, leading to spontaneous ulceration and issue of a brown viscous liquid as observed in our patient. On the physio pathological aspect, PP is caused by the massive release of lipolytic enzymes into the bloodstream which is attributed to the underlying pancreatic disease that is commonly inflammatory conditions. Additionally, it can serve as a diagnostic marker for acinar cell carcinomas. In fact, our patient was admitted for acute pancreatitis stage E of Balthazar. Histologically, PP is characterized by a massive necrosis of entire fat lobules, in which only cytoplasmic silhouettes of adipocytes persist, giving them a pathognomonic appearance of 'ghost cells'. Managing the underlying cause is key in treating pancreatic panniculitis, and wound care plays a crucial role in this process. Trichloroacetic acid has proven its efficacy in venous leg ulcers at various concentrations due to its anti-inflammatory properties and should therefore be considered for wider applications.

#### **Conclusion:**

Pancreatic panniculitis is a rare entity. Dermatologists and gastroenterologits should collaborate to ensure optimal care for their patients.

Assessing the Effects of a Novel Sunscreen Formulation of Specific Chemical UV-Filters vs a Pure Mineral UV-Filter Sunscreen on Patients With Sensitive Skin Syndrome: A Comparative, Randomized, Split-Face Clinical Study on Tolerability and the Effect on Skin Barrier Integrity

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# **Introduction & Objectives:**

Sensitive skin syndrome is a highly prevalent condition (approximately 59% in women and 44% in men) characterized by increased sensitivity to environmental factors and ingredients. Contributing factors to skin hyperreactivity include cosmetics, climate changes, and skin barrier impairment. Proper sun protection is crucial for individuals with sensitive skin due to their increased susceptibility to sun damage.

Sunscreens with only mineral UV filter actives are often recommended for people with sensitive skin due to low rates of sensitization and low allergenic potential. Novel formulations utilizing chemical UV filters with high molecular weights as well as increased melting points and lipophilicity have shown reduced interaction with skin and higher molar extinction coefficients indicating increased capacity for photoprotection (e.g., Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine (BEMT) and Ethylhexyl Triazone (EHT)).

Two sunscreens with different UV filters package were compared in terms of tolerance and impact on skin barrier function during 21 days of use in a split-face clinical evaluation.

#### Materials & Methods:

One novel SPF 70 sunscreen with 100% high molecular weight, high melting point, lipophilic chemical UV filters and a currently marketed product SPF 50+ 100% mineral sunscreen were compared split-face.

35 adult patients diagnosed with sensitive skin syndrome by dermatological assessment and self-declaration were included. We assessed the effects on sensitive skin tolerability through clinical grading, skin barrier integrity through transepidermal water loss measurements, subjects' self-perception on discomfort signs, after 21 days of use. Study design is shown in Figure 1.

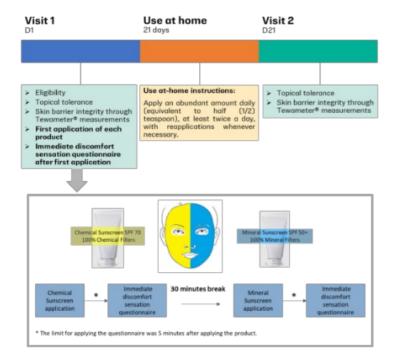


Figure 1: Study design and details of the first supervised split-face products application

## **Results:**

Clinical assessment showed no significant difference for erythema, peeling, blistering, and edema after 21 days of split-face use, in the comparison of Chemical and Mineral sunscreens. For the Mineral Sunscreen, a significant increase in peeling of mild intensity was observed after 21 days compared to the initial timepoint (p-value: 0.036).

Transepidermal Water Loss results showed that both sunscreens significantly improved skin barrier integrity after 21 days of use. A significantly greater improvement was observed for Chemical Sunscreen compared to Mineral Sunscreen (p-value: 0.036).

Patient's self-perceived discomfort sensation questionnaire results after first supervised product application showed no significant difference between the investigated products.

# **Conclusion:**

These findings support that the novel sunscreen formulation with select chemical UV filters and the sunscreen with pure mineral UV filters were similarly well tolerated as determined by both the dermatologist and the patient.

The Chemical Sunscreen studied was found to be an effective alternative to Mineral Sunscreen for improving skin barrier integrity, making it a suitable option for sun protection in those with sensitive skin.

# Idiopathic lobular panniculitis of pregnancy with spontaneous resolution following delivery

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**Introduction & Objectives:** Idiopathic lobular panniculitis (ILP) is a rare inflammatory disorder of the subcutaneous adipose tissue and usually presents with fever and may have systemic organ involvement. It is a diagnosis of exclusion, and an extensive systemic workup should be performed to rule out other causes.

**Materials & Methods:** A 41-year-old female with a history of hyperthyroidism and methimazole consumption without a history of cold exposure or injury presented at 36 weeks' gestation to the hospital with one-week history of pain, swelling, and redness of inner aspect of both her thighs. On admission, the patient had low grade fever but hemodynamically was stable. Physical exam was notable for large indurated and edematous ill-defined pink-to-red plaque involving inner aspect of both her thighs with tenderness on palpation. On ultrasound demonstrated increased echogenicity and edema of skin and subcutaneous soft tissue without collection. Antibiotics was started with diagnosis of cellulitis. There was no improvement after taking cephazolin, clindamycin, meropenem and vancomycin for 1 week and skin biopsy were obtained.

Pathology examination demonstrated a mixed infiltrate of lymphocyte and neutrophil with lymphocyte-predominant in subcutaneous fat lobules, fibrin thrombi, and fat necrosis. The epidermis was uninvolved and dermis demonstrated a perivascular and periadnexal lymphohisticocytic infiltrate. Tissue cultures of skin for any type of organism were negative. Further workup was only notable for elevated erythrocyte sedimentation rate to 70 and C-reactive protein to 32. Other screening tests were normal. Following delivery, the patient experienced rapid resolution of her symptoms during two weeks without any specific treatment. At 6-month clinical follow up, she remained asymptomatic without any cutaneous lesion.

**Results:** Panniculitides are categorized as predominantly septal or lobular. Patients typically develop indurated, edematous, tender plaques, or nodules in areas of adiposity. Anatomic location is generally on the lower extremities. The presence of panniculitides is often an indication that a patient has an underlying condition. Erythema nodosum, is common septal panniculitis in pregnancy but Lobular panniculitis in pregnancy is rare and extensive evaluation should be taken to rule out other type of panniculitis.

Our case is distinct because histopathology demonstrated an ILP with fat necrosis, without vasculitis. Patients with ILP may have systemic involvement but our patient had a skin-limited bilateral form of ILP, which resolved spontaneously with delivery and only medicine she took, was an analgesic to reduce the pain. There are several hypotheses which link the association of pregnancy with panniculitis. Pregnancy is an immunomodulatory condition and type 4 hypersensitivity reaction to progesterone or estrogen plays a role in the development of panniculitis. An additional theory is release of inflammatory mediators in response to activation of the complement system as a result of the deposition of immune complexes within the subcutaneous tissue which leads to tissue destruction.

**Conclusion:** This case has value in recognizing a rare form of panniculitis during pregnancy which had a benign clinical course after delivery. It should be added to the list of pregnancy-associated dermatoses that obstetricians and dermatologists need to be aware of, particularly as a mimicker of cellulitis and other causes of panniculitis.

# Pyoderma gangrenosum, a cohort of 10 patients. Our experience of the past few years.

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# **Introduction & Objectives:**

Pyoderma gangrenosum (PG) is a rare, inflammatory, extremely painful and rapidly progressive pathology. Its usual way of presentation is a violaceous undermined border ulcer which mostly compromises the inferior extremities. PG's pathophysiology is still unknown. It is believed there is a misbalance among the cytokines related to both the innate and acquired immunity, specially related to the inflammasome. Different kind of traumas can act as triggers. Due to the poor understanding of PG, there are no consensus or guidelines about its management and treatment.

PG represents a challenge for the dermatologist, from its diagnosis up to its treatment. There is so little bibliography about this clinical entity that we wanted to reunite our clinical cases, analyse their demographic characteristics and compare them in relation to the published evidence.

# **Materials & Methods:**

We have searched the term "pyoderma gangrenosum" in the clinical histories of the dermatology department from January 1st 2020 to January 1st 2024. Ten cases popped up. We have analysed certain demographic parameters like sex, age, background, history of mechanical trauma, daily medications, associated comorbidities, compromised anatomical region, number of ulcers, associated symptom, skin biopsy, laboratory findings, antibodies, initial treatment, maintaining treatment and outcome.

# **Results:**

We have evaluated 10 patients. Of the total, 4 were males and 6 women. The mean global age was 56.7 years. Among the first group the mean age was 67 and in the second, 50 years. Five patients referred some kind of trauma which was interpreted as a trigger of the PG. Three of them were women who had gone through a breast surgery (reductive as well as additive by the colocation of breast implants). One of these three, in addition, consumed inhaling cocaine. One male had a functioning colostomy and the other one had a shearing episode with a rope while walking his dog. Two of the males had a neoplastic background. One of them, already knew the diagnosis prior to the PG but the other one, was diagnosed secondary to the skin compromise. The tumours were a rectum adenocarcinoma and a multiple myeloma respectively. The first one has developed in the context of ulcerous colitis. Among the women, one of them was diagnosed with Crohn's disease as a consequence of the cutaneous compromise. It is noteworthy, that another woman referred having an autoimmune hepatitis of longstanding evolution before the PG diagnosis. Regarding the clinical presentation, the inferior extremities were the most affected anatomical area. Five cases had a unique lesion. Every patient has reported local pain as an associated symptom. Nine patients have received as first line treatment metilprednisone. The remaining one, since he had a unique ulcer, received high potency tropical corticosteroid with a fabulous clinical outcome. Two patients had been treated additionally with infliximab experiencing a favourable response until nowadays.

# **Conclusion:**

PG is poorly understood due to its rarity and its complex ethiopathology. In the actual literature, there are a few number of case reports and small case series. Our cases reflect the spectrum of clinical presentations that can be seen under the diagnosis of PG, from mild clinical cases to extensive severe ones which require biological treatment to control the inflammatory background. We do believe that communicating our cases, can add some light to this orphan pathology.

a study on clinico histological characteristics in patients with erosive palmoplantar lichen planus from a tertiary care hospital in north east india.

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# **Introduction & Objectives:**

Palmoplantar lichen planus is an uncommon disorder that can pose a diagnostic dilemma for practising dermatologists not only in absence of characteristics lichen planus (LP) lesions elsewhere in the body but also because of its varied atypical presentations. Erosive or ulcerative variant of palmoplantar lichen planus (ELP) is even a rarer entity that has only been described as case reports in literature. This study aims to demonstrate the clinical and histological characteristics of erosive variant of palmoplantar lichen planus.

## **Materials & Methods:**

This was a retrospective study conducted in a tertiary care hospital in North East India; from 2013-2023, where records of all diagnosed cases erosive palmoplantar lichen planus were analysed.

#### **Results:**

A total of 15 patients were included in the study. The median age was 15 years; the youngest was 9 years while the oldest was 62 years. Majority of the individuals were paediatric population comprising about 60 % (9/15) as compared to adults (40%). Male preponderance was noted with a M:F ratio of 1:1.5. Family history was seen in 13.33%.

Clinical description of the cases revealed the following: the only primary sites of involvement in all were heels. Hyperkeratotic plaque with painful ulcerations, were universal symptoms of presentation.

The nail findings accounted for a total of 53.33% (8/15), out of which toe nails were affected in all the 8 patients while the finger nails were additionally affected in 4/8 individuals. All ten toe nails units were involved in 2/8 (25%), while 5 to 9 toe nail units were involved in 50% and 25 % had less than 5 toe nail units affected. Out of the four patients who had finger nail units involvement, 2 patients had 1- 2 units, while one person each, had all 10 units and 7 units of nail changes. With regards to the observed changes in the nail units, complete or partial anonychia was present universally in all the eight patients. Dystrophic changes were the second most common finding seen in 62.5%, followed by pterygium in 50% patients. Longitudinal ridging and nail splitting was seen in 37.5 % each while other minor changes included melanonycia, beaus line, coarse pitting, periungual scaly plaque, periungual erosion. One patient presented as twenty nail dystrophy while additionally another presented as syndactly of the toes secondary to scarring giving it a characteristic mitten appearance. Associated lesions of lichen planus was seen in 13.33% over dorsa of fingers, while none of the patients had scarring alopecia of the scalp or any mucosal involvement.

Prominent epidermal changes in histology included basal cell degeneration accounting for 93.33% followed by hyperkeratosis in 66.66%, irregular acanthosis and hypergranulosis seen in 53.33% and 46.66% respectively. Dermal changes revealed characteristic band like lymphocytic inflammatory infiltrate along the dermoepidermal junction in all the slides. Additionally perivascular inflammation was seen in 33.33%. Civatte bodies were present in 26.66%,

while saw toothing of rete ridges was observed in 20%. melanophages were seen in 13.33%.

# **Conclusion:**

This is the first study that demonstrates the clinico-histopathological characteristics of erosive plantar lichen planus in a largest series of patients not only from India but worldwide: with characteristic male preponderance and largest record of its occurrence in the paediatric population and involving a single indigenous tribal population in North East India.

**Cutaneous Plasmacytosis: a case report** 

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**Introduction & Objectives:** \*\* Cutaneous plasmacytosis (CP) is a rare skin disorder characterized by multiple reddish-brown nodules with polyclonal plasma cell proliferation. It has most often been reported to affect the trunk but is also known to affect the face and extremities in adults and is predominantly seen in Asians. The etiology is poorly understood, and there is no consensus on treatment methods.

## **Materials & Methods:**

We present the case of a man diagnosed with cutaneous plasmacytosis

#### **Results:**

A 58-year-old male presented with the history of persistent asymptomatic papules and plaques on the back, neck and trunk which gradually increased over three years. Physical examination revealed multiple discrete infiltrative erythematous to brownish plaques and nodules on the face, neck, trunk and back, with some pustules in certain areas. The skin biopsy showed mature plasmacytic dermal infiltrate requiring immunohistochemical study. The immunohistochemistry revealed no light chain restriction.

The diagnosis, cutaneous plasmacytosis, was established by the pertinent laboratory findings. Primary cutaneous plasmacytosis was an uncommon reactive lymphoplasmacytic disorder of uncertain etiology. Cutaneous plasmacytosis is a rare disease characterized by peculiar multiple eruptions and hyper gamma globulinemia. It has been mainly described in patients of Japanese descent, with only few reports in Caucasians and Chinese and none of Africain descent, although information concerning the disorder was limited.

Cutaneous plasmacytosis is a rare disorder, which is characterized by multiple red to dark-brown nodules and plaques on the trunk and usually associated with polyclonal hyper gamma globulinaemia. Primary cutaneous plasmacytosis or cutaneous plasmacytosis was thought to be a reactive process with unknown etiology. Histologically, lesions contain dense perivascular infiltration of mature polyclonal plasma cells without any atypia, in the dermis and subcutaneous fat. The clinical course is chronic and benign without spontaneous remission.

The patient with cutaneous plasmacytosis in this report was treated with cyclins, after 2 months of treatment the skin lesions are starting to improve

#### Conclusion:

In the management of patients with CP, it is important to exclude secondary causes of plasmacytic infiltrates. Cutaneous plasmacytosis, however, is chronic and benign and is characterized by the development of multiple plasma cell-rich infiltrates in the skin

# Gasdermin D-dependent neutrophil extracellular traps exacerbate cytokine storm contributing to pyoderma gangrenosum pathogenesis

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# **Introduction & Objectives:**

Pyoderma gangrenosum (PG) is a neutrophilic dermatosis distinguished by the recurrent, rapidly progressive, and painful necrotizing ulcers with non-infectious neutrophil infiltration as a histological hallmark. The pathogenesis of PG remains inadequately understood. Neutrophil extracellular traps (NETs) are among the activation mechanisms of neutrophils, and gasdermin D (GSDMD) has a regulatory impact on NETs. Nonetheless, the regulation of NETs by GSDMD and its related pathways in the pathogenesis of PG remain ambiguous.

The aim of this study is to investigate the pathogenesis of PG, establish an animal model of PG, elucidate the role of GSDMD in regulating the production of NETs by neutrophils, the release of inflammatory factors in the pathogenesis of PG.

## **Materials & Methods:**

The study employed various methodologies, including (1) detection of the expression levels of inflammatory factors, including myeloperoxidase (MPO)-deoxyribonucleic acid (DNA) complexes, GSDMD, interleukin (IL)-1 $\beta$ , tumor necrosis factor (TNF)- $\alpha$ , IL-17A, IL-8, interferon (IFN)- $\gamma$ , and IFN- $\alpha$  in peripheral blood serum of PG patients by enzyme-linked immunosorbent assay (ELISA) and quantitative Real-time PCR (qRT-PCR), and comparison with healthy controls (HC); (2) establishment of a mouse model of PG on GSDMD knockout mice and wild type (WT) mice, collection of skin lesions and adjacent tissues at the modeling site, detection of the degree of neutrophil infiltration and NETs expression level in the skin lesion tissue by hematoxylin-eosin staining and immunofluorescence staining, and detection of the expression levels of inflammatory factors.

# Results:

1. In comparison to HC, PG patients had significantly higher levels of MPO-DNA complexes and inflammatory factors, including IL-1 $\beta$ , TNF- $\alpha$ , IL-17A, IL-8, IFN- $\gamma$ , and IFN- $\alpha$ , in their peripheral blood serum. The spontaneous production of neutrophil extracellular traps (NETs) in the peripheral blood was also significantly enhanced in PG patients. Additionally, the ability of neutrophils to stimulate NETs production in peripheral blood serum from healthy controls was significantly enhanced in PG patients. Moreover, the expression levels of NETs in PG patients' skin lesions were significantly increased. (2) Injection of serum from PG patients into the back skin of wild-type mice induced the formation of local skin ulcers. Histopathological analysis revealed extensive infiltration of neutrophils in the dermis and adipose tissue layers. Furthermore, after modeling, the white blood cell count and neutrophil count of mice significantly increased, and the expression levels of IL-1 $\beta$  and TNF- $\alpha$  in their peripheral blood serum significantly increased, indicating that the PG mouse model was successfully established. (3) The expression levels of NETs and gasdermin D (GSDMD) in skin lesions and peripheral blood serum of wild-type mice significantly increased after modeling.

# **Conclusion:**

1. A PG mouse model was successfully established. After modeling, the skin lesions, abnormal laboratory

indicators, and expression levels of serum inflammatory factors in mice were similar to those of PG, which can better simulate the disease characteristics of PG; (2) GSDMD mediates the production of NETs by neutrophils, thereby releasing inflammatory factors such as IL-1 $\beta$ , TNF- $\alpha$ , IL-17A, IL-8, IFN- $\gamma$ , and IFN- $\alpha$ , which participate in the pathogenesis of PG.

## Pustular psoriasis of pregnancy and hydroxychloroquine: a case report and a review of the literature

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**Introduction & Objectives:** Pustular psoriasis of pregnancy (PPP) represents a rare manifestation of generalized pustular psoriasis within the gestational period with risk to both the gravid mother and the developing fetus. While sporadic cases of drug-induced PPP have been reported, we present a case of PPP manifesting in the second trimester subsequent to the administration of hydroxychloroquine (HCQ), which we hypothesize as a potential trigger, with a litterature review of HCQ induced PPP.

**Materials & Methods:** A previously healthy 37-year-old woman (with no past medical history of psoriasis) was diagnosed with Sjogren's disease during her first trimester of pregnancy. Treatment was initiated with HCQ at a dose of 200 mg daily.\*\* At 22 weeks of her first gestation, 23 days after starting HCQ, the patient presented with multiple confluent annular plaques with peripheral post-pustular desquamative collarettes, affecting the limbs, upper trunk, and mid-abdominal region. Skin biopsy revealed a multilocular non-follicular pustular dermatosis consistent with PPP, with negative direct immunofluorescence findings. Morphological ultrasound of the second trimester of pregnancy and fetal monitoring was unremarkable. Laboratory tests showed hyperleukocytosis, with a white blood cell count of 11.5 x 10^9/L, 9000 neutrophils, and a CRP level of 26 mg/L.

Results: Management of PPP involved initiating corticosteroid therapy at 0.5 mg/kg, resulting in partial improvement. Subsequently, due to insufficient response, one week later, cyclosporine was added at a dose of 2.5 mg/kg, leading to significant improvement in lesions within 48 hours of initiation. No complications related to cyclosporine treatment, notably maintaining good blood pressure control, were observed, and the dermatosis did not impact pregnancy outcome. HCQ has been linked to several adverse effects, including dermatological manifestations such as acute generalized exanthematous pustulosis, plaque-type psoriasis, and generalized pustular psoriasis. However, the incidence of new onset generalized PPP following HCQ administration is rare, and scant data are available regarding their association. Five cases have been reported with imputation of HCQ in development of PPP (Table 1). The onset of PPP ranged from 1 to 4 weeks after initiating HCQ therapy similarly to the onset period for pustular psoriasis induced by HCQ outside of pregnancy context (table 2). This contrasts with non-drug-induced PPP, which typically manifests more frequently during the third trimester of pregnancy. Primiparity did not appear to be associated with the occurrence of PPP. Merely discontinuing HCQ was insufficient for managing PPP. While one case experienced improvement with corticosteroid treatment, three cases required the administration of cyclosporine. Most of the HCQ induced PPP cases had poor pregnancy outcomes and led to premature delivery.

**Conclusion:** Limited data are available regarding the frequency of fetal monitoring in the context of PPP and the importance of premature delivery. Similarly, there is scant information on contraindications for future pregnancies or the use of oral contraceptive pills in this condition. Future research endeavors are warranted, and it would be valuable to investigate the IL36RN profile of patients to ascertain whether they exhibit a predisposition to PPP development, particularly concerning exposure to hydroxychloroquine.

Table 1: Patient Characteristics in Hydroxychloroquine-Induced Pustular Psoriasis of Pregnancy

Case report	Ag e	Condition treated with HCQ	Primipari ty	Duration from HCQ Initiation to Onset of Pustular Eruption	Gestational age at pustular psoraisis onset	Dose of HCQ	Treatement after HCQ discontinuation	Pregnancy outcomes/Gest ational age at birth
Gravani, 2014 (12)	37	Lichen planopilaris	Yes	4 weeks	25	400	GC, ciclosporine	39
Ryoo, 2023 (6)	33	SLE	No	21 days	17	200	GC, ciclosporine	28
Wan, 2023 (7)	30	Sjogren syndrome	No	4 weeks	19	200	GC, ciclosporine	29
Liu, 2022 (3)	29	SLE	Yes	1 week	4	300	GC	Stillbirth at 8 weeks
Kaikati, 2024	37	Sjogren syndrome	Yes	23 days	22	400	GC, ciclosporine	Unkown

Table 2: Patient Characteristics in Hydroxychloroquine-Induced Pustular Psoriasis

Case report	Sex	Age	Condition treated with HCQ	Duration from HCQ Initiation to Onset of Pustular Eruption	Dose of HCQ	Treatement after HCQ discontinuation
Magalie, 2016 (15)	F	70	Mixed connective tissue disease	2 weeks	Not described	GC
Shindo, 2019 (13)	F	34	SLE	21 days	200	GC, ciclosporine
Gravani, 2013 (12)	F	40	Lichen planopilaris	1 month	400	GC, ciclosporine
Midorikawa, 2021 (14)	F	30	SLE	Not described	200	High potency topical steroids
Karaalioglu, 2022 (16)	F	49	SLE	1 month	400	High potency topical steroids + PUVA therapy
Friedman, 1987 (17)	М	60	Rhumatoid arthritis	21 days	400	High potency topical steroids

# Polymorphous cutaneous sarcoidosis unmasked by SARS-CoV-2 mRNA vaccination: case report and literature review

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# **Introduction & Objectives:**

We present an interesting case of polymorphous cutaneous sarcoidosis with concurrent rheumatoid arthritis (RA) triggered by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) messenger RNA (mRNA) vaccination and review the literature regarding this uncommon presentation.

## **Materials & Methods:**

A 48-year-old female with background of diabetes mellitus and hyperlipidaemia developed pruritic rashes on her forearms, chest, and posterior neck six days after the first dose of Pfizer-BioNTech BNT162b2 SARS-CoV-2 vaccination. She developed bumps on her tattoo and flare of lower limb rashes of two-year duration. She experienced right knee pain, swelling for a few months and early morning stiffness affecting both hands.

There were no new medications. Besides poor appetite and weight loss, there were no other systemic symptoms.

Examination revealed flat-topped scaly papules over bilateral arms, central chest, and posterior neck, scaly plaques within her right deltoid black tattoo, thick scaly plaques over bilateral shins and a linear scaly plaque extending from her right medial ankle up to her right posterior thigh.

Punch biopsies from right forearm, right deltoid tattoo and right posterior thigh linear rashes showed scattered granulomas in the superficial dermis composed of epithelioid histiocytes and occasional Langerhan-type multinucleated giant cells. Acid fast bacilli smear, culture and tuberculosis polymerase chain reaction were negative.

She had raised erythrocyte sedimentation rate, positive anti-cyclic citrullinated peptide and rheumatoid factor. Tuberculosis enzyme-linked immunospot was negative. Chest radiograph did not show hilar lymphadenopathy.

Clinical and histological features were consistent with cutaneous sarcoidosis, precipitated by immune upregulation due to vaccine. She was diagnosed with RA and started on oral prednisolone. There was no clear systemic involvement of sarcoidosis. Her rashes improved with topical clobetasol ointment over few weeks. She received a second dose of Pfizer-BioNTech vaccine without further flare of her condition while on oral prednisolone 5mg once daily. She was started on methotrexate for RA and prednisolone was tapered off.

#### **Results:**

Sarcoidosis is a multi-system disease of unknown etiology characterised by noncaseating granulomas in various organs. The skin is the second most commonly affected organ. Cutaneous sarcoidosis is dubbed the great imitator for its various morphological presentations. Different morphologies reported in the same patient is termed polymorphous cutaneous sarcoidosis. Few case reports of sarcoidosis post-SARS-CoV-2 vaccine have been reported to date and these include cutaneous and extracutaneous manifestations. Table 1 summarises the various cutaneous morphologies which include erythema nodosum-like, erythema nodosum (EN) in the setting of

sarcoidosis, scar sarcoidosis, papular variant, Sweet syndrome-like, and erythrodermic. Sarcoidosis has been reported to occur regardless of the type of SARS-CoV-2 vaccines. T-cell mediated up-regulation elicited by the SARS-CoV-2 vaccine results in sarcoidosis flare.

## **Conclusion:**

We report an uncommon case of polymorphous cutaneous sarcoidosis with papular, plaque, scar and linear morphologies with concurrent RA flare possibly triggered by immune up-regulation post-SARS-CoV-2 vaccine. Sarcoidosis post SARS-CoV-2 vaccine is rare and prognosis is good based on anecdotal reports.

## Global Delphi consensus on treatment goals for generalised pustular psoriasis (GPP)

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## **Introduction & Objectives:**

Generalised pustular psoriasis (GPP) is a heterogeneous inflammatory disease associated with recurrent, unpredictable flares, chronic symptoms and high morbidity, which greatly impact quality of life (QoL). Due to a lack of evidence-based management goals, GPP has historically been treated with therapies for plaque psoriasis (PsO).1 However, as GPP is distinct from plaque PsO, specific treatment goals are required to address its broad spectrum of symptoms. A previous Delphi study established consensus among dermatologists on key principles of GPP treatment;2 however, various aspects of treatment goals remain unclear. Here, we report results from the first Delphi study to incorporate both physician and patient perspectives to achieve consensus on holistic treatment goals for GPP.

#### **Materials & Methods:**

Statements were formulated based on a systematic literature review (SLR) conducted in 2022, and input from a steering committee of clinical experts. This study followed the Delphi method; statements were evaluated by a panel of 30 dermatologists and three patient representatives, through two planned rounds of questionnaires. Consensus was defined as  $\geq$ 80% agreement or disagreement.

## **Results:**

The SLR provided a comprehensive understanding of the current evidence landscape, forming the basis for 26 statements evaluated by the Delphi panel on three key treatment goal domains: overarching principles, and short-and long-term goals. The study involved 33 panellists, providing global representation (24 countries) with a balanced gender ratio (52% male); all panellists were aged ≥40 years. All dermatologists had experience with GPP and 57% were based only in a hospital setting. Consensus was achieved for all statements in the first round (Table), with no need for revisions.

The overarching principles for GPP management were established with near 100% agreement, emphasising the condition's complexity and the need for timely, multidisciplinary collaboration. Tailored treatment plans, comprehensive approaches addressing short- and long-term goals, and regular patient evaluations were recommended (≥97%).

For short-term treatment goals, the panel reached a consensus on all metrics, including pustular clearance within 7 days and prevention of new pustules within 2–3 days of treatment initiation (≥82%). Further agreements included pain reduction, resolution of fever, and improvement in inflammatory biomarkers (≥91%). Panellists agreed that GPP treatment should be prioritised in patients with comorbid psoriatic diseases.

Long-term treatment goals focused on minimising disease severity, preventing flares, and controlling signs and symptoms between flares (≥97%). Management of comorbidities, improvement in QoL, and sustained disease control were emphasised (≥94%). Panellists agreed that sustained disease control is defined as continuous clear/almost clear skin (100%), and caution was urged against discontinuing therapy prematurely (88%).

## **Conclusion:**

This is the first Delphi consensus study in GPP to incorporate patient perspectives and GPP-specific clinical endpoints, offering clear guidance for healthcare professionals and holistic treatment goals for patients. This patient-centric consensus provides a foundation for shared decision-making and evidence-based management of GPP.

## **References:**

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**Table**. Statements on treatment goals for generalised pustular psoriasis with expert consensus

Domain/subdomain	Statement	Agreement
	GPP is a complex, heterogeneous, and chronic condition, with effective management requiring timely treatment and multidisciplinary collaboration to prevent escalation to life-threatening complications	100%
	Effective management of GPP requires a comprehensive treatment approach that addresses both:  • Long-term objectives, including the prevention	100%
	of future flares  Minimising disease activity	100%
Domain 1: Overarching principles	Optimising functional status and improving quality of life	100%
F	<ul> <li>Preventing or minimising complications that may arise from untreated active disease</li> </ul>	100%
	Minimising morbidity	97%
	Short-term goals, such as flare treatment	97%
	Tailored treatment plans should be created collaboratively between the patient and their healthcare providers	97%
	Patients should be seen promptly and offered regular evaluations by appropriate specialists, where treatment should be modified as necessary	97%
	Substantial pain reduction (e.g. at least –4 points on a numeric rating scale for the 0–10 ltch and Skin Pain NRS item)	100%
	Prevention of life-threatening complications	100%
	Resolution of fever within 3 days	97%
Domain 2: Short-term	Substantial improvement in fatigue	97%
treatment	Evaluate the effectiveness of treatment within 3–7 days of initiation	97%
	Prevent the formation of new pustules; no new/fresh pustules observed within 2–3 days of treatment initiation	94%
	When managing patients with comorbid psoriatic diseases, treatment decisions should prioritise GPP	94%

Domain/subdomain	Statement	Agreement		
	Achieve pustular clearance; GPPGA pustulation sub-score	91%		
	of 0 within 7 days of treatment initiation			
	Progressive improvement of inflammatory biomarkers	91%		
	(e.g. CRP and/or ESR)			
	Pustules should be the main metric for assessing	020/		
	response to treatment	82%		
	Avoiding hair and/or nail loss	82%		
	Minimising disease activity to the greatest extent			
	possible, including but not limited to:			
	Prevent flares, reduce the frequency of flares	100%		
	and/or prolong the time between flares			
	<ul> <li>Control of signs and symptoms of GPP (e.g.</li> </ul>			
	pustules, erythema, pain, itching) between	97%		
	flares			
	Sustained improvement of QoL as measured by DLQI	100%		
Domain 3: Long-term	and/or other related PROs, as well as work productivity	100%		
treatment	Sustained disease control is defined as continuous clear	100%		
	or almost clear skin			
	Management of potential associated conditions	94%		
	Clinicians and patients need to be educated			
	that the potential risk of tapering or			
	discontinuing therapy in patients who have	88%		
	achieved treatment goals may result in new	3070		
	episodes of flaring			
	NOI Dermatalagu Life Quality Inday, ESP anothropita cod			

CRP, C-reactive protein; DLQI, Dermatology Life Quality Index; ESR, erythrocyte sedimentation rate; GPP, generalised pustular psoriasis; GPPGA, Generalised Pustular Psoriasis Physician Global Assessment; NRS, Numerical Rating Scale; PRO, patient-reported outcome.

The Dutch nationwide deep-phenotyping flagship project Next- Generation- Immuno-Dermatology (NGID): The right care, for the right patient, at the right time

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On behalf of the Next Generation ImmunoDermatology Consortium

# **Introduction & Objectives:**

Skin diseases often have a huge impact on patients' life. Currently, dermatological care is mainly based on a one-size-fits all approach, which fall short due to a complex interplay of individual factors influencing disease progression and treatment response. Next- Generation- Immuno-Dermatology (NGID) aims to change the one-size-fits-all approach into high-tech personalized care, by identifying individual biomarker profiles for six skin diseases: psoriasis, atopic dermatitis, chronic urticaria, hidradenitis suppurativa, cutaneous lupus erythematosus, and mycosis fungoides.

## **Materials & Methods:**

NGID, a Dutch nationwide consortium, brings together a unique blend of inter- and multidisciplinary research, including patients, basic, translational and clinical researchers. A key initiative within NGID is the large-scale prospective biomarker trial, named SKINERGY, enrolling 840 participants, approximately 120 patients per skin disease. The trial involves comprehensive datacollection, including blood samples, skin biopsies, tape strips, skin swabs, surveys, photography, and non-invasive imaging techniques like line-field optical coherence tomography (LC-OCT). NGID also emphasizes the investigation of psychological factors that may impact disease progression and treatment response. Additionally, there is a significant focus on tele-health, which enables the continuous tracking of symptoms and treatment outcomes from a distance, enhancing patient care and management. The variety in the collected data, spanning from molecular to clinical patient data, will be integrated into a unified modular omics-platform. Biomarker analyses derived from this platform will in turn contribute to the development of translational human skin models. Engagement of key stakeholders, including dermatologists and patients, throughout the project, will ensure alignment of research findings with daily practice needs. Looking forward to future research with data post biomarker implementation, a real-world evidence registry will be established.

## **Results:**

The project management and infrastructure has been setup. The operational phase of the project has been

kicked-off with 2 exploratory SKINERGY trials that have been completed and 2 trials currently enrolling patients. Moreover, all work-packages are starting up and as the patient plays a central role in NGID, extensive consultations with patient organizations have already taken place.

## **Conclusion:**

NGID's nation-wide approach aims to revolutionize dermatological care by tailoring treatments to individual patient needs. Integrating biomarker proflies into routine clinical practice will enhance healthcare decisions and pave the way for personalized medicine in dermatology. Additionally, by establishing a real-world evidence register, treatment effectiveness data post biomarker implementation will be collected, offering valuable insights for future research and clinical practice.



Associations between clinical characteristics and screening MRI findings: Exploratory analysis of the ongoing phase 4, multicenter, randomized, controlled STAR study of biologic-naïve patients with PsA with MRI-confirmed axial involvement

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**Introduction & Objectives:** Patients (pts) with psoriatic arthritis (PsA) can potentially develop axial inflammation in the sacroiliac joints (SIJs) and/or spine. Although validated classification criteria exist for axial spondyloarthritis, established criteria for classifying axial PsA are lacking. STAR (NCT04929210), a Phase 4, multicenter, randomized, controlled trial of biologic-naïve PsA pts with current neck/back/hip (spinal) pain and magnetic resonance imaging (MRI)-confirmed axial inflammation, is prospectively evaluating the efficacy of guselkumab (GUS), a human IL-23p19-subunit inhibitor, on axial symptoms and objective measures (MRI) of axial inflammation.1 This exploratory analysis of available screening MRI data from STAR compared clinical characteristics between pts meeting vs not meeting STAR MRI eligibility criteria.

Materials & Methods: 405 pts were randomized (1:1:1) to GUS every 4 weeks (Q4W; W0, W4), then Q8W; or placebo→GUS Q8W at W24. Eligibility criteria: active PsA (≥3 swollen, ≥3 tender joints, C-reactive protein [CRP] ≥0.3 mg/dL) despite non-biologic disease-modifying antirheumatic drugs, apremilast, and/or non-steroidal anti-inflammatory drugs. Eligible pts are naïve to biologics/Janus kinase inhibitors and have Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) ≥4, BASDAI spinal pain score ≥4, and screening MRI-confirmed axial involvement (positive spine and/or SIJ MRI defined by blinded, centrally-read Spondyloarthritis Research Consortium of Canada [SPARCC] score ≥3). SIJ/Spine MRI reading involves 2 central readers and an adjudicator, requiring agreement by 2 readers to confirm a positive (+) or negative (−) MRI result. Pt clinical characteristics and medical history at screening were compared between MRI+ and MRI— cohorts to determine associations with MRI-detected inflammation of the SIJ and/or Spine (Figure).

**Results:** Of 487 pts screened to date, those with non-missing MRI results included: 459 SIJ (34% MRI+), 461 Spine (30% MRI+), 433 SIJ & Spine (15% SIJ+/Spine+, 26% SIJ+/Spine— or SIJ-/Spine+, 59% SIJ-/Spine—). Percentage of males and serum CRP levels were significantly higher in both SIJ+ vs SIJ— and Spine+ vs Spine— cohorts. The SIJ+ cohort was characterized by younger age (mean: 44.7 vs 47.4 y), a higher spinal pain score (mean: 7.7 vs 7.3), and fewer tender joints (mean: 12.6 vs 15.5) vs the SIJ— cohort (all nominal *p*<0.05). Consistent but not statistically significant numerical differences were seen in spinal back pain score and tender joint counts between the Spine+ and Spine— cohorts (Table). SIJ+ cohort comprised higher proportions of pts with a history of inflammatory back pain, nail or scalp psoriasis vs SIJ— cohort. Pts with a history of palmoplantar psoriasis appeared less likely to exhibit MRI-detected inflammation in the SIJ/Spine (Figure). Differences between the SIJ+/Spine+ (N=66) and SIJ—/Spine— (N=257) cohorts were generally aligned with the site-specific cohorts (data not shown).

**Conclusion:** Preliminary findings are consistent with the recognized positive association between serum CRP levels and axial PsA involvement and suggest that several clinical characteristics may also be associated with the presence or absence of MRI-detected axial inflammation. The STAR study is actively enrolling.

#### Reference:

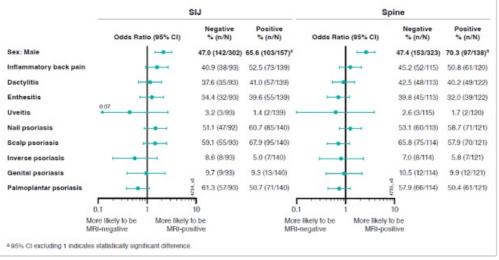
\1. Gladman. Trials. doi.org/10.1186/s13063-022-06589-y

Table: Pt. clinical characteristics by screening MRI status in STAR study

Table: Mean (SD) Pt Clinical	SIJ	MRI	Spine MRI		
Characteristics by Screening MRI Status in the STAR Study	Negative (N=302)	Positive (N=157)	Negative (N=323)	Positive (N=138)	
Age, yrs	47.4 (12.7)	44.7 (11. 8)*	46.2 (12.9)	47.9 (11.0)	
CRP, mg/dL	14.8 (22.7) <sup>a</sup>	19.6 (27.4)*	14.7 (22.4)b	18.9 (27.9)*	
Swollen Joint Count (0-66)	8.0 (5.4)°	7.5 (5.0)	8.1 (5.7)b	7.1 (4.4)	
Tender Joint Count (0-68)	15.5 (11.9)°	12.6 (8.8)*	15.1 (11.9)b	12.6 (8.4)	
BASDAI (VAS 0-10)	7.1 (1.3) <sup>d</sup>	7.2 (1.2)e	7.1 (1.3) <sup>f</sup>	6.9 (1.3)g	
Spinal back pain (VAS 0-10)	7.3 (1.6)d	7.7 (1.4)*,e	7.4 (1.6) <sup>f</sup>	7.6 (1.4)g	

BASDAI, Bath Ankylosing Spondylitis Disease Activity Index; CRP, C-reactive protein; MRI, magnetic resonance imaging; Pt, patient; SD, standard deviation; SIJ, sacroiliac joint; VAS, visual analog scale

Figure. Pt Clinical Characteristics Based on Medical History in MRI-negative and MRI-positive Cohorts in the STAR Study



MRI, magnetic resonance imaging; Pt, patient; SIJ, sacroiliac joint

## Clinical and histopathologic features of scalp rosacea in brown skin: A case series

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## **Introduction & Objectives:**

Rosacea is a chronic inflammatory disease that manifests as papules, pustules, telangiectasias, and erythema. Although it usually affects the face, this condition can extend beyond the facial area. Extrafacial rosacea is commonly observed in sun-exposed areas including the scalp. Due to its atypical presentation, scalp rosacea is rarely reported since diagnosing this condition may be challenging, especially in skin of color. Herein, we report twelve cases of recurrent papules and pustules on the scalp, usually triggered by prolonged sun exposure without residual scarring.

## **Materials & Methods:**

Twelve patients presented at the clinic due to pruritic and painful papules on the scalp after prolonged sun exposure and stressful events. Detailed history taking and physical examination were conducted. Patients who fulfilled the 2018 ROSacea COnsensus (ROSCO) criteria for rosacea were included in the case series. A 4 mm punch biopsy of a papule, pustule or a red patch was done on all patients. Baseline and follow up photos of the face and the scalp were taken using a digital single-lens reflex (DSLR) camera and a three dimension (3D) medical imaging device.

## **Results:**

All 12 patients were males aged 12 to 59 with a mean age of 30.8. All patients complained of longstanding recurrent or persistent papules and pustules on the scalp with or without overlying erythema. The most common trigger factors include sun exposure (39%), heat (22%), alcohol (22%), and emotional stress (17%). These patients had undergone prior consultations with different physicians and were initially managed as either bacterial folliculitis or folliculitis decalvans. All patients experienced frequent flare-ups of their condition, but no definite diagnosis was established. All 12 patients have concomitant facial rosacea, and the predominant phenotypes are centrofacial erythema and phyma. Despite the recurrent lesions on the scalp, patients were observed to have no scarring and alopecia. The results of Gram stain were negative; and the histopathologic findings of scalp biopsy revealed perifollicular infiltrates, some with neutrophils, which suggest a diagnosis of rosacea.

Patients were managed with ivermectin 1% cream twice a day, oral azithromycin for 4 to 6 weeks during acute flares, and low-dose isotretinoin for long term control of disease activity. Most of the patients demonstrated excellent responses observed as a decrease in the number of lesions to complete resolution of lesions within one to two months of treatment. Patients were also advised to take necessary measures to avoid factors that trigger their symptoms.

# **Conclusion:**

Accurate diagnosis is crucial when dealing with scalp rosacea, which is often underdiagnosed, especially in brown skin. We present these cases of rosacea patients, with chronic and recurrent papules and pustules on the scalp, who had recurrent flares even after several treatments. After establishing the diagnosis of scalp rosacea, patients

were then effectively managed with ivermectin cream, oral azithromycin, and low-dose isotretinoin. It is also essential for patients to understand their diagnosis to prevent certain triggers such as sunlight, stress, and heat.

squamous cell carcinoma (scc) and intraepithelial neoplasia among patients diagnosed with erosive lichen planus (lp): a study of 130 patients

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# **Introduction & Objectives:**

Lichen planus (LP) is a chronic inflammatory disease and as a result of this chronic inflammation, patients are believed to be at a high risk for squamous cell carcinoma (SCC). In this retrospective study, we aimed to evaluate the prevalence of SCC and intraepithelial neoplasia among patients who had been diagnosed with erosive LP.

#### **Materials & Methods:**

In this retrospective study, the information of all patients diagnosed with erosive LP between the years of 2007 and 2016 was obtained. Descriptive analysis, chi-square, and T-test were used to analyze data.

## **Results:**

A total number of 130 patients including 92 (70.77%) females and 38 (29.23%) males with a mean age of 54.1  $\pm$  13.82 (range 20–85) years were enrolled. The majority of patients (25.4%) were aged between 40 and 50 years old, and the mean age of females (54.79 years) was higher than males (52.42 years). The mean age of the disease onset was 49.38 $\pm$ 13.94 years.

The most prevalent locations of lesions were buccal mucosa (64, 49.24%), gums (28, 21.5%), genitalia (24, 18.46%), tongue (8, 6.15%), and palate (6, 4.61%).

The mean duration of disease was  $4.55\pm3.14$  years (ranging from one month to 12years), and the mean follow-up time was  $1.54\pm2.29$  (range 0-12) years.

Of note, three patients (2.30%) (two females and one male) with a mean age of 53 had been diagnosed with SCC or intraepithelial neoplasia including one case of SCC (0.76%) and two cases of intraepithelial neoplasia (1.54%). None of them had a smoking history or alcohol use, and none was positive for viral markers. None of the patients had a history of previous skin cancer and none of them had actinic damage. Furthermore, the mean follow-up time in these three patients was 4.93±6.20 years, which was more than the total follow-up time in all patients.

In the following, we will present these three cases in detail: The first case was a 48-year-old male with a six-year history of erosive LP with lesions located on his lips, buccal mucosa, and tongue. He had been diagnosed with keratinocyte intraepithelial neoplasia (KIN) II-III on his lower lip based on clinical and histopathologic evaluations three years after the onset of LP. The patient had no actinic damage on his face. Therefore, the intraepithelial neoplasia was considered as a result of erosive LP.

The second case was a 47-year-old female with a one-year history of LP-like lesions located on her tongue and lower lip. Six months after the onset of LP on her lips, histopathologic evaluations showed intraepithelial neoplasia (KIN) II-III, and she was diagnosed with intraepithelial neoplasia. Intraepithelial neoplasia was resolved after two sessions of cryotherapy. The patient had no sign of actinic damage.

Our last case was a 64-year-old female with a history of oral LP located on her lips and buccal mucosa since seven years ago. She was diagnosed with SCC on her lower lip four years after the onset of LP. The patient did not have any signs of actinic damage.

## **Conclusion:**

In this study, none of our cases had a previous history of smoking, HCV infection, or alcohol use. All of our three cases developed either SCC or intraepithelial neoplasia on their lower lips.

The limitations of our study included the small sample size and short duration of follow-up. At least a 10-year follow-up is suggested to be able to consider the risk of SCC development.

However, the three patients who developed SCC during this short duration of follow-up in our study are of great importance and warrant the need for frequent follow-up in these patients.

## role of imaging in morphea assessment: a review of the literature

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## **Introduction & Objectives:**

Localized scleroderma, known as morphea, is a connective tissue disorder characterized by inflammation and fibrosis of the skin and the soft tissue. There exist no universally accepted validated outcome measures in order to monitor the disease activity. Besides clinical scores to evaluate outcome measures, imaging modalities are increasingly utilized in assessing patients with morphea, such as high-frequency ultrasonography (US), shear-wave elastography (SWE), and magnetic resonance imaging (MRI). However, the accuracy of these imaging modalities in monitoring morphea activity is not yet clear. The aim of this study is to review the literature regarding the role of imaging modalities in assessing patients with morphea.

#### **Materials & Methods:**

In this study, we searched the PubMed/Medline database for articles published from inception until February 2023 using the related keywords. Our search terms were "LoS," "morphea," "imaging," "US," "Elastography," and "MRI." Out of the 439 retrieved articles, 23 original studies were included in our study.

## Results:

A total number of 23 original articles were enrolled in our study. In this study, we categorized our findings into three sections, and we reviewed the role of US, elastography, and MRI in morphea assessment. Eleven studies belonged to US, three studies belonged to elastography, and nine studies to MRI category.

## **Conclusion:**

One of the most challenging issues in treating morphea patients is the lack of globally accepted assessment tools for monitoring the results of treatment and disease activity. In this regard, ultrasound is a potential and reliable imaging modality in the quantitative morphea assessment. However, ultrasound has limitations such as being operator-dependent and lack of consistent intra or inter-operator measurement of tissue thickness. It should be considered that there are discrepancies in available literature because of different cross-sectional study designs, using A-mode scan and various probe frequencies, and small sample sizes. To establish a quantitative, valid, and reproducible outcome measure, larger prospective cohort studies using higher probe frequencies should be conducted. In addition, shear-wave elastography can be used for disease monitoring and assessing therapeutic effects. SWE is a novel tool that is not universally available and it is not FDA approved for skin so far. To determine the role of SWE in detecting lesion progression and changes over time, future studies are needed.

MRI provides complementary information about the depth of the disease especially in deep or generalized morphea (GM) as well as neurologic manifestations of localized craniofacial scleroderma. MRI has also limitations, including being expensive, time-consuming, infeasible in routine clinical settings, and a low signal-to-noise ratio for superficial layers intrinsically.

In conclusion, we recommend color Doppler ultrasound with high frequencies probe (18–20 MHz) and if available, SWE for assessing and monitoring superficial soft tissue involvement. In GM or DM, MRI helps to determine the

depth of disease, particularly as a first-line and follow-up diagnostic tool. In addition, brain MRI may be useful for patients with localized craniofacial scleroderma experiencing new or worsening neurological symptoms.

## atrophy management in morphea: a review of the literature

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## **Introduction & Objectives:**

Morphea, also known as localized scleroderma, is an autoimmune connective tissue disease. The disease is defined by an early active inflammatory phase which is followed by fibrosis that eventually, can result in atrophy and damage. Disfigurement due to atrophy is observed in almost 50% of patients and can have a substantial negative psychological impact. Several attempts have been made in order to correct the residual atrophy of morphea. The aim of this study is to determine the methods that can be used to treat the atrophy caused by morphea.

#### Materials & Methods:

We searched PubMed and Google Scholar engine using keywords in order to detect relevant articles from inception until December 2023.

## **Results:**

We categorized our findings into 6 categories: *Autologous fat grafting, Filler injection, Surgical methods, Autologous bone grafting, Implantation of porous polyethylene implants, and Acellular dermal matrix.* 

Autologous fat grafting is a favorable option for the resultant atrophy of morphea with a long-lasting result, especially for the forehead. However, multiple sessions might be required and the procedure should be performed by skilled professionals with proper fat storage facilities. Some possible adverse events include infection, calcification, embolism, and hematoma. Furthermore, patients might have variable rates of fat absorption.

Recently, fillers including Hyaluronic acid (HA), Calcium hydroxyapatite, Poly L lactic acid, and permanent fillers like Silicone, have been used to correct deformities that arise as a consequence of the condition. HA fillers are considered to be the most effective and safest method, owing to the stability of HA material and biodegradability with hyaluronidase. However, filler injection might be accompanied by adverse events namely foreign body granuloma.

Several surgical methods including excision and closure (with or without Z-plasty), fat or dermofat graft, and adipofascial free flap have been successfully used to treat the atrophy by morphea.

Autologous bone grafting is indicated when bone deformity is observed in radiology or physical examination. However, some authors believe that although it provides filling, using bone alone does not offer the flexibility and texture of subcutaneous tissue.

There are successful reports of morphea atrophy reconstruction using porous polyethylene implants, a biocompatible alloplastic material, especially for linear morphea (en coup de sabre). This implant is easy to shape, and stable, allowing rapid tissue ingrowth. However, studies report infection, extrusion, overcorrection, or undercorrection.

The production of acellular dermal matrix involves pulverizing cross-linked human acellular dermal matrix and removing epidermal and dermal cellular components. Previous studies indicated enhanced durability and long-

lasting volume consistency, with extra cellular matrix (ECM) remodeling effect.

# **Conclusion:**

Autologous fat grafting and surgical methods are among the commonly used procedures in practice. Noteworthy that HA filler injection is a good and safe alternative. When the damage reaches the bone level, autologous bone grafting should be considered. Other options with less data available are implantation of porous polyethylene implants and acellular dermal matrix. All of these procedures should be performed by a skilled person and possible adverse events should be considered. More studies with long-term follow-ups are recommended.

## Immune disorders in patients with nummular dermatitis

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## **Introduction & Objectives:**

Nummular dermatitis is a pruritic inflammatory dermatosis seen most commonly in middle-aged adults. Many potential triggers have been identified, yet the etiology remains incompletely understood. The chronic venous stasis, bacterial colonization, and sensitization to contact allergens, most commonly metals, may compromise the cutaneous lipid barrier. The release of cytokines results in increased recruitment of T cells, dendritic cells, and Langerhan's cells, eventually leading to epidermal hyperplasia and the development of characteristic lesions. Violations of the skin microbiota and frequent bacterial complications indicate primarily disorders of innate immunity in microbial eczema.

We analyzed the level of interleukins (ILs) associated with T-helpers, nonspecific factors of humoral immunity and phagocytic activity of neutrophils.

## **Materials & Methods:**

We observed 43 patients with nummular dermatitis aged 28-63 years. Signs of secondary bacterial infection were found in 23 patients. Impetiginized lesions have purulent discharge and thicker golden crusts than uninfected lesions. Eczema severity assessed using the EASI. The average severity of nummular dermatitis was determined in 45.8%, mild and severe in 25.0% and 29.2% of patients, respectively. The level of IL-4, IL-10, IL-17 and IFN  $\gamma$ , lactoferrin (LF) and human  $\beta$ -defensin 2 (hBD2) was determined by immunoenzymatic method using commercial test systems. The phagocytic activity of neutrophils studied based on the phagocytic index (PhI), phagocytic number (PhN). The control consisted of 20 healthy volunteers of the appropriate age and sex.

# **Results:**

Elevated levels of interferon (IFN)  $\gamma$  and IL-17, lowered levels of IL-10 in the serum were found in patients with nummular dermatitis without infection complications. Serum levels of IL-4 and IL-17 increased, IL-10 decreased, and IFN  $\gamma$  did not change when dermatitis complicated by bacterial infection. The serum level of LF was lowered, while the level of hBD2 was significantly elevated in patients with nummular dermatitis (11.6 times compared to the control group), while in the complication of bacterial infection, the serum level of LF lowered more significantly, and the level of hBD2 increased only 5,1 time. The value of PhI, PhN were significantly lowered in patients with nummular dermatitis complicated by bacterial infection.

## Conclusion:

Differences in the level of T-helpers depending on the clinical manifestations of dermatosis were found in patients. An increase in the production of Th1 and Th17 cytokines was determined in patients with nummular dermatitis, Th2 and Th17 cytokines in patients with a complicated course of dermatitis. Suppression of the phagocytic activity of neutrophils in patients with microbial eczema occurs due to the weakening of their absorption and digestion capacity.

The results suggest that the infection of the skin of patients with nummular dermatitis is facilitated by the Th2-

cytokine profile of inflammation, decreased phagocytic activity of neutrophils and the level of LF. On the contrary, a significant increase the serum level of hBD2 is characteristic of the Th1-cytokine profile, which characterized high level of IFN  $\gamma$  and the absence of skin infection in patients.

The results of the study testify to the possible role of violations of the adaptive immune response, the level of antimicrobial peptides, defects of the phagocytosis in the pathogenesis of nummular dermatitis.

# Frontal fibrosing alopecia and lichen planus pigmentosum. Clinical variants of the same entity?

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## **Introduction & Objectives:**

Lichen planus pigmentosum is an uncommon variety of lichen planus that occurs most often in patients with high phototypes.

#### **Materials & Methods:**

#### **Results:**

Lichen planus pigmentosum is clinically manifested by hyperpigmented macules and spots that appear mainly in photoexposed areas.

These lesions are asymptomatic or mildly itchy. Cases of association of lichen planus pigmentosum associated with frontal fibrosing alopecia have been described, and some authors suggest that they could be two clinical variants of the same entity.

## **Conclusion:**

We present two cases of lichen planus pigmentosum associated with frontal fibrosing alopecia in patients with a similar clinical profile who had previously been unsatisfactorily diagnosed and treated for melasma.

## **Bullous Pyoderma Gangrenosum: Unveiling the Blistering Enigm**

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**Introduction & Objectives:** Pyoderma gangrenosum (PG) is a rare, idiopathic neutrophilic dermatosis, which can present itself in one of 4 clinical forms: ulcerative, bullous, pustular or vegetative. Peristomal, genital, post-operative and also extracutaneous PG are worth mentioning.

The bullous form was described in 1972 as a variant found in patients with hematological malignancies; it can start before, after or at the same time as the hematological condition. Classically, patients show the rapid appearance of inflammatory bullous lesions, which break quickly and lead to the formation of a superficial ulcer that mainly affects the face and arms.

**Materials & Methods:** We present the case of the 62-year-old patient who came in our clinic for an ulcerative skin lesion, located on the dorsum of the right foot.

The onset of this condition was on January with 2 blisters, the first with a diameter of 15cm, located on the dorsum of the right foot and the second with a diameter of 5 cm, in tension, with clear content, serocitrin, surrounded by erythematous lizerium, intensely painful, without pre-existing local trauma or other recognizable trigger factor, preceded by intense paresthesias.

The patient presented himself for the first time in a plastic surgery center, where the contents of the blister were evacuated and stripped, after which a dry local dressing was applied and she received antibiotic therapy for 5 days.

Later, the patient was consulted in our clinic and received the recommendation to continue the antibiotic treatment for another 10 days and to add NSAIDs, antihistamines and to apply special wet dressings.

Due to the unfavorable evolution (the initially clean ulceration that became covered with purulent deposits despite the antibiotic treatment), the patient was hospitalized on a continuous regimen.

**Results:** Following the paraclinical investigations and the anamnesis, we reconsidered the diagnosis and treatment, introducing corticosteroids. The response to corticotherapy was quick, stabilizing the disease in the first week.

Currently, the PARACELSUS criteria are used for the diagnosis of PG. To establish the diagnosis of PG, we need at least 2 major and 2 minor criteria - in the present case, the patient presents 2 major criteria: rapidly progressive ulcer with purple edges and 3 minor criteria: improvement of the lesion under corticotherapy, irregular shape of the ulceration, extreme pain, disproportionate to the size of the ulcers, thus correlating the anamnestic data, clinical examination and paraclinical investigations, the clinical diagnosis of bullous pyoderma gangrenosum is established.

**Conclusion:** Pyoderma gangrenosum, especially in its bullous form, presents significant challenges in diagnosis and management. Its rapid progression and tendency for severe tissue damage underscore the need for early recognition and prompt treatment to mitigate its devastating effects.

# Combined blockade of IL-1, IL-33 and IL-36 signaling by targeting IL1RAP to treat inflammatory skin diseases

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# **Introduction & Objectives:**

The IL-1 receptor accessory protein (IL1RAP) is a co-receptor required for signaling through the IL-1, IL-33, and IL-36 receptors. CAN10 is a humanized IgG1-LALA antibody that binds IL1RAP with high affinity and disrupts IL- $1\alpha/\beta$ , IL-33 and IL- $36\alpha/\beta/\gamma$  signaling.

CAN10 is currently in phase 1 clinical development in healthy volunteers and subjects with psoriasis. Here, we investigate the potential of targeting IL1RAP in preclinical models of skin inflammation to strengthen the scientific rationale for clinical development of CAN10 in inflammatory skin diseases with involvement of IL-1, IL-33 and IL-36, such as hidradenitis suppurativa (HS) and psoriasis.

## **Materials & Methods:**

Acute peritonitis was induced by i.p injection of monosodium urate crystals (MSU) and 1h before MSU, mice received mCAN10 or an equimolar amount of IL1RA. Levels of neutrophils and cytokines were determined in the peritoneal lavage 6 hrs post MSU injection by flow cytometry and luminex. Daily topical administration of imiquimod was used to induce experimental psoriasis in Balb/c mice and an injection of mannan (Saccharomyces cerevisiae) in B6N.Q.Ncf1m1j/m1j mice was used to induce experimental psoriatic arthritis. Mice were treated with the anti-murine IL1RAP surrogate version of CAN10 (mCAN10), anti-IL-1β antibody or isotype controls twice a week. Skin from healthy human donors or HS patients were analyzed to determine IL1RAP expressing cell types. Whole blood from healthy donors, dermal fibroblasts or human umbilical vein endothelial cells were used to determine the inhibitory capacity of CAN10 after IL-1, IL-33 or IL-36 stimulation.

#### **Results:**

The anti-inflammatory profile of IL1RAP-blockade was characterized in a model of MSU-induced acute peritonitis. mCAN10 treatment had potent anti-inflammatory effects that led to decreased recruitment of neutrophils to the peritoneum as well as reduced production of IL-6, KC, IL-5, eotaxin and G-CSF. Blocking IL-1 $\alpha/\beta$  with IL1RA reduced neutrophils, IL-6, KC and G-CSF, but notably, the IL-33 related mediators IL-5 and eotaxin were not affected by IL-1 inhibition alone, suggesting that IL1RAP blockade results in a broader anti-inflammatory profile.

To investigate if targeting IL1RAP was efficacious in treating skin inflammation, mCAN10 was tested in mouse models of psoriasis and psoriasis arthritis. IL1RAP-blockade by mCAN10 reduced skin inflammation and disease severity in experimental psoriasis and psoriatic arthritis, and this was accompanied by a reduction in plasma IL-17 levels. Interestingly, these effects were not recapitulated by IL-1 $\beta$ -blockade, suggesting that the broader effect of targeting IL1RAP is required for efficacy.

In human skin, IL1RAP was shown to be expressed on a wide range of cell populations such as fibroblasts, immune cells and endothelial cells and more IL1RAP positive cells were present in patients with inflammatory skin disease. Stimulation of human immune cells, dermal fibroblasts or endothelial cells with IL-1, IL-33 or IL-36 led to release

of IL-6 and IL-8 which could be completely blocked by CAN10.

# **Conclusion:**

Taken together, these results suggest that IL1RAP is a central signaling node for the IL-1, IL-33 and IL-36 cytokines, which are active in skin inflammation and can be targeted by CAN10. These data suggests that CAN10 holds promise as a future therapy in inflammatory skin diseases such as psoriasis and HS where a single agent therapy may not provide complete effectiveness.

## A Rare Variant of Sweet Syndrome

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<sup>1</sup>OMSB, Dermatology, Muscat, Oman, <sup>2</sup>Oman, dermatology, Oman

## **Introduction & Objectives:**

# A Rare Variant of Sweet Syndrome

#### Materials & Methods:

Sweet syndrome (SS) is a rare inflammatory skin disease. It is also known as acute febrile neutrophilic dermatosis, which is characterized by neutrophilic infiltration of the skin with or without vasculitis. The main presentations of this disease are painful skin eruption ranging from violaceous papules, plaques, to vesicles and ulcers, peripheral blood and skin neutrophilia, and hyperpyrexia. There are three subtypes of sweet syndrome: classical, druginduced, and malignancy-associated SS. It has different variants. Necrotizing variant of sweet syndrome (NSS) is a rare, severe, and aggressive variant, which is rarely reported in literature. Acute myeloid leukemia is a common precursor of malignancy associated sweet syndrome. There are few published cases of necrotizing variant of sweet syndrome related to acute myeloid leukemia.

#### **Results:**

Here, we present a case of necrotizing sweet syndrome in a patient with advanced stage of acute myeloid leukemia, who was treated successfully with systemic corticosteroids.

## **Conclusion:**

This case demonstrates the importance of collaboration between multidisplinary teams to address the difficult clinical presentation of differentiating NSS from NF. Dermatology, surgery, and oncology were all important in the care of this patient. In view of association between hematologic malignancies and SS, keeping SS on the differential could prevent disease exacerbation from unnecessary debridement and lead to a more rapid initiation of appropriate treatment.

# IL-1 targeting agents in Schnitzler syndrome: a multicenter, retrospective, real-world study from the international AIDA Network registry

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## **Introduction & Objectives:**

Schnitzler syndrome (SchS) is a rare, sporadic, acquired and late-onset immune-mediated disease. The emergence of new evidence supporting the autoinflammatory nature of SchS has paved the way for the investigation of IL-1 targeting agents for the treatment of the disease. To date, certain studies have described good clinical responses with the IL-1 blockers anakinra, rilonacept and canakinumab in SchS. However, data regarding the long-term effectiveness and safety of these agents in a real-world setting are still scarce. Aim of this study was to retrospectively evaluate and analyze an international multicenter cohort of patients with Schnitzler's syndrome, extrapolated from the Autoinflammatory Disease Alliance (AIDA) International Registry, and treated with two IL-1 targeting agents, anakinra and canakinumab.

#### **Materials & Methods:**

This study was based on retrospectively collected data from the International AIDA Network Registry dedicated to SchS. The enrolment of SchS patients in the AIDA Registry started in January 2021 and information on 28 patients up to December 23 were extrapolated. ShcS was diagnosed according to the fulfillment of Strasbourg diagnostic criteria for Schnitzler's syndrome.

We evaluated the effectiveness of anakinra and canakinumab in our patient cohort by examining: (i) the drug survival and retention rates (DRRs) for both agents using Kaplan-Meyer survival curves for any reason for discontinuation (overall drug survival), and for loss of effectiveness only, and (ii) the percentages of patients who achieved complete response (CR) and partial response (PR) with each drug. Secondary aims were to evaluate whether variables including clinical features of SchS patients, disease duration, laboratory findings and concomitant treatments with csDMARDs could influence either the DRR or global effectiveness (measured in terms of CR and PR) of anakinra and canakinumab.

#### Results:

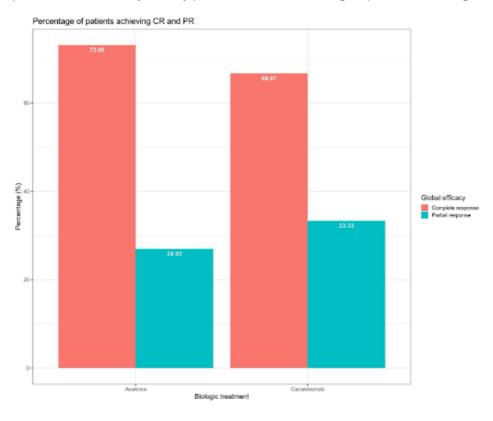
In our study, both anakinra and canakinumab proved good effectiveness for SchS, with at least a partial response observed in all subjects enrolled. Indeed, most of the patients achieved a complete clinical response, and the overall drug survival and survival related to drug effectiveness corresponded to 64.7% and 75.5% at 5 years from the start of treatment. Interestingly, a statistically significant relation was found between maximum IgG M-protein levels and percentage of patients achieving a PR (p=0.032), suggesting that high IgG M-protein levels, and not IgM, the most common type of M-protein in SchS, may be a negative predictor of response to IL-1 inhibitors. Furthermore, no specific clinical manifestations, including any type of skin lesion, showed a significant impact on drug response or drug survival, except for lymphadenopathy, which significantly correlated with loss of

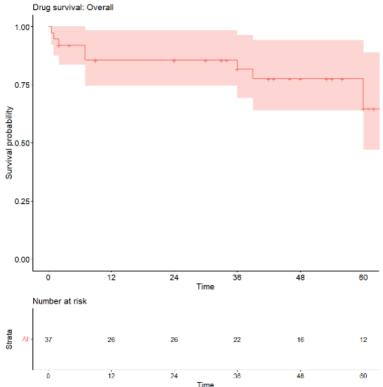
effectiveness of anti-IL-1 agents.

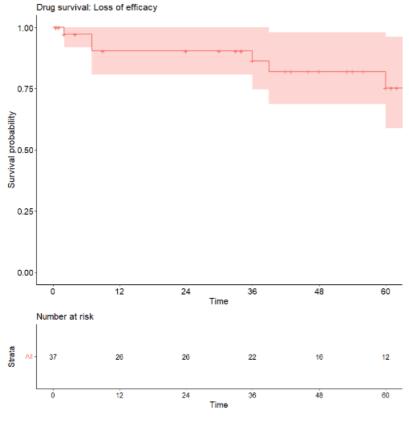
# **Conclusion:**

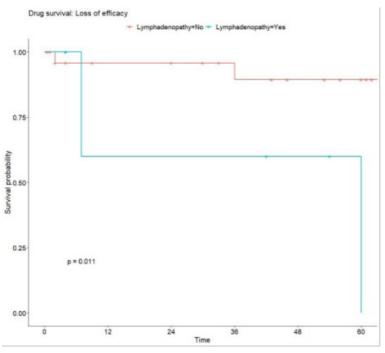
In conclusion, our study further reveals the high effectiveness of IL-1 inhibitors in controlling SchS. It demonstrates, no correlation between specific clinical manifestations, including any type of skin lesion, and response to anti-IL-1 agents or drug survival, with the exception of lymphadenitis and IgG M-protein levels, possibly useful in identifying patients requiring closer follow-up.

Prospective studies on larger cohorts of SchS patients should be encouraged to thoroughly characterize response patterns and accurately identify possible factors influencing response to IL-1-targeted agents in SchS.









Benefit of a keratolytic and soothing cream containing ciclopirox olamine (CPO), piroctone olamine (PO), β-glycyrrhetinic acid and lactamide MEA in adults and adolescents with mild to moderate facial seborrheic dermatitis

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## **Introduction & Objectives:**

Facial Seborrheic dermatitis (FSD) is a common chronic dermatological disease which is characterized by erythematous, greasy, scaly plaques involving forehead, nasolabial folds, and eyebrows.

*Malassezia* yeasts (especially *M. Restricta* and *M. globosa*) could be an important factor and were found in higher proportion in patients with facial SD, also associated with significantly lower bacterial and fungal diversities.

We developed a face cream that combines 1.5% ciclopirox olamine and 0.3% piroctone olamine (CPO/PO), 2 active ingredients that have demonstrated a synergistic effect both on inhibiting the growth and fungicide activity of *M. restricta* and *M. globosa*.

The aim of the study was to assess tolerance and efficacy of a face cream containing CPO/PO,  $\beta$ -glycyrrhetinic acid and lactamide MEA in patients with FSD during a 2-phase treatment.

#### Materials & Methods:

60 subjects (adults and teenagers - 13 to 64 years) with mild to moderate FSD were included in a 2-stages study. A two-week attack phase (D1 to D15) with application of treatment once a day was followed by a 6-weeks maintenance phase (D15 to D57) without treatment for the control group (Group 1) or with application of product twice a week for the treated group (Group 2). Subjects were randomly assigned to these two parallel comparison groups.

Evaluations were done at D1, D8, D15, D36 and D57 depending on the method used: tolerance, clinical efficacy, quality of life, biochemical, pharmacological, and microbiological assessments.

## **Results:**

Cutaneous tolerance has been assessed as good by dermatologist. Physical and/or functional signs were mainly of very mild or mild intensity and observed during the attack phase.

Attack phase: After 14 days of daily application, a decrease of erythema (-35.8%, p<0.001), desquamation (-73.8%, p<0.001), mean pruritus (-74.1%, p<0.001), global discomfort sensations (-69%, p<0.001) and DLQI score (-78,4%, p<0.001) were observed from baseline. Correlated to clinical efficacy, the protein expressions of pruritus, biomarker of inflammation (IL-8) and protein of barrier defect (Plakoglobin) were normalized. Population of Malassezia was also reduced. After 14 days of daily application, the Investigator judged the product effective or very effective for 78.6% of patients.

Maintenance phase: When applied twice weekly (Group 2), we observed a maintenance of efficacy on clinical

signs (erythema and desquamation) and functional signs (pruritus and discomfort), compared to an untreated group.

We also observed an increase of these signs in Group 1 which stopped the investigational product. Thus, when applied twice weekly, the investigational product maintains the efficacy observed during the attack phase, compared to an untreated group. After 56 days of use (maintenance phase), the Investigator judged the product effective or very effective for 89.7% of patients.

Correlated to clinical efficacy, for the Group 2, the improvement of pharmacological markers remained improved. Bacterial diversity and abundance remained improved during the maintenance phase as well.

## **Conclusion:**

This study demonstrates the good tolerance and efficacy (clinical, pharmacological, and microbiological) of a new cosmetic cream in adults and adolescents with mild to moderate FSD.

Moreover, results after 56 days highlight the interest of the product in maintenance phase.

The improvement of the quality of life could ensure a good observance in this chronic disease.

## **Exploring the Therapeutic Potential of Abrocitinib in Prurigo Nodularis Treatment**

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## **Introduction & Objectives:**

Introduction:\*\* Prurigo nodularis (PN) is a stubborn and chronic inflammatory skin disorder. Typically, PN presents as hard hyperkeratotic nodules with itching, as well as lichenification, excoriation, crust and bleeding. PN is associated with a significant reduction in quality of life and individual economic burden. Along with the rise of biologics, an increasing number of scholars are applying biological preparations to the treatment of inflammatory skin diseases. Researchers have found that dupilumab and tofacitinib have good efficacy in the treatment of PN. Abrocitinib, a small-molecule JAK1 inhibitor that is administered orally once daily, inhibits signaling of interleukin-4, interleukin-13, and other cytokines involved in the pathogenesis of atopic dermatitis. Abrocitinib is less likely to stimulate an immunogenic response than biologic treatment. Abrocitinib has shown significant efficacy in inflammatory skin diseases, including atopic dermatitis, granuloma annulare and so on.

Objective: To assess the efficacy and safety of abrocitinib in treating prurigo nodularis(PN).

#### **Materials & Methods:**

This is a prospective, observational cohort study conducted at the Department of Dermatology, Wuhan No. 1 Hospital from December 2022 to August 2023. Potential chronic infections, including hepatitis B, hepatitis C, HIV, and tuberculosis were screened. All patients were treated with 100 mg of abrocitinib tablet once a day and reduced the medication gradually depending on the condition. The treatment response was evaluated by itch Numeric Rating Scale (NRS) scores, investigator's global assessment (IGA) of prurigo, IGA-activity scores and IGA-chronic nodular prurigo (IGA-CNPG) scores, and the Dermatology Life Quality Index (DLQI). Adverse events were also recorded.

## **Results:**

Ten PN patients included in the study showed significant decreases in NRS, IGA, IGA-a, and IGA-CNPG after starting abrocitinib treatment, and remained low during the follow-up period of up to 6 months. Among them, one patient, patient 3, withdrew from the cohort after 2 months of treatment due to financial constraints, transitioning to tofacitinib. 1 / 10 (Patient 4) experienced bilateral lower extremity edema in the second month of treatment with abrocitinib, leading to a temporary cessation of the medication without subsequent adverse reactions. No treatment-associated adverse effects or abnormal laboratory findings were noted in the remaining patients receiving abrocitinib. Our study found that oral administration of abrocitinib significantly reduced pruritus in patients with prurigo nodularis within 4 days, leading to sustained control at a lower level. Additionally, analysis of the three scores related to IGA over a 6-month period in ten patients showed a consistent downward trend, indicating the efficacy of abrocitinib in disease control for prurigo nodularis.

## **Conclusion:**

Our findings collectively demonstrate that abrocitinib can rapidly and significantly ameliorate pruritus and cutaneous lesions in PN patients, thereby offering a promising treatment modality. It is necessary to carry out clinical trials with a larger sample of patients and various dosages to elucidate the long-term effectiveness and safety of abrocitinib in treating PN.

Single cell transcriptomics reveals two fates of hair follicle stem cells and sheds light on the mechanisms of keratinisation and inflammation in patients with hidradenitis suppurativa.

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## **Introduction & Objectives:**

Hidradenitis suppurativa (HS) is a devastating skin disorder that affects 1% of the world's population. Although the pathogenesis is multifactorial and poorly understood, the pathomechanisms of HS are intimately associated with aberrantly activated keratinization and autoinflammation. It is unknown whether the autoinflammatory events precede or follow the hyperkeratotic changes in the hair follicle (HF) epithelia.

We take advantage of single-cell RNA sequencing (scRNA-Seq) to define the cellular composition of hair follicle cells, the primary cells involved in HS. We confirmed scRNA-Seq findings in the Fol-HYDRA cohort.

#### **Materials & Methods:**

For scRNA Seq analysis, HF samples were from discarded plastic surgery specimens from 2 controls and 5 HS patients. To obtain single-cell suspension, the isolated HFs were digested in Trysin-EDTA. We used the Seurat R package to analyze the scRNA-seq data. RNA was extracted from HFs cells of HS patients enrolled in the Fol-HYDRA cohort (CPP# n°2021-A02352-39).

# **Results:**

We identified three main families: i) HF matrix lineage enriched for MSX2 (HF matrix marker), ii) non-matrix lineage enriched for KRT14 and iii) immune cells enriched for PTPRC. To determine whether differences could be observed between HF cells from controls and HS patients, unsupervised clustering was performed based on the proportion of cells in each cluster. The most striking differences were observed in non-matrix cells and could segregate patients into 2 groups. The first group is enriched in cluster 1 (IBL), while the second is enriched in clusters 0 (mORS). These two clusters displayed fundamental transcriptomic changes. Noteworthy, GSEA revealed significant enrichment for genes involved in keratinization in IBLs, whereas mORS showed enrichment for interferon response genes. The trajectory analysis revealed that the HF-SCs differentiated in either IBL or mORS. We were able to confirm our results on 47 HS patients included in Fol-HYDRA cohort and show that these two pathways are associated with two different clinical phenotypes of patients.

#### **Conclusion:**

Our results provide an unprecedented view of HS pathology and identify two pathways involved in HS, one involved in the keratinization process and the other in inflammation. Based on these pathways, two endotypes of HS patients were identified, which could serve as a potential marker for personalized medicine.

### Apremilast: psoriasis and more. Real world experience

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<sup>1</sup>Dermatology clinic, Department of Health Sciences, Firenze, Italy

## **Introduction & Objectives:**

Apremilast is a drug belonging to the so-called "small molecule" class, administered orally, approved for the treatment of moderate-severe plaque psoriasis and psoriatic arthritis. It acts through the inhibition of phosphodiesterase 4 (PDE4), which is a key regulator of intracellular signaling, through the degradation of the second messenger cAMP, which in turn activates the transcription of pro-inflammatory molecules and inhibits anti-inflammatory cytokines such as IL-10. Apremilast inhibits PDE4 by increasing intracellular cAMP levels and thereby reducing key regulators in the pathogenesis of psoriasis, including TNFα, IL-17, IL-12 and IL-23. This regulation involves pathways common to other inflammatory and immune-mediated pathologies, such as, for example, atopic dermatitis, vitiligo and hidradenitis suppurativa. Furthermore, due to the ubiquitous distribution of cAMP, the inhibition of PDE4 is also advantageous in other systemic conditions, such as asthma and obstructive pulmonary disease.

### **Materials & Methods:**

Patients with psoriasis and other concomitant cutaneous and systemic disease were treated with apremilast for at least 12 weeks. Clinical, demografic and blood parameters were recorded for each patient.

## **Results:**

Apremilast was generally effective in psoriasis treatment. Moreover, clinical parameters of bronchial asthma and COPD, dermatological comorbidities such as vitiligo and hidradenitis suppurativa improved over time. In patients with concomitant autoimmune liver diseases apremilast proved to be a safe option.

### **Conclusion:**

In our experience, treatment with apremilast allows a personalization of the therapeutic choice with a global impact on the patient's general health and quality of life.

## Successful treatment of juvenile pityriasis rubra pilaris (PRP) with Tildrakizumab

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## **Introduction & Objectives:**

Pityriasis rubra pilaris (PRP) is a rare papulosquamous inflammatory dermatosis of unknown aetiology. Diagnosis and treatment remain a challenge, as there are different clinical subtypes and no approved therapies, guidelines or controlled studies on PRP.

### **Materials & Methods:**

An 18-year-old female patient presented with erythematous plaques and maculae that deteriorated significantly over the past 5 months. The patient's history of skin lesions dated back to the age of two years. At the age of eight Erythrokeratodermia variabilis was diagnosed (without evidence of a genetic mutation) and the patient was treated with intensive local therapy including daily moisturizer baths. As this was insufficient, topical corticosteroids and UVB311 therapy were added with only little improvement. The patient's further and family medical history was clear with regard to skin and other diseases. No regular concomitant medication.

Clinically, disseminated erythematous maculae and plaques with fine to moderate scaling, partly with lichenification and nappes claires were present. The toenails showed distal onycholysis.

The histopathologic examination revealed a psoriasiform epithelial hyperplasia with hypogranulosis, alternating hyper- and parakeratosis and a subepidermal lymphocytic inflammatory infiltrate.

Based on the clinical-pathological correlation, a juvenile atypical PRP (type V) was diagnosed. Due to the extensive skin involvement (BSA 75%) and the high impact on her quality of life (DLQI 18) a biological therapy with the IL23p19 inhibitor Tildrakizumab (100 mg subcutaneously at week 0.4, then every 12 weeks) was initiated.

### **Results:**

The treatment with Tildrakizumab was effective resulting in a long-lasting improvement of objective and subjective scores related to disease severity (week 0: PASI 22.8, BSA 75%, pruritus VAS 4/10, DLQI 18/30; week 12: PASI 15, BSA 25%, pruritus VAS 3/10, DLQI 12/30; week 24: PASI 5, BSA 5%, pruritus-VAS 2/10, DLQI 6/30; week 48 + 96: PASI 1, BSA 0.5%, pruritus-VAS 1/10, DLQI 0/30). The nail changes were also partially regressive. There were no side effects.

## **Conclusion:**

PRP is a rare and heterogeneous papulosquamous inflammatory dermatosis of unclear aetiology that is often misdiagnosed. Six different subtypes are known. However, the subtype is not always obvious and patients may show characteristics of several subtypes. Because of the lack of classical PRP features, the partly ichthyosiform clinical aspect and the juvenile onset we suggest type V PRP. CARD 14 mutation analysis is pending. In addition to the difficulty of diagnosis, treatment is also a challenge, as there are no approved therapies, guidelines or controlled studies on PRP and the disease is often refractory. Due to the partly similar pathogenesis, the treatment of PRP is often based on therapies approved for psoriasis vulgaris. However, treatment-refractory courses have also been described, meaning that larger studies and data from registries are necessary in order to be able to

conclusively assess the effectiveness of the biologics approved for psoriasis in the treatment of PRP.

### Widespread Lichen Planus following COVID-19 vaccination: Case series

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<sup>1</sup>Research Institute for Tropical Medicine, Dermatology, Muntinlupa, Philippines, <sup>2</sup>De La Salle Medical and Health Sciences Institute, Dasmariñas, Philippines

## **Introduction & Objectives:**

Lichen planus, a chronic autoimmune inflammatory condition with an unclear etiology, has recently shown increased incidence, notably associated with mRNA-based COVID-19 vaccines. Here, we describe three cases of new-onset lichen planus induced by three different types of COVID-19 vaccine.

### **Materials & Methods:**

### Case reports

Case 1: A 50-year-old female developed multiple pruritic papules and plaques 2 months after receiving the first COVID-19 mRNA vaccine booster dose. The lesions started on her right hand and later spread to her trunk. She has no comorbidities and denied other possible triggers such as previous infection, stress, or medications. Dermatological examination showed multiple, well-defined, irregularly-shaped, violaceous to hyperpigmented papules and plaques, some with scales, on her right hand and left abdomen extending to the left flank.

Case 2: A 52-year-old female, with a history of atopic dermatitis, developed few pruritic erythematous to violaceous scaly papules on her left leg 1 week after her second vector COVID-19 vaccine dose. Lesions spread to the dorsum of her left foot and later involved her left posterior thigh. There was no history of any other drug intake or a triggering factor. Clinical examination revealed multiple linear violaceous scaly papules and plaques on the left lower extremity and foot.

Case 3: A 38-year-old female, with a history of atopic dermatitis and seafood allergies, developed severely pruritic papules on her trunk and extremities that coalesced into plaques. There was no significant drug history, but skin lesions first appeared on her lower legs 4 months after her second COVID-19 inactivated vaccine dose. On examination, she had widespread, erythematous to violaceous papules and plaques, some with scales, on the trunk and extremities.

## Results:

Dermoscopy revealed fine scales and Wickham striae in all patients, indicative of lichen planus. Histopathological analysis confirmed this diagnosis, showing typical features such as saw-toothed rete ridges, wedge-shaped hypergranulosis, basal cell layer vacuolar alteration, Civatte bodies, pigment-laden macrophages, and a lichenoid lymphocytic infiltrate. The diagnosis of lichen planus was made based on clinical and histopathological findings. All cases received initial treatment with systemic and topical steroids, along with a topical calcineurin inhibitor for 2 weeks. Two out of the three cases resolved, leaving only post-inflammatory hyperpigmentation. One patient received a combination of oral steroid and antihistamine, along with continued topical steroid and calcineurin inhibitor for an additional two weeks. Complete resolution, with post-inflammatory hyperpigmentation, occurred after one month of treatment, with no recurrence during the follow-up.

## **Conclusion:**

The occurrence of dermatoses after COVID-19 vaccinations, including subsequent doses, is possible. While definitive evidence may be lacking, clinicians should remain vigilant for the onset of these conditions following COVID-19 vaccination, irrespective of the vaccine type administered.

### facial solar porokeratosis: a newly discovered variant of porokeratosis

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## **Introduction & Objectives:**

Porokeratosis are a set of acquired or hereditary keratinization disorders. They are defined clinically by annular lesions surrounded by a peripheral border and histologically by a parakeratotic column known as cornoid lamella. There are several variants of porokeratosis such as Mibelli porokeratosis and superficially disseminated actinic porokeratosis. A variant manifesting only on the face has been discovered recently and referred to as facial solar porokeratosis. We present our observation of this variant on a case involving two sisters.

Materials & Methods: Case report of two sisters

#### **Results:**

Two sisters aged 28 and 30, with no particular pathological history, were admitted for similar hyperkeratotic annular facial lesions that had been developing for 10 years. These lesions were small and gradually increased in size and flattening of the central region. The lesions came with mild itching sensations that worsened with sun exposure. No medication, irradiation or topical application was previously used on the regions. Skin examination showed small rounded lesions measuring 4 to 15 mm with an atrophic and pigmented center surrounded by a palpable and slightly visible thin peripheral border located on the nose and the paranasal region, along with retentional lesions and acne scars. Dermoscopic examination showed a brownish-yellow cornoid lamella surrounding a flat center. Both patients refused to do a skin biopsy. The diagnosis of solar facial porokeratosis was deduced based on the presence of these clinical and dermoscopic signs characteristizing the disorder.

### **Discussion:**

Porokeratosis is an epidermal disorder caused by the expansion of abnormal epidermal keratinocytes. The two most common types,known as Mibelli porokeratosis and disseminated superficial actinic porokeratosis, are inherited as autosomal dominant traits, and are most often found on the chest and extremities,with rare manifestations on the face. Recently, rare variant known as solar facial porokeratosis has been discovered, characterized by distinct clinical and histopathological attributes.

Facial solar porokeratosis is characterized by single or multiple annular skin-colored lesions measuring between 0.1cm to a few centimeters, surrounded by a keratotic rim appearing most often on the nasal and paranasal regions. Dermoscopic examinations show the yellowish cornoid lamella surrounding a pink-white scarred area at the center. Histopathology of the hyperkeratotic area shows a cornoid lamella specific to porokeratosis.

No specific treatment has been approved for facial solar porokeratosis. Lesions may respond to topical steroids, calcineurin inhibitors, vitamin D3 analogues, cryotherapy, imiquimod or topical 5-fluorouracil, combined with routine photoprotection.

# **Conclusion:**

Facial solar porokeratosis is a newly discovered type of porokeratosis, defined by distinguishable clinical and histopathological characteristics.

### Granulomatous rosacea - from the clinical picture to therapy

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**Introduction & Objectives:** Granulomatous Rosacea (GR) is a rare variant of dermatosis with a unique clinical presentation. Information on the prevalence of GR is limited, and it is estimated that it accounts for no more than 10% of all rosacea cases. Due to the lack of specific diagnostic criteria, the diagnosis of GR can be challenging. Treatment approaches for GR have not been well-established, and there is limited data on the efficacy, frequency, and severity of adverse effects associated with available therapies. Doxycycline and isotretinoin are considered the drugs of choice, but further research is needed to better understand their efficacy and safety in population.

**Materials & Methods:** There were 29 patients with GR under observation. Of these, 8 patients were treated with doxycycline and 21 with isotretinoin and topical ivermectin. The severity of GR was assessed using the Rosacea Area and Severity Index (RASI). Treatment was considered effective if a patient scored 0-1 on the Investigator's Global Assessment (IGA) scale after treatment. Adverse events were assessed using the Hartwig scale. Mild severity corresponded to 1-2 points on the scale.

**Results:** Flesh-colored papules were observed in 5 patients, while the rest were pink or red. Half of the patients also had erythema and telangiectasia. Scars were present in 90% of the cases. In all patients, rashes were localized in the cheeks. Additionally, in 50% of cases, they were also found in the chin area, while other localizations were less frequent. Half of the patients experienced moderate severity of the rash.

Approximately 60% of patients who were taking isotretinoin did so at a dose of 0.7 mg/kg/day, while the rest took 0.3 mg/kg/day. More than half of those taking doxycycline did so at 100 mg/day, with the rest taking 50 mg/day. After the completion of therapy, those taking isotretinoin were rated between 0 and 1 points, indicating the effectiveness of the treatment. Patients taking doxycycline were rated between 1 and 2 points, indicating insufficient effectiveness.

Retinoic dermatitis was observed in all patients, which was managed by the use of emollients. Two patients experienced adverse eye symptoms. In one case, xerophthalmia resolved after the use of moisturizing eye drops, and in the other, conjunctivitis was diagnosed. Dyslipidemia was identified in one patient. In these last two cases, the daily dosage of isotretinoin was reduced from 0.7 mg/kg/day to 0.3 mg/kg/day. Based on the Hartwig scale, all reported adverse events were classified as mild.

Combination therapy with systemic isotretinoin and topical ivermectin has been shown to be effective in the treatment of GR. All patients may experience retinoic dermatitis as a side effect, which does not require dosage adjustment. Adverse events that may require dosageadjustments, such as conjunctivitis and dyslipidemia, occur in a small percentage of patients and are generally not severe enough torequire discontinuation of the medication.

**Conclusion:** Combination therapy with topical ivermectin and systemic isotretinoin is effective in granulomatous rosacea. All patients develop retinoic dermatitis, which does not require drug withdrawal or dose adjustment and is managed by the administration of emollients. Undesirable events requiring dose adjustment - dyslipidemia and

conjunctivitis - are formed in a small number of patients and do not require drug withdrawal.

### Juvenile Gangrenous Vasculitis of the Scrotum: A Rare Case with Excellent Treatment Response

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## **Introduction & Objectives:**

Juvenile Gangrenous Vasculitis of the Scrotum (JGVS) is a rare disease, with fewer than 20 cases reported in the literature. It is characterized by a distinct presentation and a favorable response to treatment.

### **Materials & Methods:**

This clinical case report presents a retrospective analysis of a single patient diagnosed with JGVS in a tertiary care hospital. The study adhered to ethical guidelines and obtained informed consent from the patient for publication of the case details.

#### **Results:**

A 34-year-old male presented with five tender, sharply demarcated scrotal ulcers involving the scrotum and medial thigh, which progressively worsened over three weeks. He had no history of sexually transmitted diseases, systemic disease, or immunosuppression. Laboratory investigations revealed elevated inflammatory markers; however, all microbiological studies were negative, including lesion swabs for HSV-1 and 2, N. gonorrhoeae, C. trachomatis, and Haemophilus ducreyi. A biopsy showed a dense neutrophilic infiltrate and secondary fibrinoid necrosis of small blood vessels without identifiable microorganisms on Gram, EBER, or CMV staining. The patient was diagnosed with JGVS and treated with methylprednisolone (24 mg tapered over two months) combined with doxycycline (100 mg twice daily for one month) and topical clobetasol under occlusion. Complete healing occurred within two months, and there was no relapse after one year of follow-up.

### **Conclusion:**

This case contributes to the existing knowledge of JGVS. Typically, patients are young, usually under 30 years old; however, this patient was 34 years old. While exclusive scrotal involvement is common, this patient also exhibited smaller satellite ulcers on the adjacent thigh. The case underscores the effective response to treatment with low-dose steroids and doxycycline.

### **Neutrophilic Dermatosis of the Hands: A series of 16 Cases**

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## **Introduction & Objectives:**

Neutrophilic dermatosis of the hands (NDH) is a variant of neutrophilic dermatosis (ND) that has recently been identified. The aim of this study is to determinate the clinical, histological and evolutionary features of this disease.

### **Materials & Methods:**

This is a retrospective study of all cases of neutrophilic dermatosis of the hands collected in the dermatology department of Hedi Chaker hospital, over a period of 9 years (2016 - 2024). The diagnosis was based on clinical, biological and histological criteria.

### **Results:**

Sixteen patients with an average age of 54.6 years (36-84 years) were identified. The sex ratio M/F was 0.23. All patients had a sudden appareance of painful papulo-nodules and/or erythematous-violaceous plagues on the hands. They were surmounted by bullae (50%), pustules (18.7%) and/or ulceration (6.2%). The precipitating factors were: infection (2 cases), insect bites (1 case) and trauma (2 cases). These lesions occurred bilaterally (93.7%): on the palms of the hands (11 cases), on the backs of the hands (2 cases), and on both the backs and palms (3 cases). The comorbidities were: diabetes (4 cases), arterial hypertension (1 case), dyslipidemia (1 case) and psoriasis (1 case). Fever, asthenia and polyarthralgia were observed in 56.2%, 43.7% and 43.7% of cases respectively. Two patients had episcleritis. A biological inflammatory syndrome (BIS) was noted in 87.5% of patients. Histopathology reports of skin biopsy showed infiltration of the dermis by neutrophils in all cases, associated with leukocytoclastic vasculitis (LV) without fibrinoid necrosis in 31.2%. Associated cancers were Burkitt's lymphoma (1 case), Hodgkin's lymphoma (1 case), and uterine leiomyosarcoma (1 case). Infections such as tuberculosis, infective endocarditis, aortitis and parotitis were concomitant in each case. Treatment was based on systemic corticosteroids 0.5 mg/kg/d (4 cases), colchicine 1 mg/day (8 cases), a combination of the two treatments (1 case) and dermocorticoids only (3 cases). The average duration of treatment was 2.5 months. The immediate evolution was favourable in all cases after 15 days. Recurrence occurred immediately after stopping treatment (2 cases) and within a year (1 cases).

### Conclusion:

NDH is currently considered to be an acral form of Sweet's syndrome (SS). Clinically, compared with classic SS, NDH is characterised by the frequency of pustules and bullae. General signs are absent in 30% of cases, which is consistent with our findings. Histologically, a dermal neutrophilic infiltrate is constant. VL is associated in 60% of cases in the literature. In our cases, malignant haemopathy and/or solid neoplasia were associated in 18.7%. Other pathological associations were noted in our cases, in particular infectious diseases. Evolution is often favourable with corticosteroid or colchicine.

## Radiation-Induced Breast Morphoea: Light on an Overlooked Affliction

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# **Introduction & Objectives:**

Morphea is a localized plaque scleroderma, in contrast to systemic scleroderma, which can affect several organs. The usual clinical presentation is characterized by the progressive appearance of a white, pearly and indurated plaque, surrounded by a characteristic purplish inflammatory border.

The pathophysiology remains poorly understood, and is multifactorial: traumatic and immunological factors, as well as alterations in collagen production, have been implicated. Since the 1990s, morphea has also been recognized as a complication of radiotherapy for breast cancer, and around forty cases have been described. Its incidence is 0.2%. It is a little-known complication that is often ignored. Its main differential diagnoses are recurrence, mastitis (carcinomatous, infectious), chronic radiodermatitis and radiation recall. Diagnosis can only be made by histological analysis. Because of the delay in onset, radiosensitization is not a classic differential diagnosis, but it can be considered in the event of new radiotherapy without a change in medication.

## **Observation:**

A 51-year-old female patient, followed since 2018 for breast carcinoma of the left breast after lumpectomy with axillary curage followed by chemotherapy followed by radiotherapy followed by hormone therapy (HT) presented 1.5 years after RT with an inflammatory, indurated and painful placard of the breast. Skin biopsy showed a banded lymphocytic infiltrate in the papillary dermis in favor of bullous lichen sclerosus, and thickened collagen fibers in the reticular dermis suggestive of morphea. Autoimmunity tests were normal. Treatment with dermocorticoids was ineffective, but the patient progressively improved under phototherapy B.

### **Discussion:**

Morphea is a localized scleroderma whose pathophysiology remains poorly understood. Radio-induced morphea is rare, but probably under-diagnosed. The etiology is thought to be a Koebner phenomenon with a favorable autoimmune background. Dosage regimen and total delivered dose of radiotherapy are not associated with the occurrence of radiation-induced morphea. The delay in onset is late: on average 1 year after the end of radiotherapy. Histological analysis may suggest bullous lichen sclerosus or morphea, depending on the evolutionary phase of the radiation-induced morphea, which is initially inflammatory and then sclerotic. Differential diagnoses include mastitis, chronic radiodermatitis and radiation recall. Treatment is not codified, ranging from dermocorticoids, phototherapy and systemic immunosuppressants to mastectomy.

### Conclusion:

Breast morphea represents a little-known complication of radiotherapy, often underdiagnosed as a potential cause of post-radiotherapy erythema. Only histological confirmation can distinguish this condition from the differential diagnoses considered during the clinical examination. To date, there is no consensus on the optimal treatment, and the most commonly used therapeutic approaches include simple clinical monitoring, application of steroid-containing topicals, excisional surgery or phototherapy at a more advanced stage of fibrosis.

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Wells syndrome: A series of 8 cases.

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## **Introduction & Objectives:**

Wells syndrome (WS), also known as eosinophilic cellulitis, is a rare inflammatory dermatosis of unknown pathogenesis. The clinical feature is pruritic dermo-hypodermatitis associated with blood hypereosinophilia and suggestive histological images. This condition has several clinical manifestations. It can pose problems of differential diagnosis with other dermatoses, particularly infectious. Our study aimed to determine the epidemiological, clinical, therapeutic and evolutionary characteristics of this condition.

### **Materials & Methods:**

This is a retrospective descriptive study including all patients consulting between 2006 and 2023 for a clinical feature suggestive of SW, confirmed by histopathological examination.

### **Results:**

We included 8 patients. The sex ratio M/F was 1.6. The average age was 44 years (13-82). All patients consulted for their first episode without any triggering factor. The clinical presentation was characterized by erythematous, infiltrated and pruritic plaques in 5 patients (62%), either on the lower limbs in 4 cases (80%) or on the trunk. Annular granuloma-like lesions on the trunk and papulo-nodular lesions with an orange peel appearance on the back were noted in two cases. General signs such as fever and asthenia were reported in 25% (2 patients). Hypereosinophilia was noted in 50% of cases (4 patients). Histological examination showed the presence of an interstitial infiltrate of eosinophilic polymorphs (EP) in all cases, associated with a flare pattern in only one patient. Treatment was systemic corticosteroid therapy (1 mg/kg/day), with a favourable outcome and no relapse in 4 patients (50%). Spontaneous resolution was noted in 2 patients (25%). Two patients have been lost to follow-up.

## Conclusion:

The diagnosis of WS, an uncommon eosinophilic dermatosis, is based on a variety of clinico-biological and histological arguments. The predominance of women, a classic feature of the literature, was not observed in our study. Paediatric cases and certain triggering factors such as infections (viral, bacterial, parasitic or fungal), insect bites, drugs and vaccines were not observed in our case series. SW is characterised by a clinical diversity dominated by an aspect that resembles cellulitis (as in the majority of our cases). The anatomopathological findings vary according to the stage of the disease, leading to the inconsistency of the flaming image, which is suggestive but not specific for SW. Treatment is not codified, given the rarity of this dermatosis and the possibility of spontaneous regression.

# Rapid Response of Lichen Planus to Baricitinib Associated with Suppression of cytotoxic CXCL13+ CD8+ T-cells

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**Introduction & Objectives:** Cutaneous lichen planus (LP) is a recalcitrant, difficult-to-treat, inflammatory skin disease characterized by pruritic, flat-topped, violaceous papules on the skin. Baricitinib is an oral Janus kinase (JAK) 1/2 inhibitor that interrupts the signaling pathway of interferon (IFN)- $\gamma$ , a cytokine implicated in the pathogenesis of LP.

**Materials & Methods:** In this phase II trial, twelve patients with cutaneous LP received baricitinib 2 mg daily for 16 weeks, accompanied by in-depth spatial, single-cell, and bulk transcriptomic profiling of pre- and post-treatment samples.

**Results:** An early and sustained clinical response was seen, with 83.3% of patients responsive at week 16. Our molecular data identified a unique, oligoclonal IFN-γ secreting, CD8+, CXCL13+ T-cell population and basal keratinocyte (basal KC1) in LP skin and demonstrated a rapid decrease in IFN signature within 2 weeks of treatment, most prominently in the basal layer of the epidermis. We observed a 60-75% decrease in the proportion of *CXCL13+* CD8+ T-cell in lesional skin from Week 0 to Week 2 during treatment in patients with complete or near-complete clinical response (PGA scores 0 and 1). The single patient with a minimal response (PGA score of 4) had a higher proportion of *CXCL13+* CD8+ T cells at baseline and only a 20% decrease of *CXCL13+* CD8+ T-cell with baricitinib treatment. The basal KC 1decreased and an increased proportion of a resting "basal KC2" in patients with robust treatment responses to baricitinib (PGA scores of 0 and 1) The patient with lack of response (PGA score of 4) basal KC1 remained the dominant state.

**Conclusion:** These results suggest that the basal KC 1 state reflects inflammatory activity in LP. Furthermore, the correlation between decreased frequency of *CXCL13*+ CD8+ T cells with clinical improvement suggests that changes in this population may predict treatment response or a potential target of future treatments, which warrants further investigation.

### Bimekizumab as Treatment for Hidradenitis Suppurativa: Case Series

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# **Introduction & Objectives:**

Hidradenitis suppurativa (HS) is a chronic skin disease that often poses challenges in its therapeutic approach. Bimekizumab (BKZ), a humanized monoclonal antibody targeting IL-17A and IL-17F, has shown favorable results in patients with HS in randomized clinical trials, with limited evidence on its effectiveness in real-world clinical practice.

### **Materials & Methods:**

Our series includes 5 patients with moderate or severe HS refractory to conventional treatments for the disease, who were initiated on BKZ and followed up for 16 and 24 weeks, with response quantified through the number of inflammatory lesions on ultrasound examination and the pain scale.

## **Results:**

Three out of the five evaluated patients showed objective improvement after 16 weeks of treatment. However, the remaining two patients did not show improvement until week 24 of treatment. It is worth noting that these two patients had a shorter disease history but experienced a rapidly progressive evolution over a limited period, necessitating multiple successive treatment regimens without clear improvement with any of them. Therefore, they had a higher inflammatory burden and clinical involvement at baseline before the initiation of BKZ. Regarding tolerance and safety, none of the five patients showed drug intolerance or adverse reactions warranting drug discontinuation. Additionally, three out of the five patients presented with oral mucosa candidiasis resolved with local treatment.

### **Conclusion:**

BKZ appears to be an effective and safe therapeutic alternative for patients with HS. The speed of disease progression may be considered as another parameter to evaluate for therapeutic decision-making. Certain patients with hidradenitis suppurativa may require longer treatment to achieve favorable clinical responses. Therefore, further studies are needed to identify factors associated with response speed and to assess possible dosage or treatment interval implications.

Effect of the use of a skincare routine containing skin-identical ceramides on corticosteroid and antihistamine consumption in patients with atopic dermatitis and psoriasis

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**Introduction & Objectives:** Atopic dermatitis (AD) and psoriasis are highly prevalent, chronic, inflammatory diseases that require long-term treatment. Although they are different diseases, they share some common characteristics such as skin barrier disruption, immune system dysregulation, genetic factors and external environmental triggers. One of the first-line treatments for these conditions is the use of emollients, which can help restore the skin's barrier function, thus keeping the skin healthy. However, in some cases, emollients may not be sufficient and topical medications, such as corticosteroids or antihistamines, may be necessary to help reduce inflammation and pruritus. The objective of this study was to evaluate the benefit of incorporating a ceramide-containing skin care routine (EOP, NP, AP) in patients with AD and psoriasis who had priorly been prescribed corticosteroid or antihistamine therapy.

**Materials & Methods:** Prospective, multicenter, interventional study involving 206 adult patients with mild to moderate AD (n=109, mean age  $29.6 \pm 16.4$ ) with a Scoring Atopic Dermatitis (SCORAD) < 40, and chronic plaque psoriasis (n=97, mean age  $47.9 \pm 16.3$ ) with a Psoriasis Area and Severity Index (PASI) < 10. Patients used a daily cleanser and moisturizer, both containing ceramides (EOP, NP and AP) and MVE technology for 4 weeks, along with other previously prescribed corticosteroids or antihistamines (if applicable). At baseline (V1) and after 4 weeks of study (V2), doctors assessed the severity of the condition using the appropriate scale, SCORAD for AD and PASI for psoriasis, and recorded changes in treatment with corticosteroids or antihistamines. Patients evaluated the tolerance, satisfaction, and cosmeticity of the routine.

**Results:** After 4 weeks of the study, the clinical evaluation of the severity and extent of AD and psoriasis demonstrated a significant improvement with a reduction in the SCORAD index of 19.38 points (61.2%, V1= 31.65  $\pm$  12.32)/V2= 12.27  $\pm$  10.81; p<0.001) and in the PASI index of 2.77 point (-62, 5%, V1= 4.43  $\pm$  4.74/V2= 1.66  $\pm$  2.11; p<0.001). Remarkably, this general improvement in the condition of both diseases allowed a reduction in the prescription schedule of corticosteroids (AD, n=57; psoriasis, n=48) and antihistamines (AD, n=12) in patients who had them prescribed at the beginning of the study. In particular, the consumption of corticosteroids and antihistamines was lower in 73.7% and 58.3% of these patients with AD, respectively. Similarly, a reduction in the use of corticosteroids was also observed in 48% of patients with psoriasis.

**Conclusion:** Incorporating a daily care routine with ceramides is effective and well tolerated in patients with AD and conical plaque psoriasis. Its use as a complement in the treatment plan for both conditions helps reduce the consumption of drugs such as antihistamines or corticosteroids in a large percentage of patients.

# Living with generalised pustular psoriasis: Understanding chronic symptoms, impact on quality of life, and support and educational needs

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### **Introduction & Objectives:**

Generalised pustular psoriasis (GPP) is a chronic, heterogenous, neutrophilic inflammatory skin disease.1,2 Although characterised by recurring, unpredictable flares (often associated with systemic symptoms), patients experience chronic symptoms between flares, which can significantly impact their quality of life (QoL).1,2 This study aimed to understand the impact of chronic symptoms between flares, coping mechanisms, and access to educational/support resources among patients with GPP.

### **Materials & Methods:**

Between October 2022 and December 2023, 19 patients with GPP from the USA (n=7), Germany (n=5), China (n=4) and Japan (n=3) were predominantly recruited via databases and healthcare professionals to complete qualitative interviews and surveys, and to provide insights into their QoL experiences. Eligible participants were aged 18-65 years, diagnosed with GPP for >1 month, with  $\geq 1$  flare in the past year, and actively receiving treatment. Data collection methods included quarterly deep-dive interviews (n=15), bimonthly survey tasks, and regular self-reporting of mental wellbeing (n=16; 33 entries), QoL and symptom trackers (n=18; 57 entries).

## Results:

Most patients were female (n=15; 79%); 11 were 18–40 years old, and 8 were 41–65 years old. Five patients had concomitant plaque psoriasis (26%), three had psoriatic arthritis (16%), and one had palmoplantar pustulosis (5%). Despite patients actively receiving treatment, GPP had a moderate impact on QoL, with a mean Dermatology Life Quality Index score of 6.1. Clothing choice (33%), itch, soreness and pain (25%), feelings of embarrassment (21%) and treatment-related issues (19%) had the largest impact on QoL. Twelve of 15 patients interviewed (80%) reported chronic symptoms, describing them as less intense versions of the symptoms they experience during flare periods. Common symptoms included itchiness, dryness, redness, fatigue, peeling and pustules (occurring once to a few times per week). Despite their lower intensity, chronic symptoms still posed a significant daily burden, with the largest impact on work and travel.

Patients with chronic symptoms had a higher degree of psychological distress (mean General Health

Questionnaire [GHQ]-12 score: 15) than those without symptoms (mean GHQ-12 score: 12), but lower compared with during a flare (GHQ-12 score: 17) (Figure 1). The main factors affecting psychological wellbeing in patients with chronic symptoms were financial issues (63%), comorbidities (47%) and relationship/family issues (47%) (Figure 2). Many patients reported self-management of chronic symptoms with creams, painkillers and diet modification; however, 60% of patients mentioned the need for an effective treatment for chronic symptoms. Only 3 out of 14 patients (all from Japan) utilised patient organisations as a source of information, highlighting a lack of awareness or availability of such resources. Patients expressed interest in a centralised app that provides information about GPP, treatments, lifestyle advice, symptom tracking and connectivity with other patients.

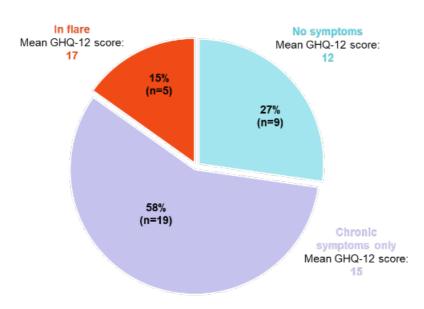
### **Conclusion:**

There is unmet need for comprehensive treatment and management strategies for GPP that address chronic symptoms, as well as improved access to information and services to better support individuals living with GPP.

### **References:**

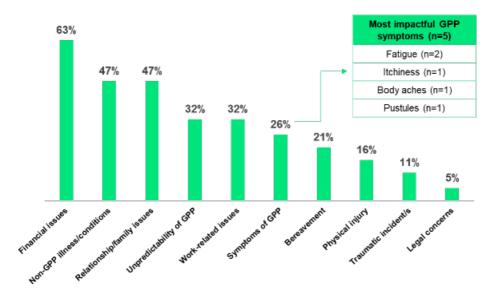
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Figure 1. Psychological distress associated with GPP (n=33)\*



GHQ, General Health Questionnaire; GPP, generalised pustular psoriasis. n=33 entries, completed by 16 patients between July and October 2023.

Figure 2. Factors impacting psychological wellbeing in patients with chronic symptoms of GPP (n=19)\*



GPP, generalised pustular psoriasis. \*n=33 entries, completed by 16 patients between July and October 2023.

# Insights Into Symptom Monitoring and Nocturnal Scratching Activity in Mycosis Fungoides Using Wearable Technologies and ePROs

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# **Introduction & Objectives:**

Mycosis Fungoindes (MF) is the most prevalent variant of Cutaneous T-cell Lymphoma, presenting a broad array of symptoms. Pruritus stands out as the most common symptom across disease stages, affecting sleep quality and, as a result, impacting patient Quality of Life (QoL). The relationship between MF symptoms and sleep disturbances highlights the need for a detailed exploration of how these factors influence one another and overall the effectiveness of therapeutic interventions. This study aims to analyze the correlation between nocturnal scratching, disease severity and treatment response in MF patients using wearable technologies and electronic Patient-Reported Outcomes (ePRO).

### **Materials & Methods:**

In this prospective, explorative open-label study, 21 patients with early-stage MF and 11 Healthy Volunteers (HV) were enrolled. The study was structured into a 6-week observational phase for all subjects and a subsequent 16-week interventional phase with chlormethine gel 0.016% treatment for MF patients. HVs were provided with wearables (Withings Steel HR smartwatch) for monitoring sleep and activity, while both HVs and MF patients used ePRO to subjectively assess sleep quality and symptom severity. Additionally, the Derma Track app combined with an Apple Watch was used by all subjects to objectively document nocturnal scratching.

### **Results:**

Preliminary analysis using wearables has established baseline characteristics for sleep patterns in HVs. ePRO measurements revealed significant differences in NRS scores for itch, pain, and sleep quality when comparing HV with MF patients. Notably, self-reported symptoms of patients with MF indicated an improvement of pruritus following the treatment phase. However, the application of DermaTrack for objective scratching frequency measurement did not reflect a statistically significant alteration in nocturnal scratching behavior in the post-treatment phase.

### **Conclusion:**

This study provides insights into the sleep disturbance, scratch activity and related symptomatology in MF patients. The use of non-invasive tools like wearables and ePRO provides a new perspective in monitoring disease impact and treatment efficacy. By integrating these technologies, we aim to improve patient monitoring and understanding of MF, ultimately improving patient QoL. However, further analysis and interpretation of the data are needed to fully understand the implication of these findings and optimize patient care.

Pyoderma gangrenosum patients are at increased risk for developing certain cardiovascular diseases – a retrospective, propensity-matched, US-based cohort study

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## **Introduction & Objectives:**

Pyoderma gangrenosum (PG) is a rare, neutrophilic skin disorder, which is characterized by painful skin ulcers. While various comorbidities such as anemia, metabolic syndrome, internal malignancies and chronic inflammatory bowel diseases, have been well described, risk of cardiovascular diseases in PG patients remains to be elusive.

#### **Materials & Methods:**

Data from electronic health records were retrieved by accessing the federated US Network using the TriNetX platform. For identification of patients, controls, and analyzed outcomes ICD10CM codes were used. Cohorts were propensity-score matched and risk for cardiovascular diseases, such as major adverse cardiovascular events (MACE), ischemic stroke, deep vein thrombosis, or cardiac arrest were identified within 20 years after diagnosis of PG.

### **Results:**

A total of 11,568 propensity-score matched PG patients were identified. While in 13% of PG patients a diagnosis of MACE was observed, only 6.6% of controls had MACE, accounting for an increased hazard ratio (HR) of 2.18 (95% CI 1.98-2.39, p < 0.0001) in PG patients. Highest HRs were identified for cardiac arrest (HR 3.62, 95% CI 2.79-4.70, p < 0.0001) and deep vein thrombosis (HR 3.42, 95% CI 2.95-3.97, p < 0.0001). Further, risks for ischemic stroke, pulmonary embolism and also death were significantly increased, while no increased risk was observed for cerebrovascular diseases (HR 1.12, 95% CI 0.94-1.35, p = 0.2175). Granular analysis on risk in person of color/white or female/male patients revealed no significant differences.

### **Conclusion:**

Presented results indicate that PG patients are at increased risk for developing various cardiovascular diseases. Respective screenings in order to detect and prevent cardiovascular diseases might be advised in patients diagnosed with PG.

### Use of Topical Beta-blockers in the Treatment of Rosacea: A Systematic Review of Clinical Evidence

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# **Introduction & Objectives:**

Rosacea is a chronic relapsing-remitting inflammatory skin condition that affects the face, characterized by papules, pustules, telangiectasias, and erythema. Different subtypes of rosacea exist, including erythematotelangiectatic, papulopustular, phymatous and ocular rosacea. Initial management of rosacea relies on appropriate skin care and avoidance of triggers, such as alcohol, sunlight and stress. However, several pharmacological treatments, such as topical antimicrobials, alpha 2 adrenergic receptor agonists and retinoids have been found to be effective in managing symptoms and prolonging remission. While these agents proved to be effective in papulopustular rosacea, treating the erythematotelangiectatic type remains a challenge. One class of drugs that has gained widespread attention in dermatology recently is topical beta blockers. The vasoconstrictive effects of beta blockers are thought to play a role in improving erythema and flushing associated with erythematotelangiectatic rosacea. The aim of this study is to review the clinical trials on the efficacy of topical beta blockers in managing rosacea.

### **Materials & Methods:**

This study was conducted in accordance with the PRISMA guidelines. A search strategy was synthesized and conducted on four databases: Medline, PubMed, Embase and Google Scholar. The articles were assessed for inclusion by two independent reviewers based on preset criteria, and duplicate studies were removed. Data extraction was then conducted by two independent reviewers, and any discrepancy was solved with the aid of a third blinded reviewer.

## **Results:**

Three clinical trials encompassing 82 patients with rosacea were included in the review. All studies were conducted on adult patients. Two studies were randomized controlled split face trials while the third one was an uncontrolled trial. All studies used topical timolol maleate 0.5%. None of the studies used other adjunct treatments for rosacea. The majority of participants were females. Each study used a different method to assess post treatment results. One study used Clinician Erythema Assessment (CEA) and Patient Self-Assessment (PSA), while the second study used ristimulus colorimetry and computer aided image analysis (CAIA) of cross-polarized photographs. The third study used Investigator's Global Assessment scale (IGA). Two studies included patients with erythematotelangiectatic rosacea only while one included patients with both erythematotelangiectatic and papulopustular subtypes. In the split face trials, both trials found a significant improvement in the side treated with timolol, with significant improvement in the scale scores that assess for erythema and telangiectasias. In the third study, all participants had a significant improvement in IGA score with only a minority having complete clearing of erythema. Timolol was well tolerated in all studies, with minimal side effects such as dryness, and irritation.

# **Conclusion:**

In summary, all studies found a significant improvement in rosacea symptoms following treatment with topical timolol. The sample size, however, is small and more studies are required to further assess the efficacy of topical

beta blockers in rosacea. Nevertheless, given that timolol was used alone in the studies and not as an adjunct treatment, and yet proved to be effective, is promising for the future use of topical beta blockers in dermatology.

Table 1: Data Extraction Sheet

Study	Country	Type of Study	Intervention	Intervention Administration Route	Intervention Formulation and Dosage	Duration of Intervention	Concurrent Treatments	Adverse Effects	Control Group	Sample Size	Results
Wei et al., 2021	South Africa	Clinical Trial	Timolol maleate	Topical	0.5% drops	28 days	None	Worsened redness on day 1	Normal saline	16	75.00% of treated lesions showed significant improvement in CEA score vs 37.5 % untreated lesions, p<0.05
Tsai et al., 2021	USA	Clinical Trial	Timolol maleate	Topical	0.5% gel- forming solution	16 weeks	None	Transient lower eyelid sensitivity	8 weeks of no treatment followed by 8 weeks of treatment with 0.5 % timolol	8	There was improvement only on the longer-treated side most significant at week 12 with p<0.047
Al Mokadem et al., 2020	Egypt	Clinical Trial	Timolol maleate	Topical	0.5% drops	8 weeks	None	Dryness, itching	None	58	10.4 % of patients achieved an IGA result of "clear" or "almost clear" after treatment

Table 2: Risk of Bias Assessment

			Blinding of				
	Random		participants	Blinding of	Incomplete		
	Sequence	Allocation	and	outcome	outcome	Selective	
	Generation	concealment	personnel	assessment	data	reporting	
	(selection	(selection	(performance	(detection	(attrition	(reporting	Other
Study	bias)	bias)	bias)	bias)	bias)	bias)	bias
Wei et al.,		No					
2021	Low	information	Moderate	Low	Low	Low	Low
Tsai et al.,		No	No	No			
2021	Low	information	information	information	High	Moderate	Low
Al Mokadem							
et al., 2020	N/A	N/A	N/A	N/A	Low	Low	Low

# Efficacy of Apremilast for the Treatment of Japanese Patients With Palmoplantar Pustulosis: Results From a Phase 3, Randomized, Placebo-Controlled Study

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## **Introduction & Objectives:**

Palmoplantar pustulosis (PPP) is a chronic dermatitis associated with itching and pain, for which treatment options are limited. In this study, Japanese patients with moderate to severe PPP who had an inadequate response to topical therapy were treated with apremilast (APR) 30 mg BID or placebo (PBO) for 16 weeks (Wk), followed by APR for all patients until Wk 52. As exploratory endpoints, PPP Area and Severity Index (PPPASI)-75,-90, PPPASI sub-score, PPPASI-50 sub-group analysis and PGA 0/1 achievement rate were evaluated.

### **Materials & Methods:**

In this study, Japanese patients with moderate to severe PPP who had an inadequate response to topical therapy were treated with apremilast (APR) 30 mg BID or placebo (PBO) for 16 weeks (Wk), followed by APR for all patients until Wk 52.

## **Results:**

A significantly greater proportion of patients achieved PPPASI-50 response at Wk 16 (primary endpoint) with APR (n=88) than PBO ([n=88] 67.8% vs 35.3%, *P*<0.0001). PPPASI-75 and -90 were also higher in the APR than in the PBO at 16 Wk (35.8% vs 14.8% nominal P=0.0008 and 9.3% vs 3.4% nominal P=0.1072, respectively). Improvements from baseline at 16 Wk in PPPASI subscores (erythema, pustules or vesicles, desquamation, or scale) was greater in the APR than in the PBO (-3.9 vs -2.0, -4.3 vs -2.0, -3.6 vs -1.7), respectively. Subgroup analysis of achieving PPPASI-50 at 16 Wk showed that the APR was better than the PBO for most baseline demographic and disease characteristics. All of the efficacy endpoints showed improvement as early as Wk 2 of treatment, suggesting a rapid onset of effect of APR.

### **Conclusions:**

Clinical improvement in Japanese pts with moderate to severe PPP was observed with APR relative to PBO, regarding of baseline demographics and disease characteristics. Rapid onset of efficacy as early as week 2 was observed with APR.

# Increased risk for MACE and venous thromboembolism in vitiligo patients - data from a large-scale, US-based, retrospective study

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## **Introduction & Objectives:**

Specific destruction of melanocytes is the hallmark characteristic of vitiligo. Due to its autoimmune nature several comorbidities have been identified, of which several are risk factors for the cardiovascular diseases. However, risk for cardiovascular diseases, such as MACE and venous thromboembolism, especially in light of modern small molecule treatment options, remains elusive.

#### Materials & Methods:

TriNetX is a federated platform, which included 57 health care organizations across the US at the time of analysis and allows for data retrieval from electronic health records. Patients and controls were identified using respective ICD10CM codes and hazard ratios (HR) for following outcome events within 20 years after first diagnosis determined. Outcome events included acute myocardial infarction, atherosclerosis of aorta, atrial fibrillation and flutter, cardiac arrythmia, cerebral infarction, heart failure, hypertensive heart disease and chronic kidney disease, ischemic cardiomyopathy, ischemic heart disease, MACE, venous thromboembolism, pulmonary embolism, rheumatic tricuspid insufficiency, and ventricular tachycardia.

### **Results:**

1:1 propensity score matching resulted in identification of two cohorts, each containing 96,581 individuals. All outcomes were present >1% in both cohorts. MACE and venous thromboembolism displayed significantly increased HRs of HR = 1.28 (95% CI 1.22-1.35, p <0.0001) and HR = 1.27 (95% CI 1.17-1.38, p < 0.0001), respectively. The diagnosis with the highest HR was hypertensive heart and chronic kidney disease HR = 1.46 (95% CI 1.31-1.62, p < 0.0001), followed by rheumatic tricuspid insufficiency HR = 1.35 (95% CI 1.19-1.53, p < 0.0001) and heart failure HR = 1.33 (95% CI 1.25-1.42, p < 0.0001).

### Conclusion:

This descriptive study shows that vitiligo patients present with an increased risk of cardiovascular diseases. To establish causal linkages between individual diseases, as well as different forms of vitiligo and disease severity, further studies are needed.

Improvement in the quality of life of patients with psoriasis, atopic dermatitis and xerosis using a skincare routine containing skin-identical ceramides

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**Introduction & Objectives:** Psoriasis, atopic dermatitis (AD) and xerosis are common, chronic, inflammatory skin diseases associated with poor health-related quality of life. They are characterized by symptoms such as itching, erythema and thickening of the skin, which can lead to sleep disturbances and have an impact on mental health. These conditions are associated with impaired skin barrier function including a decrease in water content and stratum corneum lipid components such as ceramides, cholesterol and free fatty acids. The use of a daily skin care routine with skin-identical ceramides (EOP, NP and AP) that restores the skin barrier may help reduce symptoms and improve the quality of life for people with psoriasis, AD and xerosis.

**Materials & Methods:** Prospective, multicenter, interventional study involving 312 adult men and women with mild to moderate AD (n=109, mean age 29.6  $\pm$  16.4), chronic plaque psoriasis (n=97, mean age 47.9  $\pm$  13,3) and xerosis (n=106, mean age 50,6  $\pm$  22.3). Patients included at baseline had a Scoring Atopic Dermatitis (SCORAD) < 40 for AD, Psoriasis Area Severity Index (PASI) < 10 for psoriasis and Visual Analogue Scale (VAS) < 4 for xerosis. Patients used a daily cleanser and moisturizer, both containing ceramides (EOP, NP and AP) and MVE technology for 4 weeks, along with other previously prescribed treatments (if applicable). At baseline (V1) and after 4 weeks of study (V2), the impact of skin disease on patients' health-related quality of life was assessed using the Dermatology Life Quality Index (DLQI) questionnaire for each condition. Patients evaluated the tolerance, satisfaction, and cosmeticity of the routine.

**Results:** After 4 weeks of using the daily skincare routine with ceramides, the health-related quality of life of the study patients improved significantly in all three conditions. The DLQI score in patients with AD (n=71) decreased by 3.59 points (V1 =  $5.34 \pm 4.38/V2 = 1.75 \pm 2.30$ ; p < 0.001). In the case of psoriasis (n=57), the DLQI score was reduced by 3.44 points (V1=  $5.32 \pm 5.16/V2 = 1.88 \pm 2.33$ ; p < 0.001). Finally, the DLQI score in patients with xerosis (n=75) also experienced a reduction of 2.69 points (V1=  $3.48 \pm 3.10/V2 = 0.79 \pm 1.21$ ; p < 0.001). The skincare products were well tolerated, and 96% of subjects were satisfied or highly satisfied with the routine.

**Conclusion:** This study evidences the positive impact of using a daily skincare routine with ceramides in the treatment plan of chronic plaque psoriasis, AD and xerosis (as monotherapy or adjuvant). After 4 weeks of treatment, patients' perception of the impact of the condition on health-related quality of life significantly improved. The routine was well tolerated, and a high percentage of patients were satisfied with the result.

### **Prurigo Pigmentosa: Report of Four Maghrebin cases**

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## **Introduction & Objectives:**

Prurigo pigmentosa (PP) is an inflammatory skin disease characterized by a sudden eruption of pruritic, erythematous papules in a reticular pattern followed by hyperpigmentation. Although the majority of reports about PP are from East Asia, patients of all backgrounds can be affected. Our aim is to describe the clinical features and follow-up outcomes of four Moroccan patients diagnosed with PP.

### Materials & Methods:

Four patients diagnosed with PP were identified from dermatology department of university hospital center of Marrakesh between January 2022 and January 2024.

### **Results:**

Three patients were female. The mean age of the patients was 25,75 years old (20-33 years old). The duration of symptoms ranged from 10 to 30 days. All patients presented with pruritic, papular or papulovesicular lesions. The rash had a predilection to the chest and back. Two patients were pregnant in the first trimester. One patient followed a ketogenic diet for a month, excluding carbohydrates. No causal factor was found in the fourth patient.

A skin biopsy on an erythematous papule showed in all cases, spongiosis, dermal infiltrate of eosinophils, lymphocytes, and neutrophils.

The evolution was spontaneously favorable in both pregnant patients, and favorable under doxycycline (200 mg daily) treatment in the 2 other cases. Carbohydrates were reintroduced immediately for the patient who presented the Keto rash. The Erythematous plaques evolved into asymptomatic, hyperpigmented, reticulated patches in all cases.

## **Conclusion:**

Prurigo pigmentosa, a rare inflammatory disease, initially presents with intense pruritic erythematous papules, typically on the neck, chest, back, and rarely, limbs or face. In line with the literature, we observed a clear predilection of the condition for young women.

PP's etiology remains unclear but has been associated with various factors, including physical trauma, friction, acupuncture, atopic dermatitis, diabetes mellitus, pregnancy, and ketosis. These last two factors were noted in patients in our serie. Further investigations are necessary to better understand the etiopathogenesis of this rare entity.

Dermatologists should be familiar with early signs of PP in order to minimize unnecessary therapies, recurrences and long-lasting hyperpigmentation.

### A case report of lichen planus pigmentosus - inversus, a rare variant of lichen planus pigmentosus

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**Introduction & Objectives:** Lichen planus pigmentosus, a rare form of lichen planus, is characterized by asymptomatic brown or purple-gray macules, papules and/or plaques. The lesions are frequently located on ultraviolet-exposed areas such as the face and neck. Lichen planus pigmentosus-inversus is a variant limited to intertriginous and fold areas. It most often affects the axillae, groin, inframammary folds, antecubital and popliteal fossae

**Materials & Methods:** In this case, the histopathological findings of lichen planus pigmentosus inversus and the characteristics of clinical involvement were emphasized.

**Results:** A 74-year-old man was admitted to our dermatology outpatient clinic with the complaint of itching and eleveted lesions on his body for three months. Dermatologic examination revealed multiple purple colored, squamous papules and plaques with a tendency to coalesce, involving only bilateral axillae, inguinal region, popliteal fossae and sacrum. Oral and genital mucosa were intact. The patient had no comorbidities and no regular medication use. No significant findings triggering the disease were found in the patient's history

In laboratory tests, Enzyme-Linked ImmunoSorbent Assay (ELİSA), routine hemogram, biochemistry and viral serology results were normal.

Two four-mm punch biopsies were taken from the sacrum and axilla and referred to the pathology unites. Histopathological examination revealed orthokeratosis on the surface, hypergranulosis in the epidermis, keratinocyte necrosis, subepidermal separation, vacuolization, dense band-like lymphocyte accumulation in the superficial dermis, and melanophages showing pigment incontinence in the superficial dermis. The results were consistent with lichen planus pigmentosus.

Since the site of involvement was restricted to axillary, inguinal region, popliteal fossae and sacrum, the clinical diagnosis was considered as planus pigmentosus inversus.

The patient was followed up in our outpatient clinic and topical treatment was planned.

**Conclusion:** The case was clinically and histopathologically evaluated as lichen planus pigmentosus - inversus compatible and is presented because it is a rare variant of lichen planus pigmentosus and to emphasize the characteristics of the lesion localization in the patient.

# Unfolding dermatologic spectrum of adult onset Still disease: real-life data from the International AIDA Registry

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### **Introduction & Objectives:**

Adult onset Still's disease (AoSD) is a systemic immune-mediated condition of an autoinflammatory nature, traditionally characterized by four symptoms: fever, arthralgia, cutaneous lesions and leucocytosis. The classic skin eruption is described as an evanescent, salmon-colored, maculopapular, non-pruritic rash. Atypical skin manifestations may occur, the most common being persistent, pruritic papules and plaques. A potentially fatal complication of AoSD is macrophage activation syndrome (MAS). As AoSD is rare, the understanding of the disease is still evolving and large observational studies on patients with AoSD are scarce. The aim of our study was to analyze a large international cohort of AoSD patients, assessing the types and frequencies of skin lesions and correlating them with the age of onset of AoSD, ethnicity, disease severity and occurrence of MAS.

### **Materials & Methods:**

This study was based on retrospectively collected data from the International Autoinflammatory Disease Alliance (AIDA) Network Registry dedicated to AoSD. The enrolment of AoSD patients in the AIDA Registry started in June 2021 and information on 518 patients up to January 2024 were extrapolated. Diagnosis of AoSD was made according to internationally accepted Yamaguchi criteria. Disease severity was assessed based on the Pouchot score and patients stratified according to score <7 and <sup>3</sup> 7. Chi-squared test was performed to assess the association between qualitative variables. In the cases of age and ethnicity, a post hoc analysis was performed with multiple exact tests with false discovery rate correction.

### **Results:**

Of the 518 patients, 213 (41.3%) were male, 390 (77.5%) were of Caucasian origin, 45 (8.9%) and 50 (9.9%) Hispanic and Arabian respectively. 304 patients (63.9%) presented with the classic salmon-colored skin rash, while 122 (25.8%) had atypical skin manifestations, including macules (n=40; 7.7%), urticaria-like eruptions (n=22; 4.2%) and erythema (n=27; 5.2%). Pruritus was present in 104 patients (29.6%). The complication of MAS occurred in 44 patients (9.5%). The typical salmon-colored skin rash was significantly more frequent in young patients (under 16 years of age, compared to patients aged 16-60 years) (p<0.05), while pruritus was more frequently reported by adult patients (16-60) (p<0.05). No significant differences between the various ethnicities were found in terms of the frequency of the typical skin rash. Conversely, atypical AoSD skin variants and pruritus were significantly more frequent in Hispanics than Caucasians and Arabs (p<0.05). Furthermore, the typical skin rash was significantly associated with disease severity, being more frequent in patients with Pouchot score  $^3$  7 (p<0.001). Finally, none of the skin variants of AoSD were significantly associated with the occurrence of MAS.

## **Conclusion:**

Despite its rarity, AoSD is an important diagnosis to keep in mind, especially for dermatologists dealing with

recurrent febrile episodes, as spontaneous remission of symptoms is unlikely and the impact on patients' lives is profound. In our study, the range of skin lesions in AoDS was wide, with the typical skin rash associated with increased disease severity. Interestingly, differences in skin lesions were found across ethnicities, highlighting the heterogeneity of the disease. Unlike other systemic manifestations, no specific skin variants of AoSD were significantly associated with the occurrence of MAS.

### Association of cutaneous sarcoidosis and squamous cell carcinoma

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## **Introduction & Objectives:**

Sarcoidosis is a chronic systemic disease characterized by the formation of non-caseating granulomas in multiple organs, including the skin. An association between systemic sarcoidosis and an increased risk of malignant tumors has been established. Dermatologists should be aware of the increased risk of non-melanoma skin cancers in patients with sarcoidosis.

### **Materials & Methods:**

We hereby report the case of a 74-year-old female patient, followed since 2017 for cutaneous sarcoidosis with lymph node involvement under synthetic antimalarials, with stable evolution on the cutaneous level presenting as erythematous-violaceous scaly lesions throughout the body and alopecic plaques on the scalp. She presented with a new evolving lesion on the face evolving for 8 months. Clinical examination revealed a hyperkeratotic ulcerobudding tumor topped with pustules and crusts localized on the right cheek measuring 12cm/10cm.

### **Results:**

Dermoscopy showed: white areas without structures, scales, crusts, yellowish and brown superficial horns, ulcerations, blood spots, and irregular serpentine and branched polymorphic vessels. A skin biopsy was performed and is suggestive of a well-differentiated infiltrating and keratinizing squamous cell carcinoma. The tumor was resected followed by skin grafting and 35 sessions of radiotherapy with good outcome.

### **Conclusion:**

An association between sarcoidosis and malignant tumors has been suggested for several decades. We specifically report this case of a patient with cutaneous sarcoidosis who presented with concomitant cutaneous squamous cell carcinoma to emphasize the importance of thorough dermatological examination complemented by biopsy when patients with sarcoidosis present new and unusual skin lesions.

### Survey on Clinical Application of Dermocosmetics in Chinese Rosacea Patients

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## **Introduction & Objectives:**

Rosacea is a chronic inflammatory skin disease which can affect patients' self-esteem and quality of life. Dermocosmetics are widely used among Chinese dermatologists and rosacea patients due to their mildness, moisturizing and repair efficacy. However, their clinical application in rosacea skin care remains unclear. This study aims to conduct a thorough research on the current clinical application of dermocosmetic products for patients with rosacea.

### Materials & Methods:

A questionnaire survey was initiated on an online platform, and a total of 296 questionnaire data are collected. Based on descriptive and inferential statistical analysis, comparisons and analyses between groups are performed by chi-square or Fisher's exact test (SPSS 23.0 software).

### **Results:**

In this study, the dermatologists are predominantly physicians from second- and third-tier cities in China (66.22%), with the predominant title of attending/resident physicians (62.16%). For the investigated dermatologists, frequently recurrence (80.07%), unclear pathogenesis (69.93%), and poor patient compliance (63.85%) are commonly cited pain points in the treatment and management of roseasa (Table 1). Among them, compared with dermatologists in first-tier/new first-tier cities, more dermatologists in second- and third-tier cities (34.18% vs. 17.00%) perceive no safe treatment option as a pain point in the clinical treatment and management of rosacea (p < 0.05).

		City			Title			
	General	First-tier/new first-tier cities	Second-and third-tier cities	Р	Chief physician/associate chief physician	Attending physician/resident physician	ρ	
Frequently recurrence	80.07%	84.00%	78.06%	0.29	84.82%	77.17%	0.15	
Unclear pathogenesis	69.93%	69.00%	70.41%	0.91	71.43%	69.02%	0.76	
Poor patient compliance	63.85%	62.00%	64.80%	0.73	60.71%	65.76%	0.45	
No effective treatment methods or drugs	61.82%	55.00%	65.31%	0.11	60.71%	62.50%	0.85	
Skin barrier damage	52.36%	54.00%	51.53%	0.78	53.57%	51.63%	0.84	
No effective skin care products	45.95%	43.00%	47.45%	0.55	43.75%	47.28%	0.64	
Difficulties in differential diagnosis	39.53%	37.00%	40.82%	0.61	41.07%	38.59%	0.76	
No safe treatment options	28.38%	17.00%	34.18%	⊲0.05	27.68%	28.80%	0.94	

Note: Data are presented as n(%)

Table 1. Clinical pain points in diagnosis, treatment and skin care of patients with rosacea

Dermocosmetics are widely recommended in rosacea skin care, with 77.36% of surveyed dermatologists willing to recommend them on a regular basis. Overall, dermocosmetic products are recommended by dermatologists to repair skin barrier (86.49%) and soothe skin discomfort (83.78%) (Table 2). Compared with chief physicians/associate chief physicians, a higher percentage of attending physicians/resident physicians (88.59% vs. 75.89%) recommend dermocosmetic products to soothe skin discomfort (p < 0.05).

			City		Title		
	General	First-tier/new first-tier cities	Second- and third-tier cities	Р	Chief physician/asso ciate chief physician	Attending physician/re sident physician	Р
Repairing skin barrier	86.49%	87.00%	86.22%	1	85.71%	86.96%	0.90
Soothing skin discomfort	83.78%	79.00%	86.22%	0.15	75.89%	88.59%	⊲0.05
Adjunctive therapy with drug to improved treatment efficacy	79.39%	83.00%	77.55%	0.35	81.25%	78.26%	0.64
Using as routine skin care	78.04%	85.00%	74.49%	0.06	75.89%	79.35%	0.58
Reducing side effects of medications	63.18%	62.00%	63.78%	0.86	61.61%	64.13%	0.75
Preventing recurrence	44.59%	45.00%	44.39%	1	44.64%	44.57%	1

Note: Data are presented as n(%)

Table 2. Main purposes for which physicians recommend dermocosmetic products

A majority of the dermatologists surveyed are satisfied with the dermocosmetic products available in the Chinese market (62.84%) and considered them to be capable of significantly improving symptoms such as skin xerosis (83.78%) and sensitivity & discomfort (82.43%). Among them, compared with dermatologists in second- and third-tier cities, dermatologists in first-tier/new first-tier cities are more likely to believe that dermocosmetic products can improve skin sensitivity (88.00% vs. 79.59%) and barrier damage after photoelectric treatment (69.00% vs. 56.63%, p=0.05).

			City		Title			
	General	First-tier/new first-tier cities	Second- and third-tier cities	Р	Chief physician/associate chief physician	Attending physician/reside nt physician	Р	
Skin xerosis	83.78%	88.00%	79.59%	0.81	81.25%	85.33%	0.45	
Skin sensitization	82.43%	85.00%	83.16%	0.10	80.36%	83.70%	0.5	
Intermittent skin flush	73.31%	70.00%	75.00%	0.43	72.32%	73.91%	0.87	
skin barrier damage post procedure	60.81%	69.00%	56.63%	0.05	62.50%	59.24%	0.88	
Persistent erythema	60.47%	64.00%	58.67%	0.45	59.82%	61.41%	0.66	
Skin inflammation	53.38%	50.00%	55.10%	0.48	48.21%	56.52%	0.20	
Telangiectasia	43.58%	42.00%	44.39%	0.79	46.43%	41.85%	0.52	
Papules	36.15%	34.00%	37.24%	0.67	36.61%	35.87%	1	
Pustules	31.08%	26.00%	33.67%	0.22	31.25%	30.98%	1	

Note: Data are presented as n(%)

Table 3. Clinical manifestations of rosacea that can be improved by dermocosmetic products

## Conclusion:

There are many challenges regarding skin care and management in the diagnosis and treatment of patients with rosacea. In the clinical practice of Chinese dermatologists, dermocosmetics are highly recommended due to their soothing, moisturising and repairing effects. While the investigated dermatologists are generally satisfied with the existing dermocosmetic products on the Chines market, there is still a need for products that can better alleviate clinical symptoms of rosacea, reduce recurrent attacks, and are more mind and non-irritating for use.

## **Subcorneal Pustular Dermatosis: case report**

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### Introduction:

Sneddon-Wilkinson disease is a rare skin condition classified as a neutrophilic dermatosis. It mainly affects women aged between 40 and 60 and generally presents with characteristic clinical symptoms. Although the disease is benign, it is chronic and may be linked to other medical conditions, requiring prolonged and regular supervision.

#### **Observation:**

A 64-year-old female patient with a history of arterial hypertension with hypertensive nephropathy, a chronic haemodialysis patient who consulted for a skin rash made up of pustules that had started on the abdomen and then spread to the rest of the body without any other associated signs.

Histology showed unilocular epidermal subcorneal pustules. Direct immunofluorescence and bacteriological sampling of the pus were negative. The diagnosis of Sneddon-Wilkinson disease was accepted.

The patient was treated with oral corticosteroids at a dose of 0.5mg/kg/day, as she had normocytic normochromic anaemia related to her chronic renal failure, with good improvement after 1 month of treatment.

#### **Results:**

Sneddon-Wilkinson disease is a rare skin disorder belonging to the group of neutrophilic dermatoses. It generally affects middle-aged adults, with a higher prevalence in women. Clinically, it manifests as flares of vesiculopustular eruptions, characterised by large flaccid pustules that coalesce to form annular or polycyclic plaques.

Diagnosis requires histological analysis, which reveals the presence of a unilocular intraepidermal amicrobial pustule, under the stratum corneum, filled with polynuclear cells, above an unaltered epidermis.

The treatment of choice is dapsone in daily doses of between 50 and 150 mg. In cases of haematological contraindication or lack of response, other treatment options have demonstrated variable efficacy: retinoids, colchicine, methotrexate, oral corticosteroids, phototherapy and recently anti-TNF alpha.

#### **Conclusion:**

Sneddon-Wilkinson amicrobial pustulosis has been little studied and in some cases is linked to other conditions, highlighting the importance of regular patient follow-up.

#### A Rare Case of Linear Porokeratosis

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# **Introduction & Objectives:**

Porokeratosis is a rare disease of keratinization that can be inherited or acquired in adulthood, with no symptoms or mild itching but an unfavorable cosmetic effect. It includes a variety of skin conditions. Linear porokeratosis causes numerous grouped skin lesions with a linear pattern, following a dermatomal distribution. The diagnosis is based on the history and clinical examination but may require a biopsy. Patients with linear porokeratosis can develop skin cancer, such as basal cell carcinoma or squamous cell carcinoma, at a rate of 6.9 to 30%. Treatment is often unsatisfactory.

#### **Materials & Methods:**

We report the case of a 21-year-old male patient who presented with numerous itchy unilateral lesions arranged in more lines along the right upper extremity, progressing over the past 12 years. He denies any family history of linear porokeratosis or another kind of porokeratosis. Physical examination revealed multiple slightly scaly, reddish patches grouped in a linear arrangement on the right upper limb, with complete dystrophy of the medial aspect of the right pollex nail plate, longitudinal split and ridging, nail plate thinning, and mild subungual hyperkeratosis. The dermoscopic image showed a central furrow surrounded by a well-defined ridge-like border, suggestive of a cornoid lamella.

Lichen striatus, lichen planus actinicus (LPA), linear epidermal naevus, and porokeratotic eccrine ostial and dermal duct naevus (PEODDN) were considered differential diagnoses.

A punch biopsy, including the raised edge of the lesion, was performed, and histopathological evaluation established the diagnosis of linear porokeratosis.

#### **Results:**

Because there is no known cure for linear porokeratosis, the patient was offered a treatment to improve the appearance of the lesions. He used a cream consisting of a combination of calcipotriol and betamethasone, as well as a topical treatment with 5-fluorouracil for one month, resulting in a reduction of inflammation.

He will continue the treatment with 5-fluorouracil cream, along with ablative skin resurfacing procedures using the fractional carbon dioxide laser.

Sun protection is crucial because exposure to ultraviolet radiation can lead to the onset of skin cancer within linear porokeratosis.

## **Conclusion:**

We opted to present this case to bring forward an extremely rare type of porokeratosis disease. Linear porokeratosis should be considered for each patient with linear lesions along a limb or on one side of the trunk, head, and neck, along the pathway of a sensory nerve. Nail damage rarely occurs in patients with linear

porokeratosis. A biopsy, together with histopathological examination, is essential in making the diagnosis. It is very important to perform a skin cancer screening on such patients, as well as improve the appearance of the skin using innovative ablative therapies.

## Pediatric lichen Planus Pigmentosus: Rare melanoderma

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#### Pediatric lichen Planus Pigmentosus: Rare melanoderma

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# **Introduction & Objectives:**

Lichen planus pigmentosus (LPP) is a rare variant of lichen planus that presents as asymptomatic to mildly pruritic, hyperpigmented macules. This dermatosis has been rarely reported in children. We report a case of childhood Lichen planus pigmentosus.

#### **Materials & Methods:**

We report a case of an 9-year-old girl with pigmented macules and patches on the upper eyelids, mentum and neck of one year duration. The affected areas weren't pruritic.

Physical examination revealed a girl with many grey to brown macules and patches on the superior palpebral region (figure 1), face (figure 2) and neck (figure 3). The nails and scalp were uninvolved.

Dermoscopy examination shows brown homogeneous areas in addition to gray-brown dots and globules grouped in a diffuse black pepper-like pattern.

A 3-mm punch biopsy was performed on a pigmented patch on the neck. Histopathology revealed that the epidermis is atrophic in places, with orthokeratosis. Discrete spongiosis is present. The papillary dermis is the site of a thin sclerohyaline band containing hyalinized blood capillaries and pigmentary incontinence. There is a minimal inflammatory infiltrate of lymphocytes and plasma cells. The presentation fit with our diagnosis of lichen planus pigmentosus

Upon confirmation of the diagnosis, our patient was prescribed hydrocortisone 0,5% one application per day for 1 month. There was clinical improvement at follow-up 2 months later

#### **Results:**

The pigmentogenic variety of lichen planus is rare in children (2.8% to 4%). Children of Arab, Afro-Caribbean and Indian origin are more susceptible, with triggering factors such as UV exposure and the use of photo-sensitizing topicals.

LPP is characterized by the presence of the hyperpigmented that may be brownish or grayish, with lesions often diffuse or reticulated, rarely annular, in the sun exposed or flexural areas of the body. Face and neck are the most frequent initial sites of involvement. Palms, soles and nails are not affected. Although lesions are generally asymptomatic, mild pruritus and burning sensations are present in about one-third of patients

Dermoscopy may aid diagnosis by showing a dotted pattern and perifollicular pigment deposition, which is a sign of activity.

Histopathological examination typically shows vacuolar alteration of the basal layer, variable dense of lymphocyte infiltration, pigmentary incontinence and melanophages in the superficial dermis.

The differential diagnosis of childhood LPP includes idiopathic eruptive macular pigmentation, ashy dermatosis and post-inflammatory pigmentation.

Treatment is based on strong dermocorticoids and topical tacrolimus, but skin lesions are often resistant to treatment.

#### **Conclusion:**

\*\* LPP is an uncommon but important variant of lichen planus in children. In the presence of dark hyperpigmentation of the skin, a biopsy can help identify LPP. Clinicians should be aware that LPP can follow four patterns: common, inverse, palmoplantar, and linear.

# A difficultly diagnosis case of weber christian disease with laurence moon biedle syndrome

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**Introduction & Objectives:** Weber-Christian disease (WCD) is an idiopathic lobular panniculitis of adipose tissue. It is a chronic condition in which recurrent fever, painful tender subcutaneous nodules, systemic symptoms and multiple organ involvement such as hepatosplenomegaly, liver cirrhosis, arthralgia and hematological abnormalities may be observed. Diagnosis of WCD is difficult as it relies on exclusion of other causes of lobular panniculitis. In limited number of case reports systemic steroids, azathioprine, cyclophosphamide, mycophenolate mofetil, cyclosporine, and TNF-alpha inhibitors have been shown to be beneficial as treatment options. Here in, we present a hardly diagnosed patient with Weber Christian disease who has recurrent panniculitis, liver and hematological involvement with Laurence Moon Biedle (LMB) syndrome.

**Materials & Methods:** A 32-year-old patient previously diagnosed with Laurence Moon Biedle syndrome and has morbid obesity, hepatosplenomegaly, diabetes mellitus, hypothyroidism, retinitis pigmentosa, and non-alcoholic liver cirrhosis admitted to our clinic in 2006 when she was 14 years old, with painful tender nodular lesions on her lower extremities. Lesional skin biopsy revealed lobular panniculitis and she was evaluated primarily in favor of erythema induratum. The patient was started on anti-tuberculosis treatment. However, there was no regression in the lesions. The patient was started on systemic steroid treatment. There was a response to the treatment, but systemic steroid treatment could not be used for a long time due to obesity and diabetes mellitus. After this period, although colchicine, acetylsalicylic acid, intravenous immunoglobulin and azathioprine were given respectively until 2022, the desired benefit was not achieved.

**Results:** In 2022, the patient was investigated for causes of non-lobular panniculitis other than erythema induratum. By eliminating other causes of lobular panniculitis, the patient was diagnosed with WCD and short-term systemic steroid and mycophenolate mofetil treatment was started.

**Conclusion:** WCD disease is defined as rare idiopathic lobular panniculitis. WCD is difficult to diagnose because it is a diagnosis of exclusion and there are no specific tests. There is no WCD accompanied by LMB syndrome in the literature, our case is the first in the literature

Treatments shown to be effective in the treatment of WCD are generally treatments that act on T cells. This shows us that T cells have an important role in the pathogenesis of WCD. For this reason, we started our patient on mycophenolate mofetil treatment, which has an effect on T cells.

With our case report, we wanted to draw attention to the difficulties experienced in diagnosing patients with panniculitis

## Targeting IL-1 controls refractory Pityriasis rubra pilaris

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# **Introduction & Objectives:**

Pityriasis rubra pilaris (PRP) is a rare inflammatory skin disease. Although evidence suggests that the IL-23/Th17 axis might play a role, the specific molecular mechanisms driving its pathogenesis are not well defined. We endeavored to unveil the mechanisms underlying PRP through a molecularly driven precision medicine approach.

## **Materials & Methods:**

Our investigation involved a comprehensive molecular characterization in skin samples of three transcriptomics cohorts. First, we compare PRP (lesional vs. non-lesional), post-PRP, psoriasis, atopic dermatitis and healthy. Second, we analyzed publicly available data of PRP patients with paired lesional vs. non-lesional skin biopsies. Third, we treated three patients who had previously failed biological treatments with IL-1 antagonists. And finally, we compared the transcriptomic findings with *in vitro* IL-1b stimulated keratinocytes.

## **Results:**

Ingenuity Pathway Analysis (IPA) identified IL1B as the second strongest predictor for upstream regulation of the PRP transcriptomic signature. IL1B significantly correlates with disease severity. A subsequent gene-gene coexpression analysis in combination with gene-set over representation analysis, and STRING functional network analysis (protein-protein interaction) show that the immune pathways involving IL-1 are closely intertwined with keratinization mechanisms.

Hence, we treated three patients with IL-1 antagonists who had previously failed biological treatments. All three exhibited rapid and substantial clinical improvement with PASI50 within 2-3 weeks upon receiving the IL-1 receptor antagonist anakinra or the IL-1 $\beta$  inhibitor canakinumab. During teratment IL-1b expression in skin was abrogated. GSEA, IPA and mechanistic network analysis in skin after treatment show a reversion of PRP transcriptional signals and NF-kB inhibition upon anakinra treatment. Finally, we assessed the impact of IL-1 $\beta$  signaling and activation in keratinocytes *in vitro*. A significant correlation in overlap of the gene signature in PRP

with IL-1 $\beta$ -stimulated keratinocytes suggests a crucial role for keratinocytes in the inflammation that characterizes PRP, with NF-kB being a key downstream signaling molecule. Furthermore we show that IL-1 $\beta$  can be processed by caspase-1 in an ASC-independent manner.

#### **Conclusion:**

Here through a molecularly driven precision medicine approach and an extensive mechanistic pathway analysis we identified a NF- $\kappa$ B-mediated IL-1 $\beta$ -CCL20 axis central to PRP pathogenesis, including activation of CARD14 and NOD2, validating this in the successful treatment of three PRP patients with the IL-1-antagonists anakinra and canakinumab.

Our work not only enhances the understanding of the mechanisms underlying PRP pathogenesis but also highlights the central role of the IL-1 $\beta$  pathway driving the disease. It opens the potential of a novel therapeutic target in PRP and proposes a redefinition of PRP as an autoinflammatory keratinization disorder.

# Effectiveness of surgical treatment in Morbihan disease

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# **Introduction & Objectives:**

Morbihan disease is uncommon and poses a real problem in terms of diagnosis and treatment. It is also known as solid persistent facial oedema or lymphoedematous rosacea, and could correspond to a particular form of rosacea, or even mimic certain connectivites. We report a new observation showing the effectiveness of surgical treatment after several inefficient drug therapies.

#### Materials & Methods:

A 65-year-old hypertensive patient presented with progressive erythematous oedema of the upper left face. The oedema was painless, persistent and indurated, giving an enlarged appearance of the left hemiface, affecting mainly the nose, cheek, forehead and upper and lower eyelids, and considerably impeding the opening of the left eye. He also complained of conjunctival hyperhaemia, lacrimation and visual discomfort. Biological and autoimmune tests were negative. Anatomopathological examination showed non-specific inflammatory tissue with no sign of malignancy. The pathology had been progressively and permanently evolving for over a year.

### Results:

The patient received several courses of antibiotics, isotretinoin and corticosteroids without any improvement. Treated for more than 6 months for oedematous rosacea with cyclins and topical metronidazole without any response. Given the persistence of the symptoms, a treatment with furosemide 40 mg/d was introduced, giving partial improvement of the oedema with recurrences when the treatment is stopped. Given these therapeutic failures, the patient was referred for surgery and underwent a double operation, a blepharoplasty followed by a rhinoplasty, resulting in extraordinary improvement and almost complete regression of symptoms. We have a follow-up of 5 years after surgery with no recurrence and no medical treatment.

## **Conclusion:**

Diagnostic and especially therapeutic difficulties are encountered in Morbihan disease due to its unknown pathophysiology. Our observation shows the effectiveness of a surgical treatment consisting of a blepharoplasty followed by a rhinoplasty resulting not only in remission but also in the absence of new relapses.

# Dysregulation of the IL-33/sST2 Pathway in Prurigo Nodularis

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# **Introduction & Objectives:**

Prurigo nodularis (PN) presents a significant challenge in dermatology due to its chronicity and intense pruritus. Recent research suggests a dysregulation of interleukin-33 (IL-33) and its receptor, soluble ST2 (sST2), may contribute to PN pathogenesis.

#### **Materials & Methods:**

We conducted a comparative study analyzing serum levels of sST2 and expression levels of IL-33 in keratinocytes and ST in inflammatory cells within the dermis of PN patients compared to healthy individuals. Immunohistochemistry and ELISA techniques were employed for assessment.

#### **Results:**

Our preliminary findings reveal a notable increase in serum sST2 levels and heightened expression of IL-33 in keratinocytes, as well as increased ST expression in inflammatory cells within the dermis of PN patients compared to healthy controls. This suggests a potential role for the IL-33/sST2 axis in PN pathophysiology, implicating both epidermal and dermal compartments in disease manifestation.

# **Conclusion:**

These findings shed light on the intricate immunological mechanisms underlying PN and highlight the potential diagnostic and therapeutic implications of targeting the IL-33/sST2 pathway in PN management.

# Prevalence of hidradenitis suppurativa in The Netherlands, a cross sectional study as part of the Global Hidradenitis Suppurativa Atlas (GHiSA)

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### **Introduction & Objectives:**

Hidradenitis suppurativa (HS) is a chronic and debilitating inflammatory skin disease, which mostly occurs in the skinfolds. The global prevalence of HS is currently unknown. Depending on the type of research and studied population, the reported prevalence varies between 0.03% and 4.1%. It is important to investigate the prevalence of HS worldwide using the same study design, in order to recognize, diagnose, and treat patients in an earlier stage. Consequently, a worldwide initiative, the Global Hidradenitis Suppurative Atlas (GHiSA) has developed a study design to investigate the world-wide prevalence of HS in a comparable manner. In cooperation with this initiative, this study aims to investigate the prevalence of HS in The Netherlands.

#### **Materials & Methods:**

An explorative, descriptive, cross-sectional mono center study was conducted at the Ear Nose Throat and Internal Medicine department of the Erasmus Medical Center. Healthy adults accompanying patients undergoing care in a hospital setting were asked to fill out a validated questionnaire and undergo physical examination. Primary outcome was the point prevalence of HS. Furthermore, patient characteristics and test parameters were assessed.

### **Results:**

In total, 663 participants were included in this study. Overall, the prevalence of HS was 0.60% (4/663, 95% confidence interval 0.32%-1.54%). A significantly higher proportion of smokers was found in the HS group compared to the control group (75% versus 13.2%, p=0.003). The test parameters showed a sensitivity of 1.0 (4/4), a specificity of 0.70 (14/20), a positive predictive value of 0.4 (4/10) and a negative predictive value of 1 (14/14).

#### **Conclusion:**

The point prevalence of HS in the Netherlands is 0.60%. This study is part of a global initiative and therefore, data can be incorporated in a worldwide analysis of the HS prevalence.

Eosinophilic annular erythema: a rare eosinophilic dermatosis

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Eosinophilic annular erythema: a rare eosinophilic dermatosis

# **Introduction & Objectives:**

Eosinophilic annular erythema (EAE) is a rare dermatosis characterized clinically by annular plaques with an elevated border and a slight central hyperpigmentation, and histopathologically by a perivascular inflammatory infiltrate with few-to-abundant eosinophils, usually without formation of 'flame figures", and with a slight epidermal hyperpigmentation. Its pathogenesis remains poorly understood, but some authors considered it as a variant of Wells' syndrome. We describe a case of a medication induced EAE.

#### **Materials & Methods:**

#### **Results:**

A 19-year-old male presented at a medical consultation for an annular polycyclic eruption evolving for one week, describing lesions as slightly itchy but mostly asymptomatic. The lesions were initially observed on his back and subsequently extended to his trunk, migrating in a centrifugal manner. Additionally, a few lesions were noted on his hands. The patient reported spontaneous resolution of the initial lesions without any treatment applied.

The patient had undergone a recent mandibular surgery (maxillary advancement, lowering, and transverse expansion), following which he was prescribed a course of antibiotic therapy by co-amoxicillin for one week. The lesions appeared 3 weeks post-surgery. The patient denied any known allergies, and he did not have any systemic symptoms such as fever, chills, abdominal pain, headaches, or joint pain. There was no notion of a preceding insect bite.

Clinical examination revealed multiple polycyclic and annular edematous plaques with some of the lesions manifesting a slight central hyperpigmentation and petechiae. The lesions were present on the back and flanks as well as the wrists. There were no mucosal lesions and no adenopathy present.

The histopathological analysis of a skin biopsy showed a slight-to-moderate lymphohistic infiltrate in the superficial and deep dermis, arranged in perivascular "cuffs", associated with many eosinophils and few extravasated red blood cells.

We also conducted a comprehensive assessment including complete blood count, liver and kidney function tests, as well as TSH levels, all of which were within normal ranges (notably, no peripheral eosinophilia was observed). Analyses to rule out helminthiases yielded negative results. Lyme disease serology, as well as serology for syphilis, HIV, HBV, and HCV, were negative. ANA titer was 80.

Two weeks later, we saw the patient in a follow-up visit. The patient reported complete resolution of the lesions present in the first consultation following application of corticosteroid creams but a development of new pruritic annular papules on the legs. One week later, the lesions were fully resolved.

## **Conclusion:**

The pathogenesis of eosinophilic annular erythema remains poorly understood although some theories were proposed suggesting a hypersensitivity reaction. There also have been several reports of association with several chronic diseases (such as autoimmune thyroid disease, systemic lupus erythematosus and others), as well as internal malignancy.

In our patient, having excluded other associated causes, we concluded that the most likely precipitating factor was the antibiotic treatment with co-amoxicillin. To the best of our knowledge, it is the first documented case reported in English literature.

## Therapeutic Challenges in Lichen planus pigmentosus

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# **Introduction & Objectives:**

Lichen planus pigmentosus (LPP) is a rare variant of lichen planus characterized by the gradual appearance of blue-brown macules on sun-exposed areas and flexural regions. Through our study, we present therapeutic and outcome-related data regarding LPP.

#### **Materials & Methods:**

A retrospective study was conducted, including patients with histologically confirmed LPP over a 7-year period (2016-2023). Patients lacking documented follow-up were excluded.

#### **Results:**

Twenty-five patients were enrolled (20 females and 5 males). The mean age was 51.1 years (range: 12-70 years). The average duration between symptom onset and diagnosis was 19.6 months (range: 1-60 months). Topical corticosteroids (TC) were the most commonly prescribed treatment (20 cases). A minor improvement (less than 20% macular disappearance) was observed in 55% of cases, while a significant improvement (more than 50% macular disappearance) was noted in 4 patients (20%) within an average of 4 months, with recurrence in 2 cases. Treatment was ineffective in 25% of cases. Tacrolimus 0.1% was prescribed in 3 cases, resulting in significant improvement in all cases within an average of 3.3 months. Hydroquinone (HQ) was administered in 4 cases, leading to notable improvement in 2 cases within an average of 4 months. Isotretinoin (ISTT) (0.25 mg/kg) was considered for two patients with associated frontal fibrosing alopecia (FFA), stabilizing scalp involvement and improving LPP lesions in only one case. Photoprotection was advised for all cases.

#### **Conclusion:**

LPP is a dermatosis that is difficult to treat. The natural history of LPP varies between spontaneous resolution in some cases and persistence of pigmentation in others. Compared to TC and HQ, tacrolimus has a higher favorable response rate with a shorter onset of action. This molecule is particularly interesting, especially in cases of facial involvement. The unavailability of tacrolimus in our country limited its use. The effectiveness of ISTT in treating LPP and stabilizing FFA has been reported. Various therapeutic alternatives, including Nd-YAG Q-switched laser alone or combined with tacrolimus, narrow-band UVB, peels, and combination therapies (e.g., tacrolimus with TC or dapsone), have been reported, with variable outcomes.

## Anti-recurrence efficacy of an anti-redness facial care

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# **Introduction & Objectives:**

Rosacea is a chronic skin condition characterized by redness, dilated blood vessels and lesions on the face. Beyond the cutaneous signs, it has an impact on patients' quality of life. A new product was developed to improve the comfort and reactivity of the skin, soothe the functional signs and help reduce redness in subjects with erythematotelangiectatic rosacea. Our study was focused on the measurement of the efficacy as perceived by the subjects, and particularly on the long-lasting efficacy on facial skin.

#### **Materials & Methods:**

In this test, the efficacy of an anti-redness face care product was evaluated in blind during two months with a specific home-use-test design. The target subjects were men and women aged 18 and above, with couperosis or a sensitive skin prone to redden easily. All subjects were regular users of anti-redness facials.

We chose to compare two different groups of subjects over a two-month period:

- Group 1 (n=71) evaluated the anti-redness care for two full months.
- Group 2 (n=73) evaluated the anti-redness care for one month and then switched to a standard moisturizer. (No information on its benefits was provided for neither product)

Subjects were asked to complete 5 evaluation questionnaires: before beginning the test, after the first application, after 1 month, after 1.5 months and after 2 months.

#### **Results:**

Results showed that the product gained more and more favor over applications by the subjects in both groups, both for its efficacy on redness and for its positive impact onto the quality of the skin. The skin was soothed, more comfortable and hydrated from the very 1st application. After 1 month the subjects in both groups reported a reduction in the redness of their face and in the sensation of heat and a more even complexion.

After 2 months of product usage, the anti-redness efficacy had increased in Group 1. In Group 2, the redness did not re-appear despite the discontinuation of product application, proving the long-lasting efficacy and an anti-recurrence efficacy of the tested product.

#### **Conclusion:**

In conclusion, our study demonstrates that the evaluated anti-redness product shows increasing efficacy over time, providing soothing and hydrating effects on the skin. After two months of use, it not only reduces redness but also exhibits long-lasting efficacy and prevents recurrence.

## Healthcare resource utilisation of patients with generalised pustular psoriasis in Germany

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# **Introduction & Objectives:**

Generalised pustular psoriasis (GPP) is a chronic, heterogeneous, neutrophilic inflammatory disease with a high burden. GPP is associated with higher healthcare resource utilisation (HCRU) and healthcare costs than plaque psoriasis (PsO),1,2 the most common PsO variant. There are limited published data on HCRU and healthcare costs associated with GPP in Germany, especially compared with the general population and patients with plaque PsO.\*\* This study used medical claims data to compare all-cause and disease-related HCRU and healthcare costs between patients with GPP, plaque PsO and a matched general population cohort (MC).

## **Materials & Methods:**

Administrative claims data from the WIG2 research database (German Statutory Health Insurances) were reviewed during the study period (1 Jan 2016–31 Dec 2020). Patients aged ≥12 years were identified and categorised into the following cohorts: GPP-all (GPP-only and GPP + plaque PsO) and plaque PsO-only, based on ICD-10 codes L40.1 and L40.0, respectively (as recorded on inpatient and outpatient claims) and MC. Diagnoses were validated with additional claims criteria. Patient characteristics were assessed 365 days pre-index (diagnosis), and all-cause hospitalisations, HCRU and direct medical cost outcomes (sum of GPP-related HCRU plus costs identified for treatments of interest) were assessed 365 days post-index. Unadjusted (chi-square) testing was performed on all-cause hospitalisations. Bivariate comparison (t-test) was performed on HCRU and costs. Greedy propensity scores were used to match samples, based on age, gender, index year and Charlson Comorbidity Index (CCI).

### **Results:**

A total of 976 patients in the GPP-all cohort were matched with 1,952 patients in the plaque PsO-only cohort and 4,880 persons in the MC cohort. The CCI was higher for patients with GPP (GPP-all: 1.55, plaque PsO-only: 1.34, MC: 1.11). A significantly higher proportion of patients in GPP-all experienced all-cause hospitalisations compared with plaque PsO-only and MC (Table). There was a significantly higher number of all-cause hospital days for GPP-all vs plaque PsO-only and MC, but no significant difference in disease-related hospital days between GPP-all and plaque PsO-only. The number of all-cause outpatient visits was significantly higher for GPP-all than plaque PsO-only and MC, and disease-related outpatient visits were significantly higher for GPP-all than plaque PsO-only.

Total disease-related costs were significantly higher for GPP-all compared with plaque PsO-only and MC. Overall inpatient costs were significantly higher for GPP-all than plaque PsO-only and MC, including disease-related inpatient costs (compared with plaque PsO-only). Overall drug costs were also significantly higher in the GPP-all

cohort compared with plaque PsO-only and MC, including disease-related drug costs (Table).

# **Conclusion:**

In Germany, patients with GPP experience higher all-cause HCRU than patients with plaque PsO and the general population, as demonstrated by higher all-cause hospitalisations, hospital days and outpatient visits. Significantly higher all-cause and disease-specific costs are also observed in patients with GPP, including inpatient and drug costs. These data are consistent with previous reports from Japan and the US,1,2 highlighting the economic burden and chronicity of GPP.

#### **References:**

- 1. Okubo Y, et al. *J Dermatol.* 2021;48:1675-1687.
- 2. Gottlieb AB, et al. EADV 2023. Poster P2414.

Table. HCRU and healthcare costs of patients with GPP, plaque PsO and the general population in Germany

	GPP-all	Plaque PsO-only	MC 4,880	
Patients (n)	976	1,952		
HCRU				
All-cause	36.0	27.7	20.3	
hospitalisations (%)				
p-value	-	<0.001	<0.001	
All-cause hospital days	21.5 ± 42.5 14.3 ± 22.7		15.8 ± 29.3	
(mean ± SD)				
p-value	-	<0.01	<0.05	
Disease-related	16.4±18.9	14.2 ± 15.5	-	
hospital days				
p-value	-	>0.05	_	
All-cause outpatient	32.1 ± 21.3	28.4 ± 20.6	19.4 ± 22.4	
visits (mean ± SD)				
p-value	-	<0.001	<0.001	
Disease-related	8.8 ± 11.4	6.3 ± 8.5	-	
outpatient visits				
(mean ± SD)				
p-value	-	<0.001	-	
Healthcare costs				
Total dise as e-related	€4,035 ± €9,203	€1,628 ± €4,923	€84 ± €1,035	
costs (mean ± SD)				
p-value	-	<0.001	<0.001	
Overall inpatient costs	€2,567 ± €11,651	€1,405 ± €5,659	€1,152 ± €6,072	
(mean ± SD)				
p-value	-	<0.01	<0.001	
Disease-related	€975 ± €4,742	€298 ± €1,943	_	
inpatient costs (mean				
± SD)				
p-value	_	<0.001	_	
Overall drug costs	€4,283 ±€9,639	€2,239 ± €5,707	€1,071 ± €4,680	
(mean ± SD)				
p-value	-	<0.001	<0.001	
Disease-related drug	€2,820 ±€7,394	€1,151 ± €4,442	€84 ± €1,035	
costs (mean ± SD)				
p-value	_	<0.001	<0.001	

GPP, generalised pustular psoriasis; HCRU, healthcare resource utilisation; MC, matched general population cohort; PsO, psoriasis; SD, standard deviation.

A comprehensive approach to the management of seborrheic dermatitis of the scalp complicated by bacterial skin infection.

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**Introduction & Objectives:** Seborrheic dermatitis is a chronic inflammatory disease that often recurs and is characterized by erythematous, scaly, itchy rashes in seborrheic areas. The relevance of the problem of the disease is due to its significant prevalence, multifactorial occurrence, variety of clinical manifestations, which in some cases complicates differential diagnosis, often unstable treatment results with the need for supportive therapy. The addition of a bacterial infection complicates the course of the disease and significantly lengthens the duration of treatment. That is why such patients need a comprehensive approach to effectively overcome exacerbations and prolong the duration of remissions. Our objective was to study the clinical effectiveness, safety, and tolerability of the complex therapy of seborrheic dermatitis, with elements of the application of hardware methods that are widely used in the practice of cosmetologists.

## **Materials & Methods:**

24 patients aged 18 to 55 were under our observation. In 8 patients, contagious streptococcal impetigo of the face and scalp was diagnosed, in 12 patients - folliculitis of the face, and scalp of staphylococcal etiology, and in another 4 patients - a combination of both pathogens was observed. For the treatment of pyoderma, a combined antibacterial ointment containing two bactericidal antibiotics (bacitracin and neomycin) was applied 2 times a day for 7 days. At the same time, a hardware cosmetology technique – darsonvalization - was used. It regulates the function of the sebaceous glands, has an antiseptic effect, stimulates regeneration and reduces swelling of tissues and increases permeability, which favorably affects the further absorption of the ointment. It was carried out every day for 3 days, then 3 more procedures every other day. After elimination of pyoderma against the background of application of combined antifungal and corticosteroid cream 2 times a day for 2 weeks, phonophoresis with keratolytic lotion was used every day for 5 days. Shampoo-peeling with salicylic, citric acids and niacinamide was also offered along with systemic therapy 2 times a week during the entire period of treatment.

## **Results:**

After starting complex therapy of seborrheic dermatitis, positive dynamics took place already on the 2nd day, which was expressed in a significant reduction of pyoderma symptoms. By the 7th day, it was possible to eliminate the signs of bacterial infection in all patients. Due to the complex approach, the duration of seborrheic dermatitis treatment has also been reduced. In 17 (70.8%) patients, a significant improvement occurred already 12 days after the start of therapy. Clinical recovery was recorded in all patients.

# **Conclusion:**

The use of a complex approach with the inclusion of hardware cosmetology techniques can be recommended for the treatment of patients with seborrheic dermatitis of the scalp complicated by bacterial skin infections.

## **Bridging Gaps in Treatment: Managing Psoriasis in HIV-Infected Patients**

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**Introduction & Objectives:** Psoriasis vulgaris, often simply referred to as psoriasis, is a chronic autoimmune condition that affects the skin. It is characterized by red, inflamed patches of skin covered with silvery scales. These patches can appear anywhere on the body but are most commonly found on the elbows, knees, scalp and lower back.

HIV infection is a condition caused by the Human Immunodeficiency Virus, that attacks the immune system, specifically targeting CD4 cells, which are a type of white blood cell crucial to the body's defense against infections.

The prevalence of psoriasis in the HIV population is comparable to that from the general population. While there isn't a direct causal link between psoriasis and HIV infection, there is a big consideration to be aware of in terms of treatment.

**Materials & Methods:** We present a case series of 2 HIV-positive psoriasis patients successfully managed with biologic therapy.

Patient 1 is a 38-year-old male with a long-standing history of moderate generalized plaque psoriasis (diagnosed with psoriasis in 2014). He acquired HIV prior developing psoriasis and was stable on HAART on presentation in our clinic.

The patient received conventional systemic therapy for a period of 6 months, without any improvement of lesions, so in agreement with him it was decided to initiate biological therapy.

Patient 2 is a 35-year-old male with a long-standing history of severe generalized plaque psoriasis (diagnosed with psoriasis in 2013). He acquired HIV after developing psoriasis and also was stable on HAART on presentation at dermatologist.

The patient received conventional systemic therapy for a period of 6 months, without improvement of lesions, so the therapeutical decision was to initiate biological therapy.

**Results:** Both patients are currently on biologic treatment for psoriasis, the first patient has 2 years of biological therapy and the second patient has 4 months of biological therapy with a very good response. The evolution of HIV infection was not influenced by biological therapy, being further controlled.

**Conclusion:** While further research is needed to ascertain the efficacy and safety of biologic therapy in HIV-positive individuals with psoriasis, the results of this case series suggest that biologic agents hold promise as an effective treatment option for moderate-to-severe psoriasis in this population. These findings underscore the importance of tailored therapeutic approaches in managing psoriasis in HIV-positive patients.

# CME Improves Knowledge, Competence, and Confidence Related to the Management of Seborrheic Dermatitis

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**Introduction & Objectives:** Seborrheic dermatitis is a skin disease that is associated with a high disease burden and reduced quality of life for patients. Symptoms include pruritis and irritation of the skin. The relapsing and remitting pattern of disease coupled with lesions in hair-bearing areas can complicate treatment. The goal of this study was to evaluate the effect of certified continuing medication education (CME) on the management of seborrheic dermatitis.

**Materials & Methods:** Dermatologists (N=460) and Primary Care Physicians (PCPs; N=334) participated in an online activity comprised of video and synchronized slides.[1] Effectiveness of this education was analyzed using 3 multiple-choice and 1 self-efficacy question, presented as pre-/post-CME repeated pairs. Relative improvement ([post%-pre%]/pre%) was calculated to examine change in percent of correct responses. McNemar's test assessed changes in responses to multiple choice questions from pre- to post-CME. Paired samples t-tests assessed changes in mean confidence. The activity posted on March 11, 2024 and data were collected through April 4, 2024.

**Results:** Overall, this education resulted in significant improvements in knowledge, competence, and confidence among dermatologists and PCPs.

Knowledge regarding the evidence for new and emerging topical agents for seborrheic dermatitis:

Dermatologists- 39% relative improvement (49% to 68% pre/post; P <.001); 48% reinforced knowledge

PCPs - 139% relative improvement (18% to 43% pre/post; P <.001); 16% reinforced knowledge

Knowledge regarding selection of topical treatments based on individualized patient characteristics:

Dermatologists- 23% relative improvement (53% to 65% pre/post; P <.05); 48% reinforced knowledge

PCPs - 60% relative improvement (25% to 40% pre/post; P <.01); 22% reinforced knowledge

Competence related to identifying seborrheic dermatitis:

Dermatologists - 27% relative improvement (62% to 79% pre/post; P <.05); 62% reinforced competence

PCPs - 51% relative improvement (41% to 62% pre/post; P <.01); 41% reinforced competence

Confidence in developing individualized treatment plans for patients with seborrheic dermatitis:

Dermatologists- 23% increased their confidence with 38% pre- and 48% post-education who were mostly or very confident; P < .05

PCPs- 52% increased their confidence with 6% pre- and 15% post-education who were mostly or very confident; P <.05

Conclusion: Online CME consisting of a video discussion with synchronized slides improved knowledge,

competence, and confidence in managing seborrheic dermatitis. This analysis revealed remaining gaps related to new and emerging treatments and individualizing therapeutic strategies.

\1. Kwatra SG, Gooderham MJ, Alexis AF. Advances in Topical Treatments for Seborrheic Dermatitis. March 11, 2024. Available at https://www.medscape.org/viewarticle/1000361

## Generalised pustular psoriasis (GPP) in Germany: Insights from the non-interventional SCRIPTOR study

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# **Introduction & Objectives:**

Generalised pustular psoriasis (GPP) is a chronic, heterogeneous, neutrophilic inflammatory disease associated with skin and systemic symptoms and recurrent, unpredictable flares, which adversely impact quality of life (QoL). The international, non-interventional SCRIPTOR study aims to provide insights into the clinical burden associated with GPP, including flare frequency, treatment patterns and healthcare resource use in Germany.

#### **Materials & Methods:**

This analysis involved medical chart review of patients (pts) with a diagnosis of GPP recorded between 2011–2023 at five dermatology centres in Germany.

## **Results:**

Overall, 33 pts (70% female) were included, with a mean (standard deviation [SD]) age at GPP diagnosis of 60.3 (14.8) years. Most pts (82%) were White, and the ethnicity of 6 pts (18%) was unknown. Mean (SD) follow-up was 2.5 (3.0) years. The majority (79%) had  $\geq 1$  risk factor for GPP, most commonly a previous plaque psoriasis diagnosis (73%). GPP was mostly diagnosed in an inpatient setting (88%), with wide variation of diagnostic criteria use (national/institutional/ERASPEN). Erythema was the predominant cutaneous symptom at baseline (94%); 84% had pustules. Most pts (97%) had  $\geq 1$  comorbidity, most commonly hypertension (66%), plaque psoriasis (66%) and psychiatric disorders (22%).

Five pts (15%) had a flare before GPP diagnosis. Pts with  $\geq 1$  year of follow-up (n=16) had a mean (SD) 0.9 (0.9) flares per year (Table 1). GPP flare triggers were documented in 12/19 pts (57%) who had a flare post-diagnosis; the most common trigger (n=8) was steroid/other medication use/withdrawal. At diagnosis, 5 pts were assessed using Psoriasis Area and Severity Index (n=3), Dermatology Life Quality Index (n=2) and GPP Physician Global Assessment (n=1). Physical examinations were commonly used to assess GPP flares; laboratory tests, vital signs and histology were less frequent. At diagnosis, there were 28 all-cause (median/mean duration: 13.0/15.3 days) and 10 flare-related (median/mean duration: 14.5/16.7 days) hospitalisations documented.

At diagnosis, 30 pts had ≥1 documented drug-based treatment (71 prescriptions), regardless of flare occurrence, including corticosteroids (29/71), tumour necrosis factor (TNF) inhibitors (5/71), methotrexate (5/71), retinoids (5/71) and immunosuppressants (ciclosporin, dimethyl fumarate [4/71]). Post-diagnosis, 16 pts were treated for flares (58 prescriptions), mainly with corticosteroids and biologics (interleukin [IL]-17 and TNF inhibitors); 39 prescriptions were discontinued for other/unknown reasons (27/39, mainly dose/dosing frequency reduction) or lack of efficacy (3/39). For long-term treatment (49 prescriptions), biologics (IL-17, IL-23 and TNF inhibitors) and methotrexate were prescribed to >20% of pts; 29/49 prescriptions were mostly discontinued for other/unknown reasons (15/29), lack of efficacy (8/29) or adverse events (5/29).

#### **Conclusion:**

GPP exerts a significant burden from pre-diagnosis onwards, with comorbidities and recurrent flares, which can lead to hospitalisation. The use of guideline diagnostic criteria in Germany varies widely, and disease severity and QoL measurement scales are under-utilised. Treatment strategies for GPP flares and long-term management vary. There is a need for clear diagnostic and management guidelines, effective long-term treatments and education to optimise patient care.

Table 1. GPP flares

	Analysis population (N=33)				
Flares prior to GPP diagnosis n (%)					
Yes	5 (15.2)				
1 flare	2 (6.1)				
2 flares	1 (3.0)				
6 flares	1 (3.0)				
8 flares	1 (3.0)				
Flares post-baseline n (%)					
Yes	19 (57.6)				
1 flare	11 (33.3)				
2 flares	2 (6.1)				
3 flares	3 (9.1)				
4 flares	2 (6.1)				
6 flares	1 (3.0)				
Total number of distinct flares					
Patients with ≥1 flare episode	19 (57.6)				
Number of documented flares	38				
Mean (SD)	2.0 (1.5)				
Median	1.0				
Min-Max	1.0-6.0				
Annual number of flare episodes post-baseline					
Patients with ≥1 year of follow-up	16				
Mean (SD)	0.9 (0.9)				
Median	0.6				
Min–Max	0.1-3.0				
GPP flare-related hospitalisation post-baseline					
At least one hospitalisation (%)	12 (36.4)				
Mean (SD)	1.9 (1.4)				
Median	1.0				
Min–Max	1.0-5.0				

% are based on n/N. Flares that ended during clinical trial enrolment were not included in the calculation of flare durations. The time between flare episodes in days was calculated as follows: date of current visit – date of previous visit.

GPP, generalised pustular psoriasis; SD, standard deviation.

## Coexistence of follicular lichen planus with nail involvement and erosive oral lichen planus

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# **Introduction & Objectives:**

Follicular lichen planus is a rare variant of lichen planus characterized by selective involvement of the hair follicle. It predominantly affects the scalp and pubic area, leading to scarring alopecia, and may manifest as punctuate comedone-like elements in areas of hairless skin. Recurrences are common, and spontaneous resolution is possible.

Ungual lichen planus may occur without any mucocutaneous signs. It may be the initial and most important clinical manifestation of the disease process. Early diagnosis and treatment are essential because permanent destruction occurs in a significant number of patients.

Oral lichen planus is a chronic disease, of an inflammatory autoimmune nature, in which aggression by T lymphocytes directed against the basal cells of the oral mucosa epithelium occurs. Several reports of oral squamous cell carcinomas developing in the ground of previous oral lichen planus lesions exist in the current medical literature.

This case report's objective is to present the unusual coexistence of three clinical forms of lichen planus in a single patient.

### **Materials & Methods:**

Case report.

## **Results:**

A 27-year-old male patient consulted for generalized pruritic lesions on the body, alopecia and alteration of nails on hands and feet since childhood. He referred that the skin lesions initially appeared on the face and later spread to the other areas. This condition was significantly impacting his quality of life.

On physical examination, he presented lichenoid papules and pustules on the neck, face, and upper limbs, along with excoriations, scarring alopecia and nail dystrophy affecting all fingernails and toenails. Given the clinical suspicion of follicular lichen planus with nail involvement, a biopsy was performed on a lesion from the right forearm.

The pathological examination revealed lymphocytic infiltration in a band pattern dissociating the dermo epidermal junction, along with sawtooth acanthosis and isolated colloid bodies, consistent with lichen planus. With the diagnosis of follicular and nail lichen planus s, treatment with betamethasone cream and oral doxycycline was indicated, resulting in partial response.

Twenty years later, the patient returned due to the presence of a painful, 7-month-old erosive lesion on the lower lip. He underwent multiple treatments including wound healers, topical and oral acyclovir, and valacyclovir, with no response.

Physical examination revealed a non-indurated erosive lesion with a bloody crust, measuring 3 cm in diameter, on

the lower lip, along with erosions on the lower gum and the anterior third of bilateral buccal mucosa, and leukoplakia-like lesions.

Given the suspicion of erosive oral lichen planus in a patient with a history of follicular and nail lichen planus, a biopsy of the lower lip was performed. The pathology revealed a lichenoid dermatitis related to lichen planus. Treatment with fusidic acid and betamethasone cream was initiated, along with lidocaine gel to alleviate pain while eating, resulting in excellent response within a week.

#### **Conclusion:**

Our patient debuted with an initial form of follicular lichen planus with nail involvement, later adding oral mucosa lesions which pathological anatomy was consistent with erosive oral lichen planus. We highlight the importance of clinical suspicion and the value of pathological anatomy to confirm the entity, in order to install treatment as early as possible.

# Insights into generalised pustular psoriasis (GPP) in the United Kingdom: Findings from the SCRIPTOR study

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# **Introduction & Objectives:**

Generalised pustular psoriasis (GPP) is a chronic, heterogeneous inflammatory disease characterised by recurrent flares of rapidly disseminating sterile pustules, often accompanied by systemic symptoms that impact quality of life (QoL). The international, non-interventional SCRIPTOR study aims to generate insights into the clinical burden of GPP, including flare frequency, treatment patterns and healthcare resource utilisation.

### **Materials & Methods:**

This analysis, conducted between December 2022 and May 2023, involved reviewing medical charts of patients with a GPP diagnosis from 2011 onwards (patients diagnosed with acute generalised exanthematous pustulosis without a history of GPP were excluded) from five dermatology centres in the UK.

#### **Results:**

Overall, 27 patients (n=18; 67% female) were included, with a mean (standard deviation [SD]) age at GPP diagnosis of 53.1 (19.7) years. Most patients (n=21; 78%) were Caucasian; 4 (15%) were Asian, and 2 (7%) were of mixed/unknown ethnicity. Mean (SD) follow-up was 3.0 (3.3) years. Most patients (74%) had at least one GPP risk factor, most commonly a previous diagnosis of plaque psoriasis (65%), medication use (systemic corticosteroid and other) (55%) and comorbidities (50%). GPP was mostly diagnosed in an inpatient setting (74%); guideline diagnostic criteria were used in ~50% of diagnoses. Pustules were present in 96% of patients at diagnosis. Comorbidities present in >10% of patients were plaque PsO (58%), hypertension (46%), psychiatric conditions (29%), diabetes mellitus (17%), chronic kidney disease (13%) and dyslipidaemia (13%).

Seven patients (26%) had a flare prior to diagnosis of GPP. Patients with ≥1 year of follow-up (n=13) had a mean (SD) 0.9 (0.6) flare episodes per year. GPP flare triggers were documented in six patients (43% of post-diagnosis cases; the most common triggers were infections and medication use/withdrawal). Physical examination and laboratory tests were often used to assess GPP flares; vital signs and histology were less frequent. Psoriasis Area and Severity Index (PASI) and Dermatology Life Quality Index (DLQI) were used in ~30% of routine follow-ups and ~20% of flare cases (no use of GPP-specific measurement scales was documented). At diagnosis, there were 17 all-cause (median/mean duration: 17.0/22.1 days) and 3 flare-related (median/mean duration: 27.0/29.0 days) hospitalisations documented.

The most common prescriptions for flare treatment (n=39) were topical corticosteroids (9/39), retinoids (7/39), methotrexate (4/39) and ciclosporin (4/39). At diagnosis, the most common prescriptions (n=73) were topical corticosteroids (26/73), ciclosporin (10/73) and retinoids (8/73), regardless of concomitant plaque psoriasis or the occurrence of flares. The most common prescriptions for long-term treatment (n=74) were methotrexate (23/74), retinoids (14/74) and ciclosporin (8/74).

#### **Conclusion:**

GPP exerts a significant burden from pre-diagnosis onwards, with recurrent flare episodes, hospitalisation and complications. The use of guideline diagnostic criteria in the UK varies widely, and disease severity and QoL measurement scales are under-utilised. Treatment approaches vary for GPP flares and long-term management. Overall, these findings highlight the need for education regarding optimal care, more effective treatment options and guidelines for the management of GPP.

## Scalp localized psoriasiform sarcoidosis as a rare clinical presentation and diagnostic challenge

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## **Introduction & Objectives:**

#### Materials & Methods:

#### **Results:**

Sarcoidosis is a systemic disorder that can have cutaneous manifestations. There are many variants of sarcoidosis skin lesions that may mimic other cutaneous diseases.

A 54-year-old male presented with complaints about the lesions on the scalp having been around for 1.5 years that gradually increased in size, shape, number. Several months ago he noticed hair loss in the lesions.

Clinically lesions presented as pink-purple plagues on the scalp and marginal forehead skin, oval and rounded in shape from 1 to 6 cm in diameter, well demarcated with slight depression in the central part of the lesion, dense to the touch, superficial scaly in places with surface erosions. In the scalp plaques hair growth was sparse without clinically signs of scarring. Subjectively, there was discomfort, sensitivity and soreness of the lesioned skin. Diffuse scalp scaling was present.

Patient had several appointments with dermatologists due to skin lesions before: psoriasis, eczema was diagnosed, treatment with zinc pyrithione cream resulted in no effect. Patient used emollients to relieve subjective symptoms.

Somatic diseases. Since childhood patient has suffered from atopic dermatitis, bronchial asthma (in remission).

The patient also complained of pain in the eyes, lacrimation, sleep disrupting muscle and joint pain, and decreased endurance of physical activity. Patient had no active complaints about the bronchopulmonary system, no history of tuberculosis or diagnosed pulmonary sarcoidosis.

Dermoscopy of the lesions showed decreased hair density, diffuse discoloration and yellowish round spots without clear borders, lamellar scaling with surface erosion, telangiectasias.

A 4-mm punch biopsy was performed. Histopathology study revealed epidermis of normal thickness. Inflammatory infiltration was observed in the papillary and reticular layers of the dermis. There were multiple epithelioid cell sarcoid granulomas that contained giant multinucleated cells, without signs of destruction at any level of the derma. Granulomas involved the dermis and were also adjacent to the hair follicles. Horizontal section revealed decreased number and miniaturization of hair follicles without signs of fibrosis.

An additional examination was recommended in order to exclude systemic manifestations of sarcoidosis.

High potency topical steroid (clobetasol propionate cream) was recommended as the first step of skin treatment.

# **Conclusion:**

Sarcoidosis is a systemic disorder that can have cutaneous manifestations. There are many variants of sarcoidosis

skin lesions that may mimic other cutaneous diseases. Scalp localization and psoriasiform plagues are non-common and difficult for diagnostics. Typical dermoscopy picture of perifollicular yellowish or pale orange round spots with telangiectasias should alert the dermatologist. Histopathological picture of classical sarcoid granulomas and exclusion of other granulomatous diseases are required to confirm the diagnosis.

## Subcorneal pustular dermatosis (Sneddon-Wilkinson) a case report

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# **Introduction & Objectives:**

Subcorneal Pustular Dermatosis or Sneddon-Wilkinson Disease (SPD) is a rare chronic benign relapsing vesiculo-pustular dermatosis of unknown ethiology that most commonly occurs in middle-aged and elderly women.

**Materials & Methods:** A 68 years old patient presented at the consultations centre of the UHC Tirane after several weeks of ambulatory treatments. His current complaint was mild pruritus and upon inspection displayed erythemo-squamous plaques localised on chest, abdomen and back. Due to the lack of therapeutical response to topical corticosteroids over several weeks, prescribed for a suspected Psoriasis, he was offered the option of a skin biopsy which resulted in a Herpetiform Dermatitis of Duhring. The patient was admitted and after extended consultations a second biopsy was performed with the suggested diagnoses of Psoriasis, Mycosis Fungoides, Pemphigus Seborrhoicus and Pustulosis Subcornealis. The results confirmed the diagnosis of Pustulosis Subcornealis.

**Results:** The results confirmed the diagnosis of Pustulosis Subcornealis.

#### **Conclusion:**

The present clinical case displays a high interest owing to the complexity of the differential diagnosis of the rare Sneddon-Wilkinson dermatosis. Histopathology plays a crucial role in establishing a correct diagnosis and the following adequate treatment.

# treatment regimes for cutaneous sarcoidosis: a meta-analysis of randomized double blind placebo controlled trials

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# **Introduction & Objectives:**

Cutaneous sarcoidosis is a dermatologic manifestation of systemic sarcoidosis, characterized by non-caseating granulomas in the skin, but may also represent an isolated manifestation. Treatment of cutaneous sarcoidosis varies widely, and there is currently no consensus on the most effective therapeutic approach. This meta-analysis aims to evaluate and compare the efficacy of different treatments for cutaneous sarcoidosis based on randomized double blind placebo controlled clinical trials (RCT).

#### **Materials & Methods:**

A comprehensive literature search was conducted using electronic databases (PubMed, Google Scholar, Cochrane Library) from inception to (01st April 2024), using keywords such as "cutaneous sarcoidosis," "skin sarcoidosis," and "treatment." Only studies published in English were included. Inclusion criteria comprised randomized double blind placebo controlled clinical trials. Data extracted included study characteristics (design, sample size, duration), patient demographics, interventions, and outcomes. The primary outcome was the proportion of patients achieving clinical improvement per treatment arm. The Cochrane risk-of-bias tool was used to assess study quality.

#### **Results:**

A total of 6 studies met the inclusion criteria after screening 101 articles. The follow-up duration ranged from 8 weeks to 44 weeks. The tested treatment regimens were Adalimumab 40mg subcutaneous, Ustekinumab 90mg subcutaneous, Golimumab 100mg subcutaneous, Infliximab either 3mg or 5mg/KG intravenous, Thalidomide 100mg oral, Sirolimus 0.1% topical or the CLEAR regime.

The primary outcome varied across studies but commonly included measures of clinical response, resolution of skin lesions, relapse rates, and adverse events. The findings of this meta-analysis are that the strongest response (92% quadrants showed improvement) was Infliximab and the lowest response rate was seen with topical Sirolimus (0% of patients showed improvement).

Most studies exhibited moderate to high risk of bias. Blinding and allocation concealment were frequently inadequately reported.

**Conclusion:** In this meta-analysis, various treatments for cutaneous sarcoidosis were evaluated, demonstrating varying degrees of efficacy and safety profiles. Systemic agents like Infliximab showed promising results, but heterogeneity between outcome assessments and definition of treatment response hamper comparability between included studies. Treatment selection should consider the extent and severity of cutaneous and other organ involvement, patient comorbidities, as well as potential adverse effects. Further high-quality RCTs with larger sample sizes and longer follow-up periods are urgently needed to establish optimal treatment strategies for cutaneous sarcoidosis.

## **TABLE 1:**

Study	Total number of patients	Treatment arms	Response (# of patients) Intervention	Response (# of patients) Placebo	Odds Ratio 95%CI
Droitcourt et al.	39	Thalidomid vs. Placebo	4 (20)	4 (20)	1.00 (0.18- 5.54)
Baughman et al.	17	Infliximab vs. Placebo	44 (48)	2 (20)	4.80 (0.67- 34.29)
Drake et al.	30	CLEAR vs. Placebo	7 (10)	0 (11)	Non pos
Judson et al.	59	Ustekinumab vs. Golimumab vs. Placebo	Golimumab 9 (42) Ustekinumab 3 (46)	6 (30)	1.53 (0.75- 3.13) And 1.40 (0.64- 3.06)
Pariser et al.	16	Adalimumab vs. Placebo	5 (10)	1 (6)	1.67 (0.15- 18.25)
Redl et al.	16	Topical Sirolimus vs. Placebo	0 (10)	0 (10)	Non pos

# Granulomatous Skin Disease associated with X-linked agammaglobulinemia

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# **Introduction & Objectives:**

We present a case of a 45-year-old caucasian male diagnosed with congenital X-linked agammaglobulinemia (Bruton's disease), for which he has been receiving immunoglobulin replacement therapy since the age of 10. He had history of previous recurrent and chronic infections, including chronic giardiasis resistant to multiple antibiotic regimens. The patient presented to our appointment due to several infiltrated erythematous and violaceous papules and plaques evolving over the past 2 years, more prominent on the face, including the lips, but also on the arms and legs in a more scattered pattern.

#### **Results:**

A skin biopsy and molecular studies revealed non-necrotizing granulomatous dermatitis in the dermis extending into subcutaneous tissue, predominantly constituted by polyclonal small T CD8+ lymphocytes without morphologic or immunophenotypic atypical features. Microbiology cultures of the skin specimen were negative. Blood analysis were unremarkable, including Interferon-Gamma Release Assays, HIV serologies, and angiotensin-converting enzyme levels. The diagnosis of inflammatory granulomatous disease in the context of primary immunodeficiency was made at that time. After treatment failure with intralesional corticosteroids, oral hydroxychloroquine, minocycline, and dapsone, it was initiated treatment with adalimumab 40mg biweekly, resulting in progressive clinical improvement of the erythema and thickness of the skin lesions.

# **Conclusion:**

Cutaneous non-infectious granulomas are a relatively common complication of inborn errors of immunity, although they are rarely described in Bruton's disease. This case reports the synchronous and presumably associated diagnosis of these two entities.

# Management of Generalized Granuloma Annulare Using Systemic Biologics and Small Molecules: An Evidence-Based Review

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# **Introduction & Objectives:**

Generalized granuloma annulare (GGA) is an immune-mediated granulomatous condition with a recalcitrant disease course. This systematic review summarizes evidence regarding targeted systemic biologic and small molecule modalities for GGA.

#### **Materials & Methods:**

We followed PRISMA guidelines to search Embase and MEDLINE databases on December 26th, 2023 using keyword variations. Quality of evidence was assessed using the Oxford Centre for Evidence-Based Medicine 2011 Levels of Evidence. After independent screening by two reviewers, 41 articles (publication dates: 2005-2023) were included reflecting 81 patients with a mean age of 59.9 (range: 36-81) years. Of the 76 patients with reported sex, 11 (14.5%) were males and 65 (85.5%) were females. GGA was refractory to conventional systemic therapy and/or phototherapy in 67.9% (55/81) of reported cases.

# **Results:**

The systemic biologics and small molecules most commonly used for GGA treatment were: tumor necrosis factor (TNF)- $\alpha$  inhibitors (51.1%, 49/96; adalimumab, etanercept, infliximab, golimumab), Janus kinase (JAK) inhibitors (21.9%, 21/96; tofacitinib, baricitinib, upadacitinib), phosphodiesterase-4 inhibitors (17.7%, 17/96; apremilast), interleukin (IL)-4 inhibitors (3.1%, 3/96; dupilumab), IL-12/23 inhibitors (3.1%, 3/96; ustekinumab), IL-23 inhibitors (2.1%, 2/96; tildrakizumab), and IL-6 inhibitors (1%, 1/96; tocilizumab).

Complete resolution was most frequently observed with dupilumab (100%, 3/3; 51.3 days), infliximab (85.7%, 5/7; mean 335.8 days), baricitinib (80%, 4/5; 51.5 days), tofacitinib (72.7%, 8/11; 192.9 days), and adalimumab (70.9%, 22/31; 129.1 days). A lack of resolution was commonly seen with etanercept (75%, 6/8). Improvements from baseline in mean BSA (body surface area) were noted with adalimumab (86.6%, 8/31) and tofacitinib (86.3%, 5/11). Treatment duration ranged from 14 to 840 days. Of the 10 patients on concomitant systemic medications, majority used hydroxychloroquine (7.4%, 6/81). Over a mean follow-up period of 13.1 (range: 0.5-180) months, recurrence of GGA after initial resolution despite continued treatment was observed in 10 (10.4%) patients, most commonly with infliximab (50%, 3/6). Eight (9.9%) patients experienced 14 total treatment-emergent adverse events (AEs), most commonly with upadacitinib (42.9%, 6/14; including acne, gastrointestinal upset, malaise) and apremilast (8.8%, 3/14; gastrointestinal upset, myalgia, nausea). Of these, there was 1 (1%) treatment-related discontinuation reported due to gastrointestinal upset with apremilast use.

#### **Conclusion:**

These results highlight evidence suggesting beneficial responses observed with both Th-2 targeting biologics (dupilumab), Th-1 selective agents (adalimumab, infliximab, apremilast), and upstream inflammatory regulation via JAK inhibitors (tofacitinib, baricitinib). These findings may reflect the heterogeneous CD4 T-cell profile implicated in GGA. Larger-scale studies are warranted.

# A Case of Annular Elastolytic Giant Cell Granuloma: A Rare Entity

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# **Introduction & Objectives:**

Annular elastolytic giant cell granuloma (AEGCG) initially described by O'Brien in 1975 is a chronic inflammatory dermatological disease of uncertain etiopathogenesis (1). It is thought that exposure to the sun, heat or other factors change the antigenicity of the elastic fibers and causes cellular immune reactions (2). Clinically, AEGCG presents on the sun-exposed areas of the face, neck, arms, and the upper back with skin colored to erythematous annular plaques and sometimes papules (3) with a raised erythematous border and central atrophy. It usually manifests in the fourth to the seventh decade with a male preponderance to equal gender occurrence in different series (4,5). The lesions are typically asymptomatic and may persist for months to years, eventually resolving with either mottled pigmentation or skin that appears normal (6).

In histopathology, a granulomatous reaction involves elastolysis, phagocytosis of the elastic fibers, and the presence of multinucleate giant cells with either absence or reduction of elastin fibers. Histopathological hallmarks also include absence of collagen necrobiosis or mucin deposition (6).

Management of AEGCG cases is controversial due to the variability of treatment results. Topical and systemic/intralesional corticosteroids, topical calcineurin inhibitors (pimecrolimus, tacrolimus), topical retinoids, methotrexate, isotretinoin, clofazimine, acitretin, and hydroxychloroquine can be use (7). Sun protection measures are also important in treatment.

### Materials & Methods:

A 68-year-old male patient, presented with insidious onset, gradually evolving lesions on anterior chest wall and arm for two years. The patient noted that the lesions worsened after sun exposure. Associated co-morbidities included diabetes mellitus, chronic renal failure.

Examination revealed well-defined skin colored to erythematous annular lesions over the sun exposed areas of the anterior chest wall and arm (Figure 1a&1b). Mucosae, palms, soles, scalp, and hair and nails revealed no abnormality.

4 mm punch biopsy was taken from patient with the pre-diagnoses of granuloma annulare, AEGCG, sarcoidosis, borderline leprosy, porokeratosis.

Histopathologic examination of the punch biopsies revealed: Multinuclear giant cells were observed in the dermis. Loss of dermal elastic fibers was noted (Figure 2).

With clinical manifestations and histopathological findings, the diagnosis was consistent with the AEGCG.Our patient was managed with general sun protective measures and hydroxychloroquine 200 mg twice a day and topical corticosteroid.

# **Results:**

# **Conclusion:**

In the clinical differential diagnosis of Annular Elastolytic Giant Cell Granuloma: erythema annulare centrifugum, granuloma annulare, lichen planus, sarcoidosis, necrobiosis lipoidica, nummular eczema, leishmaniasis, syphilis, tinea corporis, and leprosy should be considered (6,8).

Annular elastolytic giant cell granuloma should be kept in mind the differential diagnoses of granulomatous dermatoses representing itself with annular lesions. Annular elastolytic giant cell granuloma being a rare dermatological condition, requires reporting more cases.

## Acquired perforating dermatosis: clinical and dermoscopic features.

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**Introduction & Objectives:** The perforating dermatoses represent a group of skin disorders characterized by the elimination of dermal connective tissue through the epidermis. Although several classifications exist, in function of nature of eliminated material, clinical features and the types of epidermal disruption, we have four primary perforating disorders groups: reactive perforating collagenosis (RPC), elastosis perforans serpiginosa (EPS), perforating folliculitis (PF) and Kyrle's disease (KD). Acquired perforating dermatosis (APD) encompasses Kyrle disease, acquired RPC, acquired PF, and acquired EPS and is often associated with underlying chronic renal failure or diabetes mellitus. Additionally, there are secondary perforating diseases in which transepidermal elimination occurs only as part of the underlying primary dermatosis. Clinically the APD presents as umbilicated, hyperkeratotic papules, some with a central, white, keratotic crust.

**Materials & Methods:** We conducted a retrospective observational study of all patients clinically and histopathologically diagnosed with APD between January 2015 and December 2023. We collected patient information, including age, gender, location of skin lesions, medical history, symptoms, Koebner phenomenon, associated systemic diseases, dermoscopy, histopathology, and follow-up information.

**Results:** Ten patients were included in the study; six (60 %) were male and four (40%) female, with mean age of 51.5[±22.5] years. The duration of lesions ranged from one to 96 months, with a mean duration of almost 18.69 months. The clinical and demographic characteristics are summarized in Table. The most common clinical features found in our study were hyperkeratotic papules or nodules with central brown or yellow crust surrounded by erythematous halo and scaly circle (70%). Koebner phenomenon (70%), scratching of pruriginous areas (70%), excoriated papules (50%), and large ulcerated plaques (20%). Lesions were most common on the trunk and upper extremities (80 %), followed by the lower extremities (70 %) and the scalp (10 %). Pruritus was observed in all patients, while pain occurred in only three (40%) patients. The dermoscopic features were a pink or red background (80 %), dotted vessels (90 %),a thin ring of scales around the lesion (90 %), a central keratotic plug appearing yellow in the center of the lesion (90 %); a white circle around the plug ("white collar sign") (90 %). A slightly atrophic radial scar, white scales and peripheral hyperpigmentation were observed in all patients with old lesions after the central crust had fallen off.

**Conclusion:** Our study has enriched the literature's knowledge about the clinical, dermoscopic features of APD, which are rare. It contributes to the understanding of PD by proposing a new term for these conditions and emphasizing the importance of considering underlying diseases and dermoscopic features in their diagnosis and management.

## Acquired perforating dermatosis: clinicopathological features

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**Introduction & Objectives:** The perforating dermatoses represent a group of skin disorders characterized by the elimination of dermal connective tissue through the epidermis. Although several classifications exist, in function of nature of eliminated material, clinical features and the types of epidermal disruption, we have four primary perforating disorders groups: reactive perforating collagenosis (RPC), elastosis perforans serpiginosa (EPS), perforating folliculitis (PF) and Kyrle's disease (KD). Acquired perforating dermatosis (APD) encompasses Kyrle disease, acquired RPC, acquired PF, and acquired EPS and is often associated with underlying chronic renal failure or diabetes mellitus. Additionally, there are secondary perforating diseases in which transepidermal elimination occurs only as part of the underlying primary dermatosis. Several clinical and dermatoscopic features help in the diagnosis of APD, but histopathology is still the key to diagnosis.

**Materials & Methods:** We conducted a retrospective observational study of all patients clinically and histopathologically diagnosed with APD between January 2015 and December 2023. We collected patient information, including age, gender, location of skin lesions, medical history, symptoms, Koebner phenomenon, associated systemic diseases, dermoscopy, histopathology, and follow-up information.

Results: Ten patients were included in the study; six (60 %) were male and four (40%) female, with mean age of 51.5[±22.5] years. The duration of lesions ranged from one to 96 months, with a mean duration of almost 18.69 months. The most common clinical features found in our study were hyperkeratotic papules or nodules with central brown or yellow crust surrounded by erythematous halo and scaly circle (70%). Koebner phenomenon (70%), scratching of pruriginous areas (70%), excoriated papules (50%), and large ulcerated plagues (20%). Lesions were most common on the trunk and upper extremities (80 %), followed by the lower extremities (70 %) and the scalp (10 %). Pruritus was observed in all patients, while pain occurred in only three (40%) patients. The histopathologic features observed in our study were a cup-shaped invagination with a keratotic plug penetrating the papillary dermis in all patients (100%). Transepidermal elimination of both collagen and elastic fibers was noted in 40% of patients. Transepidermal elimination of collagen fibers or abnormal keratin was observed in four (40%) and one cases (10%), respectively. In one case (10%), a dilated follicular infundibulum with transepidermal elimination of elastic fibers was observed. Associated systemic diseases were found in eight patients (80%), including diabetes mellitus (40%), chronic renal insufficiency (50%), ischemic cardiomyopathy (30%), hyperthyroidism (10%), small cell lung cancer (10%) and pulmonary aspergillosis (10%). Two patients have been treated with UVB phototherapy and have achieved good improvement, isotretinoin has led to complete remission in one patient, treatment of two patients is ongoing, and the remaining patients have died from the underlying pathology.

**Conclusion:** Our study has enriched the literature's knowledge about the clinical and histologic features of APD, which are rare. It contributes to the understanding of PD by proposing a new term for these conditions and emphasizing the importance of considering underlying diseases and histologic features in their diagnosis and management.

## Challenges in the long-term management of PASH syndrome

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## **Introduction & Objectives:**

PASH syndrome represents a complex and debilitating dermatological disorder characterized by the coexistence of three inflammatory skin conditions: Pyoderma Gangrenosum, Acne and Hidradenitis Suppurativa. The treatment of PASH syndrome presents significant difficulties due to its intricate nature and the complexity of addressing multiple simultaneous disorders. Limited therapeutic options, chronicity, recurrence and the major impact on the patient's well-being make effective management difficult. The objective of this case report is to underscore the challenges encountered in the long-term treatment of this syndrome, highlighting the need for comprehensive and personalized care approaches.

# **Materials & Methods:**

A 41-year-old male presented to our dermatology clinic for the first time in 2017 when he was diagnosed with pyoderma gangrenosum. Further assessment revealed a longstanding history of Hurley stage III hidradenitis suppurativa since 2009 and acne dating back to adolescence. Recognizing the confluence of these three dermatological conditions, a comprehensive evaluation led to the diagnosis of PASH syndrome. The patient was initiated on a treatment regimen comprising systemic prednisone, sulfasalazine and local therapy. Regular follow-up appointments were scheduled to monitor progress and adjust treatment as necessary. In addition to his dermatological concerns, the patient is also know with obesity, mixed dyslipidemia and chronic inflammatory syndrome.

# Results:

The introduction of systemic prednisone therapy in the management of the patient resulted in a favorable outcome, evidenced by the healing of pyoderma gangrenosum lesions during treatment. However, cessation of prednisone therapy was followed by a relapse of pyoderma gangrenosum. Moreover, an exacerbation of acne vulgaris was observed while the patient was undergoing prednisone treatment. This is particularly noteworthy as the acne was previously under control before the introduction of prednisone, highlighting the adverse effect of prednisone on acne exacerbation. Another notable challenge encountered in the management of this patient was the unavailability of biologic therapy within the national healthcare system where the patient resides.

# **Conclusion:**

Managing PASH syndrome in the long term poses notable challenges due to its multifaceted nature and the interplay between its constituent conditions. Achieving sustained remission proves difficult, often complicated by relapses when treatment is stopped. Furthermore, the potential for exacerbation of one condition while treating another adds complexity to the management process. Biologic therapy represents a significant advancement in

the management of PASH syndrome and this type of treatment should be available in every country. Ongoing research and collaboration are essential to develop innovative treatment strategies and improve outcomes for individuals living with this syndrome.

## Effective Treatment of Subcorneal Pustular Dermatosis with Anti-IL-23 Therapy (Case Presentation)

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# **Introduction & Objectives:**

Subcorneal pustular dermatosis (SPD), also known as Sneddon-Wilkinson disease, is a benign, non-infectious neutrophilic dermatosis. It is characterized by the appearance of pustules with a ring-like distribution on the trunk, flexural, and intertriginous areas. SPD has been associated with other conditions, such as IgA monoclonal gammopathy, rheumatoid arthritis, multiple myeloma, neoplasms, and neutrophilic dermatoses. It usually affects women aged 40 and older. The etiology of the disease is unknown, and the exact immunological process is controversial.

#### Materials & Methods:

The case concerns a 38-year-old female patient with a history of pustular psoriasis since the age of 26. The patient has been followed up at our hospital's psoriasis clinic since 2015, where she presented with ring-like pustular rash on erythematous base on the trunk and extremities, with centrifugal character. The patient reported recurrences of the rash of similar character over the past 3 years, which initially subsided with oral methotrexate and topical corticosteroid administration. During recurrence, she received cyclosporine 4 mg/kg/day and topical corticosteroid and calamine 10% lotion. Due to unsatisfactory response, ustekinumab therapy was initiated (2015), and during recurrence, subcutaneous methotrexate (15mg/week) was added for a short period. The patient under ustekinumab showed improvement of the rash. In 2017, upon her desire for conception and discontinuation of therapy for 4 months, she presented with exacerbation of the rash and ustekinumab was restarted. Since then, the patient had a clinical course with eruptions and exacerbations and frequent opportunistic infections. In 2023 the patient returned with ring-like erythematous lesions with accompanying pustulation in the trunk area unresponsive for 4 months to ustekinumab therapy. The treatment was switched to guselkumab. Previously, a skin biopsy had been taken which revealed SPD (previous biopsies showed pustular psoriasis).

#### Results:

In this particular patient, several recommended treatments were administered, and since 2023 she has been undergoing treatment with Guselkumab. Her response to Guselkumab appeared to be significant, from the first two weeks, improving both the rash and the overall quality of life of the patient.

## **Conclusion:**

SPD presents a relapsing and remitting course requiring the trial of multiple therapies or their combination. For the treatment of SPD, apart from dapsone which is considered first-line therapy, acitretin, sulfapyridine, phototherapy-PUVA, colchicine, cyclosporine and biological agents are also mentioned. The administration of guselkumab has led to remarkable results. This is a safe treatment whose efficacy in the treatment of SPD should be further investigated.

# Optimizing surgical time: Hidradenitis multidisciplinary consultation and its impact on reducing the time to surgery

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# **Introduction & Objectives:**

Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease that results in chronic structural lesions. The complexity of managing this condition needs a multidisciplinary medical and surgical approach. Cases with significant structural damage may involve other surgical services such as General Surgery or Plastic Surgery to achieve better outcomes. Referrals between services increase the waiting time for surgery, leading to a greater progression of the disease to the detriment of patients' quality of life, especially in severe stages of the disease. Recently, a multidisciplinary consultation between General Surgery and Dermatology has been established in our service to optimize the management of HS patients, which could improve this situation. The aim of this study was to compare surgical delay before and after the implementation of the consultation.

## **Materials & Methods:**

A retrospective cohort study was conducted, including patients undergoing surgery by General Surgery or Plastic Surgery referred from Dermatology before and after the establishment of the multidisciplinary surgical consultation.

#### **Results:**

A total of 48 patients were included, 33 in the pre-consultation group and 15 in the post-consultation group. In the first group, 29 patients underwent surgery by General Surgery and 4 by Plastic Surgery, while in the second group, the General Surgery:Plastic Surgery ratio was 14:1. The mean time from referral to intervention was 432.88 days (SD 276.45) in the pre-consultation group. The delay was greater for the Plastic Surgery service, with a mean time to intervention of 755.5 days (SD 395.72) compared to General Surgery, with a mean time of 755.5 days (SD 395.72). In the post-consultation group, the average waiting time for surgery was 170.4 days (SD 91.54), while the mean time specifically for General Surgery was 167 days (SD 94.02). In this group, the only patient operated by Plastic Surgery had a waiting period of 218 days. A t-test was conducted comparing the time to surgery in the subgroup of General Surgery before and after the synchronous multidisciplinary consultation, revealing a statistically significant decrease in the time to surgery after the establishment of the consultation.

#### **Conclusion:**

The implementation of a multidisciplinary surgical consultation between General Surgery and Dermatology for patients with hidradenitis suppurativa reduces the delay to surgery, potentially halting the progression of the disease and improving patients' quality of life. These findings support the importance of this collaborative consultation not only to enhance communication between specialists and tailor the treatment but also to optimize the window of opportunity for these patients.

## Pfeifer-Weber-Christian Disease: a case report

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Pfeifer-Weber-Christian disease: a case report.

# **Introduction & Objectives:**

Pfeifer-Weber-Christian disease (PWCP) or recurrent febrile acute nodular panniculitis is a rare condition characterized by inflammation of the subcutaneous adipose tissue, clinically manifested by recurrent febrile attacks of painful nodules.

This pathological entity remains a subject of debate, and its evolution is unpredictable. We report an observation.

#### Materials & Methods:

We report here a case of a patient with PWCD manifesting as ulcerated subcutaneous nodules without visceral involvement, resolved by administration of colchicine.

## **Results:**

A 37-year-old female patient with no previous history presented with nodular lesions of abrupt onset, softening then ulceration, evolving in a febrile context, associated with polyarthralgia, with any notion of triggering trauma. The patient reported a similar episode 6 years ago, leaving a scar on her left arm. Dermatologic examination revealed painful cyanotic nodules on the legs and abdomen, ulcerated and draining serous fluid from the buttocks and thighs bilaterally, with an atrophic scar on the left arm. The laboratory tests revealed an inflammatory syndrome, the immunological tests and syphilitic serologies were negative. Skin biopsy revealed essentially lobular hypodermatitis, with a dense inflammatory infiltrate rich in neutrophils and lipophagy, and the absence of pathogens on Periodic Acid Shiff (PAS) staining. Bacteriological, mycological and genexpert examination of the biopsy were unremarkable. Amylasemia and lipaemia were normal, ruling out pancreatic cytosteatonecrosis, and the alpha 1-antitrypsin was also normal. The diagnosis of PWCD was stablished without any systemic involvement. The patient was treated with colchicine 1mg/day with good improvement after three months of treatment.

#### **Conclusion:**

PWCD is a rare condition of unknown etiology. It is diagnosed only after other causes of lobular panniculitis have been ruled out. It manifests itself in middle-aged women, with the appearance of painful nodules predominantly in areas with a rich fatty panniculus, which may liquefy and ulcerate, leaving atrophic scars. The disease progresses in febrile flare-ups lasting 2 to 3 weeks. Its severity is linked to perivisceral fatty damage. Treatment remains poorly codified.

## Unveiling the Mysteries of Sweet's Syndrome: A Journey Through Four Compelling Cases

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# **Introduction & Objectives:**

Sweet's syndrome (SS), also known as acute febrile neutrophilic dermatosis, is a rare inflammatory disease. The clinical presentation is dominated by cutaneous and articular manifestations. We aim to portray the clinical presentation of SS via four cases treated in our department.

#### Materials & Methods:

We conducted a retrospective study over a period of 20 years [2004-2024] in a rheumatology department.

#### **Results:**

**Case 1:** a 51-year-old man complaining of diffuse inflammatory arthromyalgia and febrile lumbosacral pain evolving for 3 months. Cutaneous examination revealed pruritic papular lesions affecting the palms and soles, corresponding histologically to acanthotic epidermis and a dermal infiltrate of neutrophilic polymorphonuclear cells (PMNs). The erythrocyte sedimentation rate (ESR) was elevated at 125 mm/hour without polynucleosis. The diagnosis of Sweet's syndrome secondary to lymph node tuberculosis was made. No other extra-cutaneous involvement was noted. The patient's condition improved with Indomethacin (150mg/day) combined with colchicine 1mg/day.

**Case 2:** a 53-year-old woman presenting with low back pain, myalgias, and arthralgias affecting the ankles and knees for 3 weeks. She also had a febrile eruption consisting of violaceous erysipelas-like plaques on the hands and feet. Laboratory tests showed an inflammatory syndrome (ESR=87 mm/h, C-reactive protein=80 mg/L) without polynucleosis. Histological examination revealed dermal infiltration by PMNs. The diagnosis of SS was established. No treatment was initiated, and the clinical and biological evolution was spontaneously favorable.

**Case 3:** a 39-year-old woman with no significant medical history who developed, following an episode of pharyngitis, flu-like symptoms, polyarthritis involving both small and large joints of the upper limbs, and a painful papulovesicular rash on the upper and lower limbs and face. Laboratory findings revealed a CRP of 131 mg/L, leukocytosis of 13,000 cells/mm3, neutrophilic polynucleosis of 9200 cells/mm3, and hepatic cholestasis. The diagnosis made was Sweet's syndrome secondary to pharyngitis, and the patient was treated with 200mg of Ketoprofen and 1mg of colchicine. The clinical outcome was good.

**Case 4:** a 30-year-old woman with a history of rheumatoid arthritis associated with secondary Sjögren's syndrome and lymph node tuberculosis. She presented with an arthritis flare-up associated with a febrile cutaneous eruption consisting of erythematous polycyclic target lesions on the forearms. Laboratory tests showed an inflammatory syndrome with a CRP of 116 mg/L and an ESR of 116 mm/h without polynucleosis. Dermal infiltration of PMNs was found on histology, leading to the diagnosis of SS. Treatment with colchicine was initiated, and the patient's condition improved.

## **Conclusion:**

Sweet's syndrome is characterized by the polymorphism of its clinical expression and the diversity of diseases that may be associated with it. The role of the dermatologist is to be able to make the diagnosis in the presence of a febrile cutaneous eruption, to rule out differential diagnoses, and to search for associated pathologies.

# Dysphonia disclosing paraneoplastic dermatomyositis: case presentation

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# **Introduction & Objectives:**

Cutaneous paraneoplastic syndromes are much rarer, and include acanthosis nigricans, Bazex acrokeratosis, erythema gyratum repens, dermatomyositis and erythroderma.

This case report aims to document a rare and potentially significant clinical presentation where dysphonia revealed paraneoplastic dermatomyositis.

#### Case:

A 67-year-old man, a chronic smoker, consulted the otorhinolaryngology department for chronic dysphonia, whose nasofibroscopic examination revealed paralysis of the left vocal cord with no sign of malignancy on biopsy. When the doctor noticed related dysphagia and muscle fatigability in the patient's declining overall health, the patient was referred to us for a specialist opinion.

Clinical examination revealed heliotrope erythema, shawl sign, skin erosions, poikilodermal lesions, purplish erythema of the limbs and buttocks, periungual erythema, and cuticle thickening. The rest of the clinical examination revealed a positive comb and stool sign, with an abolition of vocal vibrations in the left lung field. Further investigations revealed elevated serum muscle enzymes, an accelerated sedimentation speed blood test, a myogenic pattern on the electroneuromyogram, and a normal immunological profile. A thoracic scan revealed a left mediastino-pulmonary tumor mass. Following this work-up, paraneoplastic dermatomyositis was ruled out, and the patient was put on corticosteroid therapy with partial improvement. Following histological confirmation of the tumor, chemotherapy was indicated. The evolution was marked by a spectacular improvement in the skin lesions and muscle involvement, both clinically and biologically.

# **Conclusion:**

Dermatomyositis is a rare idiopathic systemic disease that may be associated with neoplastic pathologies with a frequency of around 18–32%. It may precede, coincide with, or follow the diagnosis of cancer. The pathophysiology of paraneoplastic dermatomyositis remains poorly understood. The presence of erosive lesions, associated with dysphagia and pruritus, in a subject aged over 60 with an accelerated sedimentation speed blood test are criteria in favor of paraneoplastic dermatomyositis.

The originality of our work is the identification of dysphonia as an alarming symptom and a main reason for consultation for the patient, leading to the diagnosis of paraneoplastic dermatomyositis.

The treatment of this pathology necessarily involves the management of the neoplasia .

# Disseminated bullous lichen sclerosus in a female patient: A rare clinical presentation and a therapeutic challenge

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**Introduction & Objectives:** Bullous lichen sclerosus (BLS) is a distinctive and rare variant of the chronic inflammatory condition lichen sclerosus (LS). BLS is characterized by the presence of vesicles and/or bullous lesions within the typical atrophic plaques that can be found in the anogenital region. Due to its rarity, data regarding the prevalence, age, and sex characteristics of disseminated BLS is scarce. Providing accurate diagnosis and effective treatment for disseminated BLS can be very challenging.

**Materials & Methods:** A 56-year-old Caucasian woman presented with a two-year history of bullous lesions on porcelain-white plaques, affecting her trunk, predominantly chest and abdomen, genital and gluteal region, and lower extremities. Some of the plaques had a prominent hyperkeratotic margin. Personal history was unremarkable. Histopathology (HP) evaluation of three skin specimens verified a bullous variant of LS. The direct immunofluorescence test was negative. Initially, the patient was treated with methotrexate 15 mg weekly and topical treatment with 0.05% clobetasol propionate and 0.1% tacrolimus ointment. Due to the appearance of new lesions, the treatment with pulse doses of systemic corticosteroid (CS) therapy, alongside methotrexate, was initiated. Following the initiation of pulse CS therapy, no new bullous lesions developed.

**Results:** Disseminated BLS is a rare clinical entity whose atypical features can pose a significant diagnostic challenge. Biopsy is highly advised in all suspected cases to confirm the diagnosis. It is known that patients with anogenital LS have an increased risk of developing squamous cell carcinoma (SCC), particularly in the vulvar region. Due to the chronic characteristics of the disease and the extent of the lesions, disseminated BLS could also potentially carry a risk of SCC, warranting close surveillance and long-term follow-up. The extensive nature of the disease, coupled with the likelihood of resistance to conventional treatments, renders disseminated BLS a challenging dermatosis to manage.

**Conclusion:** Considering the nature of the disease and the potential for significant impairment in quality of life, treatment should be individualized and initiated promptly. Regular follow-up is essential to monitor the response to treatment and adjust the therapeutic approach as needed. Furthermore, monitoring for potential complications, such as SCC, is important.

# Tofacitinib, a safe and effective agent in 2 cases of prurigo Nodularis

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Introduction & Objectives: Prurigo nodularis (PN) is an intensely pruritic disease characterized by highly keratinized, itchy papules and nodules symmetrically distributed mainly on the extremities. Treatment is often challenging and unsatisfying. Recently, Janus kinase (JAK) inhibitors have been successfully used for the treatment of PN. Tofacitib is now available in India at a much reduced price. Here, we report 2 cases of PN who did not respond to conventional treatment but were successfully treated tofacitinib given in the dose of 5 mg twice daily.

Materials & Methods: Case reports

Case 1- A 42 year old woman presented with severely itchy, dark lesions on both upper & lower extremities of 1 year duration. She had no co-morbidities. She was previously treated with topical & oral steroids, antihistamines & oral cyclosporine. The previous treatments gave only partial & temporary relief. In view of this, she was put on tofacitinib. She responded very well with complete subsidence of the lesions & itching at 5 weeks. She has completed 12 weeks of treatment so far. There is no recurrence of the lesions. There are no side effects.

Case 2- A 60 year old woman presented with 11 year history of severly pruritic skin lesions on the extremities & trunk which was diagnosed as PN. She was on anti-diabetes medicines. A skin biopsy report was available & was reported as PN. Her past treatment for PN included topical & oral corticosteroids, antihistamines but no relief. On physical examination, there were many nodules, excoriatios, erosions, postinflammatory changes on upper & lower extremities as well as the trunk. She failed apremilast & mycophenolate mofetil. Thus, she was put on tofacitinib to which reponded well. The itching reduced in 2 weeks followed by healing of lesions around 4 weeks. The skin lesions subsided fully by 8 weeks. The same treatment was continued. There is no recurrence while on treatment at 4 months. There are no side effects.

Results: PN is a refractory skin disease, and pruritus is the main problem that needs to be solved. According to recent studies, the pathogenesis of PN is associated with decreased intraepidermal nerve fiber density and abnormal secretion of cytokines such as IL-4, IL-17, IL-22, and IL-31. As a non-selective JAK inhibitor, tofacitinib can inhibit the JAK-STAT pathway, block the transcription of IL-4 and IL-31, increase the density of epidermal nerve fibers, and reduce pruritus. Both our cases responded well to treatment with complete healing. Case 1, where the duration of disease was short responded faster compared to case 2 which was long standing. No side effects were seen in both.

Conclusion: Tofacitinib appears to be a good treatment option in prurigo nodularis. With reduction of cost, tofacitinib is now affordable for Indian patients. The results may be replicated in other resource poor setting too.

## Case report: reticular erythematous mucinosis spontaneously resolved after melanoma excision

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# **Introduction & Objectives:**

Reticular erythematous mucinosis (REM) is a rare form of cutaneous mucinosis, which most often affects middle-aged women. It characterized by edematous papules developing on the trunk, oftenly forming a kind of net-like lesions. The exact cause of REM remains unknow, some cases were found in association with systemic lupus erythematosus diabetes mellitus, malignancies, and thyroid disease.

#### **Materials & Methods:**

A 33-year-old female presented with 6-month history of persisting lesion on the chest, slowly growing with no pruritis. The lesion was found as 4-santimeter slightly scaly pink plaque with scalloped borders, located on the right breast. No fungi were detected by UV-lamp examination and microscopic examination as well. As a result of full body examination, a suspicious pigmented lesion on the back was found. Dermoscopy showed pink-brown 4-millimeter small plaque with a dark brown peripheral pigment network. Skin biopsy was recommended both for inflammatory plaque and pigmented lesion. Patient skipped the recommendation and came then after three years with markedly changed pigmented lesion which was identified as superficial spreading melanoma of the back. The lesion presented as asymmetrical 8-millimeter spot with extremely dark brown atypical pigment network and peripheral pseudopods. Pathology report after excision confirmed the diagnosis of melanoma. The lesion on the breast enlarged up to 8-santimeter plaque with marked infiltration – the punch biopsy was performed. Histopathological examination found out perivascular lymphocytic infiltrates and mucin deposits, which confirmed clinical diagnosis of REM. The patient was recommended to use topical steroids, avoiding Hydroxychloroquine because of planning for pregnancy.

## **Results:**

Patient used Methylprednisolone aceponate cream during 14 days with minor changes of the lesion color, then no treatment has been performed. Six weeks after melanoma excision the REM lesion resolved completely with no treatment. No recurrence has been reported during two years of follow-up.

#### **Conclusion:**

Malignant tumours of the skin could be considered as one of REM underlying causes. Further clinical trials needed.

# Effectiveness of surgical treatment in Morbihan disease

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# **Introduction & Objectives:**

Morbihan disease is uncommon and poses a real problem in terms of diagnosis and treatment. It is also known as solid persistent facial oedema or lymphoedematous rosacea, and could correspond to a particular form of rosacea, or even mimic certain connectivites. We report a new observation showing the effectiveness of surgical treatment after several inefficient drug therapies.

#### Materials & Methods:

A 65-year-old hypertensive patient presented with progressive erythematous oedema of the upper left face. The oedema was painless, persistent and indurated, giving an enlarged appearance of the left hemiface, affecting mainly the nose, cheek, forehead and upper and lower eyelids, and considerably impeding the opening of the left eye. He also complained of conjunctival hyperhaemia, lacrimation and visual discomfort. Biological and autoimmune tests were negative. Anatomopathological examination showed non-specific inflammatory tissue with no sign of malignancy. The pathology had been progressively and permanently evolving for over a year.

### Results:

The patient received several courses of antibiotics, isotretinoin and corticosteroids without any improvement. Treated for more than 6 months for oedematous rosacea with cyclins and topical metronidazole without any response. Given the persistence of the symptoms, a treatment with furosemide 40 mg/d was introduced, giving partial improvement of the oedema with recurrences when the treatment is stopped. Given these therapeutic failures, the patient was referred for surgery and underwent a double operation, a blepharoplasty followed by a rhinoplasty, resulting in extraordinary improvement and almost complete regression of symptoms. We have a follow-up of 5 years after surgery with no recurrence and no medical treatment.

## **Conclusion:**

Diagnostic and especially therapeutic difficulties are encountered in Morbihan disease due to its unknown pathophysiology. Our observation shows the effectiveness of a surgical treatment consisting of a blepharoplasty followed by a rhinoplasty resulting not only in remission but also in the absence of new relapses.

## Vulvar Crohn's disease: A challenging diagnosis!

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# **Introduction & Objectives:**

Crohn's disease (CD) is a chronic inflammatory intestinal disease with polymorphous skin manifestations. Vulvar localization is rare and may be either isolated, revealing the disease, or associated with digestive manifestations. Treatment is difficult and not well codified. We present four cases of vulvo-perineal involvement of CD to review the various clinical aspects as well as the diagnostic and therapeutic challenges of this particular location.

#### **Observations:**

#### Case 1:

A 23-year-old female with chronic diarrhea + abdominal pain evolving in flare-ups.

Reason for consultation: Inflammatory nodular vulvo-perineal lesions present for 4 years.

#### Clinical examination:

- Lymphedema of both vulvas with a pseudo-tumoral appearance.
- Deep, linear, stab-like ulcerations of the inguinal folds.
- Numerous pseudocondylomas in the vulvar region, the ano-perineal region and around the ulcerations.
- Oral enanthema and perioral erythema.

# Paraclinical:

- Skin biopsy: neutrophilic dermatitis with granuloma.
- Upper gastrointestinal fibroscopy: gastro-bulbitis + duodenitis.
- Colonoscopy: oedematous inflammatory mucosa with polyploid lesions of the rectum and impermeable sigmoid stenosis.
- Small intestine transit: normal.

# Case 2:

A 19-year-old patient with chronic diarrhea.

Reason for consultation: vulvar lesions since the age of 10

# **Clinical examination:**

- Inflammation and hypertrophy of the labia majora.
- Deep "stabbing" ulcerations of the inguinal and intergluteal folds.
- Cheilitis + labial and nasal oedema + mucocutaneous pallor.

#### Paraclinical:

- Skin biopsy: epithelioid and giant cell granuloma of the dermis without necrosis.

**Treatment:** Metronidazole (1 g/d).

#### Case 3:

A 17-year-old patient without previous pathological history with vegetative lesions in the perianal area since the age of 13, followed 1 year ago by vulvar lesions.

#### Clinical examination:

- Perianal and labia minora pseudocondylomatous lesions.

#### Paraclinical examination:

- Skin biopsy: perivascular non-necrotizing tuberculoid granulomatous inflammation.
- Colonoscopy + upper fibroscopy: No abnormalities.

Diagnosis: Vulvo-perianal Crohn's disease.

**Treatment:** Metronidazole + Azathioprine.

#### Case 4:

A 49-year-old patient with papulo-nodular lesions and ulcerations of the vulva and intergluteal fold.

#### Clinical examination:

- Papulo-nodular lesions of the labia and inguinal folds
- Stab-like ulcerations in the inguinal folds and interfessial fold.

#### Paraclinical:

- Skin biopsy: polymorphous granulomatous and epithelial giganto-cellular dermatitis without caseous necrosis.
- Colonoscopy + upper fibroscopy with biopsies: No abnormalities.

Diagnosis: Vulvo-perianal Crohn's disease.

**Treatment:** Metronidazole + corticosteroid therapy.

# **Conclusion:**

Vulvar Crohn's disease is a chronic pathology that impacts patients' quality of life and requires long-term multidisciplinary surgical and medical management involving gastroenterologists, dermatologists, gynecologists and pathologists.

The vulva may present with multiple dermatological manifestations: oedema, labial hypertrophy, lymphangiectasia, stab ulcerations, abscesses and fistulae. Histological findings, such as the presence of non-caseating granulomas, granulomatous vasculitis or dermal lymphangitis, can help confirm the diagnosis. The main differential diagnoses to consider are condyloma, vulvar intraepithelial neoplasia and acquired lymphangiectasia.

## subcutaneous sarcoidosis in the hands: a diagnostic challenge

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#### Introduction

Sarcoidosis is a systemic inflammatory disorder (1). Approximately 25% of patients with sarcoidosis have cutaneous lesions (3). Within these lesions, subcutaneous sarcoidosis has been described (2). The most common location is in forearms (4). We present a rare case in a 55-year-old woman, diagnosed with subcutaneous sarcoidosis in both hands. Systemic commitment was ruled out. This highlights the importance of considering this diagnosis when we have a patient with chronic nodular lesions located in the hands.

#### **Materials & Methods:**

A 55-year-old woman presented with a 10-year history of painless flesh-colored nodules, between 5- and 10-mm diameter, located in periarticular areas of the first 4 fingers of the right hand and in the second finger of the left hand. She had a history of surgical removal of similar lesions in 2017, back then no histological studies were performed. She had no other background.

She underwent multidisciplinary evaluation. No anomalies were found in chest and hand x-rays. Tests showed negative rheumatoid factor and anticitrullinated peptides antibodies, they also exhibited angiotensin converting enzyme levels above the normal upper limit. An incisional biopsy was done, the sample underwent histopathological study which found multiple noncaseating granulomas, also histochemistry stains were performed.

The patient was diagnosed with subcutaneous sarcoidosis without systemic commitment after ruling out other granulomatous diseases, mycobacterial and fungal infections, and was treated with intralesional steroid injections and hydroxychloroquine, showing resolution of most of the lesions.

#### **Results:**

Sarcoidosis is a systemic inflammatory disorder characterized by the presence of non-necrotizing granulomas in affected organs (1). The prevalence is higher in women with an onset between 40–60 years of age (2). It is proposed that exposure to one or more antigens in people with genetic predisposition leads towards an exaggerated T helper cell activation (1). Approximately 67% of people with sarcoidosis have an initial cutaneous presentation of the disease (5,6).

Subcutaneous sarcoidosis represents 16% of specific lesions of cutaneous sarcoidosis (2), it is defined as nodular sarcoidosis that affects subcutaneous tissues (1,2). Although common presentations are painless nodules, most case reports are located in forearms. (1,3).

There have been some reports about dactylitis due to subcutaneous sarcoidosis and represent about 0.2% of this entity (7,8,9,10). It presents as a fusiform swelling of proximal phalanges. (10).

The diagnosis relies on a compatible clinical presentation, the detection of non-necrotizing granulomas in histopathology and the exclusion of other diagnosis (11). It is mandatory to rule out systemic commitment, since

it is known that the probability of survival is lower in patients with systemic sarcoidosis without treatment (1). When skin is the only affected organ, we have some therapeutic options such as intralesional steroids, hydroxychloroquine, tetracycline, methotrexate, and even biologic therapy (12).

#### **Conclusion:**

Cutaneous sarcoidosis is a diagnosis of exclusion. Subcutaneous sarcoidosis is not always present in forearms. As dermatologists, we can have the first approach to these patients; we must guarantee a multidisciplinary evaluation.

An adequate diagnosis and treatment are essential. It is mandatory to always rule out systemic commitment because of its impact in survival rates.

## Atrophic lichen planus clinically mimicking Bowen disease: A case report

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# **Introduction & Objectives:**

Lichen planus is a chronic inflammatory disorder with many variants. Atrophic lichen planus is a rare variant with very few reports in the literature, making its prevalence and etiology unclear. Herein, we report a case of atrophic lichen planus clinically mimicking Bowen disease.

#### **Materials & Methods:**

A 82-year-old female, with no known medical conditions, presented with a history of a gradually enlarging solitary erythematous plaque with occasional pruritus on the upper chest of 10 years duration. She denied any history of preceding trauma, medical applications, radiation or chemotherapy, prolonged exposure to sunlight, or similar familial history. On dermatological examination, the patient presented with a solitary, well-defined, irregularly-shaped, erythematous plaque with areas of hypo- and hyperpigmentation, and white scales, measuring 9 x 7 cm on the anterior chest. No lesions were noted on mucosa. A diagnosis of Bowen disease was considered due to the presence of a gradually enlarging, well-demarcated, erythematous plaque with an irregular border and scales.

### Results:

Dermoscopic examination of different areas of the lesion showed various findings, including network-like white structures, dotted vessels, white/yellow dots, brown globules, white structureless areas, and white scales. Histopathological study revealed wedged-shaped hypergranulosis and saw toothing of rete ridges in the epidermis, with a lichenoid inflammatory infiltrate of lymphocytes in the dermis, Max-Joseph spaces, Civatte bodies, and pigment-laden macrophages. A diagnosis of atrophic lichen planus was made based on clinicopathologic correlation. The patient was started on topical corticosteroid with noted improvement.

#### **Conclusion:**

The diverse manifestations of lichen planus, including its rare forms such as the atrophic variant, may exhibit atypical presentations complicating their timely diagnosis and management in clinical practice. Therefore, maintaining awareness of these variations and emphasizing thorough clinicopathologic correlation becomes imperative to effectively address the challenges posed by these less common presentations of lichen planus.

## Patient characteristics and comorbidities in moderate-to-severe CHE: Results from the RWEAL study

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# **Introduction & Objectives:**

Chronic Hand Eczema (CHE) is a prevalent disease which can have significant impact and burden on patients. Real-world multinational data on patient characteristics and comorbidities is lacking. A key objective of this study was to investigate these features of moderate-to-severe CHE.

#### **Materials & Methods:**

The RWEAL study (Real-World trEatment & mAnagement of chronic hand eczema in cLinical practice) is a medical chart review in Canada, Germany, France, Italy, Spain, and the UK performed by dermatologists and general practitioners with roles in dermatology (UK/Canada). Patients ≥18 years of age with moderate to severe CHE that were treated with TCS in the last 12 months, or contraindicated to TCS were included.

Physicians were asked to identify all patients in their overall caseload in the preceding 12 months that fulfilled the inclusion criteria. An online algorithm was used to randomly select up to ten eligible patients per physician.

# **Results:**

In total, 292 physicians identified 1,939 adult patients in the chart review; 53.6% were female. 27.1% were aged 30-39, 25.5% aged 40-49, and 3.4% were aged over 65. Mean (SD) time since diagnosis was 6.0 (7.2) years.

Regarding medical history of comorbidities, 43.8% had a history of atopic dermatitis, asthma was reported in 17.2%, seasonal allergies (hay fever) in 16.9%, food allergies in 12.9%, allergic conjunctivitis in 11.1%, and perennial allergic rhinitis in 8.3%. Almost a third (30.2%) reported no atopic nor dermatological condition other than CHE.

The most common non-dermatological/atopic conditions reported were emotional or mental health conditions (14.1%), cardiac/vascular conditions (10.0%), and respiratory conditions (7.4%). A history of cancer was reported in 1.8% of patients.

A known family history of hand eczema was reported in 20.9% of cases.

# **Conclusion:**

A significant proportion of patients had no other dermatological or atopic condition besides CHE. Furthermore, fewer than half had a history of ever having atopic dermatitis. This further confirms that CHE is a distinct condition,

requiring attention and research in its own right. Additionally, a considerable proportion of patients suffer from other major comorbidities that may preclude them from having certain existing systemic treatment options, pointing to the need for additional CHE treatment options in this population.

## Unusal clinical presentation of sarcoidosis- photodistributed form

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**Introduction & Objectives:** Sarcoidosis is a multisystemic, chronic, granulomatous disease of unknown etiology, characterized by the formation of non-caseating granulomas. Skin lesions occur in 25-30% of patients. Among the numerous reported morphologic presentations are papules, micropapules, plaques, subcutaneous nodules, scar sarcoidosis, lupus pernio and erythema nodosum. Multiple other cutaneous morphologies are possible, many are quite rare. Because of a vast array of morphologies, cutaneous sarcoidosis is known as one of the "great imitators". As the clinical presentation is heterogeneous, there are few reports in the literature on the photodistributed form of sarcoidosis.

#### Materials & Methods: -

Results: An 82-year-old woman presented to the Dermatology clinic with pruritic, erythematous, scaling papules and plaques on her chest, back, and arms, in a photodistributive pattern. Similar lesions were present on her lower extremities, mostly shins. Routine blood tests were within normal range. Serum levels of chitotriosidase and beta-2-microglobulin were elevated. Protein electrophoresis and immunofixation were normal. The Quantiferon-TB Gold test was positive; cultures (sputum, blood and urine) for Mycobacterium tuberculosis were negative. Lesional direct immunofluorescent test was negative. Skin biopsy of the lesion confirmed a non-necrotizing granulomatous dermatitis with multinucleated giant cells and sparse lymphocytic infiltrate. Computed tomography of the chest showed pulmonary nodules without lymphadenopathy; bronchoscopy with transbronchial biopsy revealed granulomatous inflammation/ pulmonary sarcoidosis. She was treated with low doses of prednisone along with prophylactic doses of isoniaside-300 mg for 6 months and topical corticosteroids. Antimalarials were not given due to the advice of the ophthalmologist. After 4 months of therapy, the skin lesions had significantly reduced and the chitotriosidase levels decreased. She is being followed-up on regular basis. Skin lesions resolved leaving residual hyperpigmentation.

**Conclusion:** Sarcoidosis usually begins in adults, usually women, who are between 25 and 40 years old at the time of presentation. Radiation exposure has been theorized to cause photodistributed sarcoidosis, but this has not been proven in any reported case. The most important differential diagnosis for this form of sarcoidosis is subacute cutaneous lupus Systemic corticosteroids and antimalarial agents have been the most effective therapies for photodistributed sarcoidosis.

## **Ixekizumab Inducing Early Clinical Remission of Refractory Pityriasis Rosea**

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# **Introduction & Objectives:**

The pathogenesis of pityriasis rosea is poorly understood. The effect of existing therapies always disappoints us, especially in refractory cases. Further search for more efficient therapies is warranted. The study aims to evaluate the effectiveness and safety of ixekizumab in the treatment of refractory pityriasis rosea.

#### **Materials & Methods:**

In this real-world study, clinical data of 12 patients was collected. Among them, two patients with refractory pityriasis rosea received ixekizumab. Six subjects took acyclovir 400 mg 4 times daily for 2 weeks, while another 4 cases underwent combination therapy with oral acyclovir 400 mg 4 times daily and tofacitinib 5 mg twice daily. All the patients completed 12-week follow-ups. The primary outcome was measured by the time point of complete clearance.

#### **Results:**

Skin lesions completely subsided in about 1 month in patients treated with ixekizumab. After 12 weeks of acyclovir treatment, only two of six patients experienced complete remission. Among patients using combination therapy, only half of them achieved the goal of complete clearance. No serious adverse events were observed.

# **Conclusion:**

Ixekizumab, selectively targeting IL-17, is a reliable approach for speeding the disappearance of rash and maintaining sustained effectiveness in the treatment of refractory pityriasis rosea.

## A case of granuloma annulare resembling necrobiosis lipoidica

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# A case of granuloma annulare resembling necrobiosis lipoidica

# **Introduction & Objectives:**

Granuloma annulare (GA) is a rare granulomatous dermatosis characterized by asymptomatic papules or plaques predominantly on the joints and backs of the hands. The clinical differential diagnosis includes granulomatous diseases, such as necrobiosis lipoidica and sarcoidosis.

#### Materials & Methods:

Here, we report a case of GA which required the differential diagnosis of necrobiosis lipoidica.

# **Results:**

24-year-old women, with a history of type 1 diabetes, presented with asymptomatic, large, reddish-brown plaques on the pretibial regions that progressively grew over five years. Physical examination showed well defined large erythematous to bronze annular plaques bilaterally on the pretibial regions. The borders were serpiginous, slightly elevated and pearly red to brown. The central areas showed depigmentation and atrophy. We first considered these lesions as necrobiosis lipoidica. Dermoscopy find a typical pigment network, but not arborizing telangiectasias. Histopathological findings of the elevated border revealed a non-caseating palisading granuloma, mainly composed of macrophages and multinucleated giant cells associated with collagen degeneration and lymphohistiocytic infiltrate in the dermis. Based on these findings, definitive diagnosis of GA was made. An exhaustive etiological investigation in search of associated diseases returning without abnormalities, except her diabetes. Given the resistance of skin lesions to topical corticosteroids, the patient had undergone PUVA therapy

#### **Conclusion:**

GA is a benign, granulomatous dermatosis with several clinical manifestations, which include localized, generalized, perforating, subcutaneous, papular, patch, and linear forms. The etiology of GA remains unknown and several associations have been proposed including diabetes mellitus, malignancy, thyroid disease, dyslipidemia and human immunodeficiency virus (HIV). Histologically, GA and necrobiosis lipoidica are characterized by collagen necrobiosis. The diagnosis of GA and necrobiosis lipoidica is based on the characteristic clinical manifestations. Thus, our first clinical diagnosis was necrobiosis lipoidica. GA and necrobiosis lipoidica are difficult to distinguish in patients with unusual clinical manifestations, and histopathology is the only useful clinical examination. Different treatments have been described for GA including topical and intralesional corticosteroids, surgical interventions, phototherapy and laser. Dapsone, hydroxychloroquine, methotrexate and sulphasalazine can be considered as the second rung. If GA remains refractory, immunomodulators such as apremilast and tofacitinib, or biologic therapies may be considered.

As described in our case, sometimes it is difficult to distinguish GA from necrobiosis lipoidica during the early stage of the disease. Anatomopathological features are useful to ensure the correct diagnosis.

#### Erosive oral lichen planus and Crohn's disease: a rare association

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# **Introduction & Objectives:**

Lichen planus (LP) is a chronic inflammatory dermatosis of unknown etiology affecting the skin and mucous membranes. Erosive oral lichen planus manifests as erythematous, erosive, and ulcerated lesions of the oral mucosa. It has been associated with autoimmune diseases, viral infections, drugs, and dental amalgams. However, association with inflammatory bowel disease (IBD) has been rarely reported in the literature.

#### **Materials & Methods:**

#### **Results:**

A 74-year-old female patient with a history of Crohn's disease since 2013, in remission, consulted us for painful oral erosions evolving for 03 months. Clinical examination revealed well-limited erosions with a bright erythematous background, located on the gums, labial mucosa, and inner surface of both cheeks. The rest of the skin examination was normal. A biopsy of the labial mucosa showed hypertrophic acanthosis of the spinous layer, vacuolization of the basal layer and a banded lymphocytic inflammatory infiltrate of the chorion. The diagnosis of erosive oral lichen planus was retained. The patient was treated with local corticosteroids with a good clinical course.

### **Conclusion:**

Herein, we report the case of erosive oral lichen planus occurring in a patient with Crohn's disease. Oral lichen planus is a chronic, generally benign inflammatory dermatosis. It is characterized by a variety of clinical forms, including erosive oral lichen planus, which accounts for 40% of lesions. Lichen planus has been associated with several factors, but its association with inflammatory bowel disease has been rarely reported. Crohn's disease and lichen planus have been described together in only three cases. In a review of 711 LP cases by an Italian group, only five patients (0.7%) had associated ulcerative colitis, and few other reports of this association have been published. The etiopathogenesis is not well understood, but the deposition of antigens or immune complexes of intestinal origin could trigger the cutaneous response. This is one of the likely mechanisms responsible for other IBD skin associations, such as pyoderma gangrenosum and erythema nodosum. In Crohn's disease, the occurrence of mucosal erosions is possible in connection with a disease flare-up. However, the small number of cases could be interpreted as an incidental association. Further cases could confirm the association between the two diseases.

# Non-classifiable pyoderma gangrenosum-associated autoinflammatory syndrome: successful treatment with anti-IL-1 therapy

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# **Introduction & Objectives:**

Recent advances in understanding the pathogenesis of autoinflammation have resulted in the identification of various pyoderma gangrenosum-associated autoinflammatory syndromes (PGAAIS) as distinct clinical entities. These include phenotypes such as PAPA (pyogenic arthritis, pyoderma gangrenosum and acne conglobata) and PASH (pyoderma gangrenosum, acne and suppurative hidradenitis). Nevertheless, many patients do not fit the current phenotypes, and their management still poses a significant challenge, especially in refractory cases.

#### **Materials & Methods:**

We describe a case of severe PGAAIS featuring aseptic cutaneous abscesses, pyoderma gangrenosum, acne, and vasculitis, successfully treated with anakinra.

#### **Results:**

A 26-year-old Caucasian male was referred to Dermatology consultation due to recurrent cutaneous inflammatory nodules/abscesses of the limbs and trunk starting from childhood (around 7 years of age). Biopsy of a lesion displayed evidence of a neutrophilic process. Surgical drainage was required on multiple occasions, with no isolation of pathogens on culture. The patient additionally displayed acne (face/dorsum), episodes of leukocytoclastic vasculitis of the lower limbs, and episodes of ulcerated lesions of the lower limbs clinically and histologically compatible pyoderma gangrenosum. No family history of similar manifestations was reported. The lesions displayed a good response to high-dose corticosteroids, but with recurrence upon weaning, and lacked response to other therapies, namely oral retinoids, antibiotics, dapsone, and anti-TNF therapy with adalimumab. Progressive worsening was observed, with large cutaneous aseptic abscesses requiring surgical drainage and maintained therapy with oral prednisolone in a dose above 20 mg per day. The hypothesis of an autoinflammatory syndrome was considered, and a Next-Generation Sequencing (NGS) panel was ordered, including PSTPIP1, NCSTN, NOD and MEFV mutations, but no known pathogenic variant was identified. Nevertheless, the patient partially displayed manifestations falling under the scope of PGAAIS, fitting more closely the VPASH category (vasculitis, pyoderma gangrenosum, acne, suppurative hidradenitis - despite absence of the latter). Due to the severity of the case and supported by literature reports of favorable responses to anti-IL-1 therapy in refractory cases of PGAAIS with some clinical overlap with our patient (including PASH and PAPA), off-label therapy with anakinra was initiated. The patient displayed significant clinical improvement, experiencing for the first-time long periods without oral corticosteroids, with only sporadic and mild episodes of inflammatory nodules, having recently completed 2 years of therapy.

### **Conclusion:**

Patients may present with a clinical picture suggestive of PGAAIS while not falling into the existing categories, and IL-1 presents itself as a potential therapy, even in these non-classifiable cases.

#### Childhood Granulomatous Periorificial Dermatitis: a controversial dermatosis.

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**Introduction & Objectives:** \*\* Childhood granulomatous periorificial dermatitis (CGPD) is an extremely rare and benign granulomatous condition. It was first described in 1970 by Gianotti et al. This condition often affects dark-skinned prepubescent children and should be distinguished from perioral dermatitis, sarcoidosis, granulomatous rosacea and lupus miliaris disseminatus faciei. Herein, we report a case of CGPD.

#### Materials & Methods:

A 16 year-old boy first presented to our department with a three-month history of yellowish, non pruritic micropapules scattered around the mouth, the nose, the upper and lower eyelids. He had no personal or family history of skin disorders. There was no history of atopy. The rash was not preceded by the application of topical products. Physical examination revealed multiple monomorphic, small red-to yellow-colored papules ranging from 1 to 3 mm in diameter along with erythema and scaling. The dermoscopic evaluation of the lesions revealed a yellow-orange background with yellow-white globules and white scales. Calcium level, conversion enzyme assay and a tuberculin reaction showed no abnormalities. A chest X-ray and the findings of an ophthalmological examination were normal. Histological examination of one of the perioral papules revealed a non-specific granulomatous inflammation. There was no caseation necrosis. No *Demodex Folliculorum* was seen. Special stains for fungi and acid-fast bacilli revealed no microorganisms. These clinicopathological features were consistent with the diagnosis of CGPD. Treatment with topical 0.1% Tacrolimus was initiated

# **Conclusion:**

CGPD is a rare, benign dermatosis, manifesting clinically as monomorphous, small papular eruptions around the mouse, nose and eyes. Pustules, comedones and scarring are characteristically absent. It manifests histologically as non-specific perifollicular granulomatous inflammation. Therefore it must be distinguished from other granulomatous diseases. The aetiology of CGPD remains unknown. This condition occurs mainly in prepubertal children with a dark phototype. It is also characterised by its tendency to persist for several months before spontaneous and without scarring resolution. The first step in therapeutic management should be discontinuation of topical corticosteroids. Although CGPD is considered a self-limiting condition, treatment with tetracyclines, metronidazole, and erythromycin may be efficacious. Topical tacrolimus has been also suggested to be useful.

#### Pityriasis rubra pilaris: A series of 26 cases.

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# **Introduction & Objectives:**

The pityriasis rubra pilaris (PRP) is a rare dermatosis that combines follicular corneal papules, reddishorange palmoplantar keratoderma and erythematosquamous lesions. The aim of our study was to determinate the epidemiological, clinical, and evolutionary characteristic of this affection.

#### **Materials & Methods:**

This is a retrospective study including all patients presenting PRP according to the classification of Griffiths, collected between January 1999 and March 2024 at our department of Dermatology, Sfax.

#### **Results:**

During the 26 years, we collected 26 cases (one case per year), including 6 children. The Sex ratio (M/F) was 1/2 with a female predominance. The age ranged from 2 to 75 years (average of 34 years). The lesions appeared spontaneously in 25 cases. In one patient, infectious episodes preceded the lesions. Hepatitis B was observed in one patient. Clincally, 90% of adults were classified as type I, with 2 cases classified type II. For juvenile forms, 4 cases were type IV, 1 case was type III and 1 case was type V. Nails involvment was observed in 10 cases (38%): onychodystrophy (40%), hyperkératosis (30%), longitudinal ridging, leuconychia and distal onycholysis each in 20% of cases. Skin biopsy was performed in 18 cases, showing features compatible with PRP. One patient developed systemic sclerosis. All patients recieved topical treatment with emollients and dermocorticoids with an improvement observed in 14 cases. Oral retinoid was prescribed in 9 cases, as a first-line treatment in 6 cases or after failure of methotrexate in 3 cases. The evolution under oral retinoid was favorable in 8 cases, with relapse in 1 cas. One patient received UVB therapy sessions ( twice a week) with partial improvement.

# **Conclusion:**

PRP is a rare dermatosis which physiopathology is not yet fully understood. A better understanding of its etiologies could improve therapeutic options.

## Assess the efficacy of treatment for herpes-associated erythema multiforme

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**Introduction & Objectives:** At the present stage, the issues of diagnosis, management tactics and treatment of herpes-associated erythema multiforme (HAEM) in people who have suffered from Covid-19 are of particular relevance.

The research purpose:\*\* To evaluate the results of complex therapy of patients with herpes-associated erythema multiforme in patients who have had Covid-19 using antiviral drugs, an immunomodulator-interferon inducer (gozalidone) and hyposensitizing therapy.

**Materials & Methods:** 61 patients diagnosed with HAEM were under observation, including 27 (46,67%) men and 34 (53,33%) women aged 18 to 68 years. The duration of the disease ranged from several months to 10 years or more. The duration of relapses ranged from 7 to 27 days. Patients applied on the 2-7th day of the next relapse of the disease. All patients were examined for HSV (types 1 and 2) using ELISA. The patients' complaints included weakness, malaise, increased body temperature, herpetic rashes on the skin and mucous membranes of the oral cavity and genitals. Anamnesis: 41 patients suffered from facial herpes simplex, 20 from genital herpes. Over the past 1-4 years before the onset of HAEM symptoms, relapses of HSV have increased 3 or more times in patients who have had Covid-19. Clinical manifestations typical of HAEM occurred after prodromal phenomena and the appearance of herpetic eruptions on the skin after 2-7 days.

**Results:** For the purpose of complex treatment, acyclovir was used, as well as the drug gozalidone to form a complete immune defense. The patients received basic therapy and were divided into 3 groups depending on the treatment regimen: with acyclovir (21), monotherapy with gozalidone (18), and combined use of these drugs (22). The effectiveness criteria were indicators of the duration and frequency of relapses, and the duration of the inter-relapse period.

**Conclusion:** In the group of patients receiving acyclovir monotherapy, the duration of relapse was 2-3 days, the duration of the inter-relapse period increased by 1,3 times. In the group of patients with gozalidone monotherapy, the duration of relapses was 4-6 days, and the duration of remission increased by an average of 1,6 times. After complex treatment, the frequency of relapses decreased on average by 2 times and amounted to 1-2 times a year, whereas before treatment it averaged 3-4 times a year. The duration of relapses was on average 2-4 days, and the duration of remission increased on average by 1,8 - 2 times.

Thus, the use of the interferon inducer gozalidone in complex therapy of HAEM made it possible to increase the duration of clinical remission and reduce the duration of relapses. Our observations indicate the promise of using gozalidone in the treatment and prevention of relapses in patients with HAEM, especially after Covid-19 infection.

#### A Case of Paraneoplastic Granuloma Annulare in a Patient with Breast Cancer: An Atypical Presentation

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## **Introduction & Objectives:**

Paraneoplastic granuloma annulare (GA) is a rare form of granuloma annulare that is linked to malignancies, occurring within 6 months of the diagnosis of malignancy and/or persistent GA that resolves with cancer treatment. It may appear before, during, or after the first diagnosis. Paraneoplastic GA is similar to classic GA, and clinical patterns include localized, generalized, subcutaneous, perforating, and patch types. However, it occasionally shows non-typical patterns, such as palmoplantar, blaschkolinear, pustular, and visceral types. Features suggesting association with malignancy are atypical presentation, advanced age, pain, and pruritus. Here, we present a case of breast cancer-associated paraneoplastic granuloma annulare. This case highlights the importance of early biopsy to diagnose cutaneous involvement in patients with an underlying malignancy.

#### **Materials & Methods:**

A 47-year-old woman was admitted for neutropenic sepsis (on meropenem,previously on tazocin) and was referred to our acute dermatology on call with an 8-day history of erythematous rash on the hands, forearms, trunk, and lower limbs. Six months prior, she was diagnosed with triple negative, grade 3, invasive ductal carcinoma of the left breast. She had completed neoadjuvant chemotherapy and immunotherapy (paclitaxel, carboplatin, and pembrolizumab), and she was on epirubicin and cyclophosphamide. She has a background of Type 1 diabetes mellitus, Coeliac disease, asthma, and Hay fever. Examination revealed crops of mildly tender, firm, erythematous papule, and plaque more on the forearm, dorsum of the hands, and palms, with very minimal lower limb and trunk involvement.

# **Results:**

Her laboratory studies showed anaemia, hypalbuminemia, weakly positive ANCA, but negative ANA, ENA, CCP, and viral screens for Herpes simplex 1 and 2, Varicella zoster, respiratory virus, HIV, and hepatitis B and C. The results of a CT thorax, abdomen, and pelvis, as well as a CT pulmonary angiogram, were unremarkable. Her direct immunofluorescence was negative, but hematoxylin and eosin (H & E) staining of a 3 mm punch biopsy from the forearm revealed lymphocyte exocytosis, mild hyperkeratosis, and perivascular, periadnexial, and interstitial mixed infiltrates of lymphocytes, histiocytes, and neutrophils in the dermis up to the deep subcutis, on a background of necrobiosis and granulomatous aggregates in keeping with the mixed pattern (interstitial and deep granuloma annulare) consistent with paraneoplastic granuloma annulare. We initiated topical treatment with mometasone 0.1% ointment, which cleared her rash within three weeks. A follow-up review in three months showed no recurrence.

#### Conclusion:

A rare association of granuloma annulare (GA) with breast cancer exists, and in a patient with suspected or confirmed malignancy who presents with an acute or refractory cutaneous eruption, early biopsy should be used to rule out rare cutaneous involvement due to underlying disease.

# Cortico-induced fulminant rosacea: learning the lesson again!

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#### **Introduction & Objectives:**

Fulminant rosacea or Pyoderma facial is a rare inflammatory dermatosis that mainly affects women between the second and third decade of life, characterized by the abrupt onset of papules and pustules sometimes forming coalescing placards and painful deep nodules. Our aim was to report a patient who presented with fulminant rosacea after application of dermocorticoids.

#### **Materials & Methods:**

#### **Results:**

A 35-year-old female patient with no previous pathological history had papulopustular lesions on her face for 6 months, treated by a dermatologist with isoretinoin 20mg/d combined with betamethasone cream on the lesions for 5 months. The evolution was marked by the appearance of thermophobia, generalized erythema of the face associated with superinfected pustules. Clinical examination revealed an apyretic patient with generalized erythema, facial edema and papulo-pustular lesions on the face, with local crusting but no ocular involvement. The rest of the clinical examination was unremarkable. Mycological and bacteriological swabs of the pustules were sterile. The diagnosis of cortico-induced fulminant rosacea was accepted. The patient was started on cold cream and metronidazole, and isoretinoin was discontinued, with good clinical improvement. Doxycycline 100mg/d was started 1 month after stopping retinoids. Total whitening was achieved after 3 months of treatment.

# **Conclusion:**

Steroid rosacea may appear after several months of dermocorticoid application, on the face with a predominance in the areas of application. Most patients with fulminant rosacea have no previous history of papules or pustules. In our patient, papulo-pustular lesions were treated as rosacea, and the application of dermocorticoids was incriminated in the aggravation towards a fulminant form. It therefore seems essential to us to make practitioners aware of the risk of aggravation of inflammatory or infectious facial dermatoses linked to the long-term application of topical corticoids.

## Pyoderma gangrenosum associated with bone marrow aplasia: a case report

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## **Introduction & Objectives:**

Pyoderma gangrenosum (PG) is a rare neutrophilic dermatosis. Its clinical and biological presentation is nonspecific, often leading to diagnostic delay and significant aesthetic sequelae. We report a case of severe PG on the right leg evolving over 2 weeks in a patient with a history of bone marrow aplasia

#### **Observation:**

A 34-year-old male patient followed in hematology for bone marrow aplasia under symptomatic treatment, who had previously experienced an episode of PG on the right leg a year ago, successfully managed with corticosteroid therapy but with residual aesthetic sequelae, presented with a leg ulcer for the past 14 days, rapidly extending centrifugally with associated painful limping. Clinical examination revealed a 20 cm ulcer, spontaneously painful, covered with necrotic plaques, with the presence of atrophic, cribriform scarring on the postero-internal aspect of the right leg.

Histopathological examination favored PG, showing a polymorphic inflammatory infiltrate mainly composed of neutrophilic polymorphonuclear cells in the superficial and deep dermis without tuberculoid granulomas, caseous necrosis, or signs of malignancy.

The patient was treated by systemic corticosteroid therapy at a dose of 1mg/kg/day with adjunctive treatment and received transfusion of 3 phenotyped, leukocyte-depleted, irradiated, matched packed red blood cells, along with daily wound care and dressings.

The patient's condition improved, with ulcer healing, pain relief, and resumption of walking.

#### **Discussion:**

PG is a rare disease that affects adults between 40 and 60 years of age, with a male predominance. Diagnosis relies on a combination of non-specific clinical, histopathological, and biological signs. It is mandatory to search for associations, among which chronic inflammatory bowel diseases and rheumatoid arthritis are the most common. In the literature, associations of PG with a wide variety of hematologic disorders have been described, including erythroid hypoplasia, pure red cell aplasia, primary thrombocythemia, myelofibrosis, polycythemia vera, and various leukemias. To date, there have been no reported cases of an association between pyoderma gangrenosum and bone marrow aplasia in the same patient.

#### **Conclusion:**

The management of pyoderma gangrenosum remains a complex medical challenge, requiring an integrated approach and increased awareness. Its rare and sometimes misdiagnosed nature highlights the crucial importance of early recognition of symptoms.

# The analysis of the predictors of hand eczema in medical doctors and dentists: which factors are prominent?

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# **Introduction & Objectives:**

The aim was to examine and evaluate the predictors of hand eczema in medical doctors and dentists in comparison to control healthy individuals.

#### **Materials & Methods:**

This field study involved 185 participants from several institutions: medical doctors, dentists and a control group. Medical history on hand eczema, clinical/dermatological findings including the Osnabrück Hand Eczema Index (OHSI), the Nordic Occupational Skin Questionnaire (NOSQ) (with additional questions on working hours and conditions and atopy/dry skin) were analyzed, as well as results from standard patch tests on contact allergens.

#### **Results:**

Medical doctors and dentists washed their hands and used disinfectants significantly more often, wore gloves longer and had hand eczema significantly more often than healthy people. Skin lesions on the hands were found significantly more often in men than in women (55% vs. 39%, p=0.037). Wearing gloves >1 hour per day increased the risk of hand eczema by about 3-4 times (compared to wearing gloves <1 hour per day). Male gender and history of AD were significant predictors of more severe eczema (higher OHSI). Frequent use of disinfectant was significantly associated with the occurrence of eczema: among those who disinfected their hands >10 times a day, 38% reported eczema, significantly more than those who disinfected their hands ≤10 times, among whom it was 23% (p=0.038). The incidence of eczema significantly increased with longer glove use: among those who wore gloves <1 hour per day, 24% reported eczema; among those who wore it for 1-4 hours, 43%, and among those who wore it >4 hours, 46% (p=0.017). One or more positive allergic reactions were observed in 4 medical doctors/dentists (12%).

#### Conclusion:

The results indicate the negative effects of work activities and the need for preventive measures to protect the skin of medical workers.

# Prevalence and factors associated with the use of dermocosmetics by patients with Chronic Hand Eczema: a worldwide study in 20 countries

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#### **Introduction & Objectives:**

Dermocosmetics (DC) are formulated to enhance the skin barrier function and regulate transepidermal water loss. They play a crucial role in managing Chronic Hand Eczema (CHE). Both clinical and experimental research supports the idea that moisturizers rich in lipids can promote healing and reduce the risk of CHE recurrence. This study aimed to examine the prevalence of DC usage among patients with CHE and explore the rates of conventional treatments, such as topical and systemic medications, among those using DC.

#### **Materials & Methods:**

This online survey was conducted among a representative sample of the population of CHE patients aged 16 years or older from 20 countries. The questionnaire focused on patient experience. It collected information on demographics, any dermatological conditions in the past 12 months, type of physician and therapeutic management. The primary analysis of this study was the prevalence of use of one or more over-the-counter DC alone or in combination with standard therapies in the 12 months prior to the survey. The secondary analysis was a comparison of emollient and non-emollient users to evaluate predictors: socio-demographic, clinical parameters and treatments used to treat skin disease. Descriptive analyses were performed using absolute and percentage frequencies. The significance test was two-tailed and set at 5% ( $p \le 0.05$ ). Student's t-test and Pearson's chi-squared were used to compare CHE subjects who reported using DC with those who did not

#### **Results:**

A population of 562 HCE patients was selected, including 284 (50.5%) males and 278 (49.5%) females (mean age 42.2 +/- 14.2 years). min 19-82years. Among the responders, 106(18.9%) use DC as part of the therapeutic management of Chronic Hand Eczema. 52(49,1%) DC users use a DC only for the treatment of HCE . 54(50,9%) were prescribed a DC by their doctor, 35(33,0%) on the sole advice of a pharmacist and 4(3,8%) on the advice of a nurse. 44(41,5%) chose their own DC without consulting a health professional. 37(34,9%) use a systemic treatment in combination with a CD, including 5 (4,7%) injectable treatments for CHE. 46(43,4%) use a CD in combination with local dermocorticoid treatment. 43(40,6%) use a CD daily,50 (47,2%) twice a day (morning and evening) and 13(12,3%) three or more times a day. 53(50,0%) stated that the cost of dermocosmetics prevented them from using them more frequently. 33(31,1%) also used hygiene products and skincare products adapted to Chronic Hand Eczema, 48(45,3%) only skincare products and 7(6,6%) only hygiene products. Age (41.4 vs 42.4 years, p NS), male gender (42.5% vs 52.4%, pNS) were not predictive of DC use. Of the 456 respondents who did not use DC, 246(53.9%) reported that the cost of DC had prevented them from using it.

#### **Conclusion:**

This is the first study to assess the prevalence of DC in patients with CHE. This study needs to be complemented by more mechanistic research into why people choose to use DC and the impact of DC on the wellbeing and

quality of life of people with Chronic Hand Eczema .

Efficacy and tolerance of a prebiotic and panthenol-containing multipurpose healing dermocosmetic on patients with cheilitis or perleche: Results of an international observational study

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# **Introduction & Objectives:**

Cheilitis and perleche are common inflammatory conditions affecting the lips and corners of the mouth, respectively. These conditions often present with dryness, redness, cracking, and discomfort, significantly impacting patients' quality of life. Multipurpose healing dermocosmetic (DC) products containing prebiotic active ingredients (Aqua Posae Filiformis, a prebiotic complex made of ferments, sugars and plant extracts, panthenol, madecassoside, and zinc) offer a potential therapeutic solution for managing these conditions and promoting lip health.

# **Materials & Methods:**

This observational study, conducted across 17 countries, enrolled patients of all ages presenting with cheilitis and/or perleche. Treatment response was defined as a reduction of at least one severity grade on a five-point scale assessing key symptoms such as cracks, erythema and discomforts. Clinical evaluations by doctors, along with patient self-assessments, were conducted at baseline and at the end of the study visit. Additionally, the Dermatology Life Quality Index (DLQI) and Children's Dermatology Life Quality Index (cDLQI) were employed to assess the impact of cheilitis and perleche on patients' quality of life.

#### **Results:**

The study included 298 patients, with a majority (63.8%) being female, with an average age of 25.5 years (SD=21.2), and 30.8% having phototypes IV to VI. The DC formulation was primarily applied twice or thrice daily (72.1%) by the patients. Following an average treatment duration of three weeks, significant improvements were observed across various parameters. Cracks showed improvement in 91.8% of patients (P-value <0.001), while edema and erythema improved in 93.8% (P-value <0.001) and 85.5% (P-value <0.001) of patients, respectively. Furthermore, 86.5% of patients reported reduced tightness, and 92.7% experienced an improvement on burning sensations (P-value <0.001). The overall quality of life, as measured by DLQI and cDLQI, demonstrated significant improvement. Adults experienced an average improvement of 73.6% (P-value <0.001), while children showed a 74.2% improvement. The product presented a good tolerance rate of 95.7%

# **Conclusion:**

This study suggests that the daily use of the DC improves clinical signs, symptoms, and quality of life of people suffering from cheilitis and/or perleche. The good tolerance profile further supports the DC as a promising approach for addressing these uncomfortable inflammatory lip conditions.

# **Understanding and Improving Azathioprine Monitoring in Dermatology**

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# **Introduction & Objectives:**

Azathioprine, a thiopurine immunosuppressant, has been utilised in the treatment of autoimmune and inflammatory skin diseases since the 1960s. Originally developed for their anticancer properties, its parent drugs, 6-mercaptopurine and 6-thioguanine, paved the way for azathioprine's therapeutic use. However, its metabolism via the enzyme Thiopurine methyltransferase (TPMT) and genetic variants pose challenges, with 10% of individuals carrying a low activity TPMT allele, increasing the risk of fatal side effects such as myelosuppression. Conversely, increased TPMT activity leads to reduced immunosuppressant effects, making it necessary for higher azathioprine doses for disease control. Due to its potential life-threatening side effects, careful patient assessment and monitoring are required. The British Association of Dermatologists (BAD) issued guidelines in 2011 to ensure safe and effective azathioprine use, but previous audits indicated sub-optimal compliance. This study aimed to assess and enhance compliance with BAD guidelines for azathioprine prescribing and monitoring. Additionally, it sought to identify factors contributing to non-compliance and provide recommendations for improving local clinical practice.

## **Materials & Methods:**

Patients commenced on Azathioprine in 2023 were identified from pharmacy records. Data from patients started on azathioprine for dermatological conditions were collected and analysed against BAD guidelines. Four patients, (2 with Pemphigus Vulgaris, 1 with Recurrent Vasculitis and 1 with Behcet's disease), were included in the analysis. The findings were compared with data from previous audits conducted in 2012, 2014/15, and 2018/19.

## **Results:**

The results revealed high compliance with pre-treatment investigations, TPMT testing, and initial monitoring bloods across all audits. Specifically, in 2023, 100% of patients underwent FBC, U+E, and LFTs prior to commencing therapy, consistent with previous audits (2018/19 = 100%, 2014/15 = 100%, 2012 = 100%). Similarly, TPMT testing was conducted in all patients (2023 = 100%, 2018/19 = 100%, 2014/15 = 100%, 2012 = 100%). However, adherence to weight measurements prior to therapy initiation fluctuated, with 100% compliance in 2023 compared to 66.7% in 2018/19, 100% in 2014/15, and 49% in 2012. While pre-immunosuppression virology screens were consistently performed in 2023 (100%), adherence was lower in 2018/19 (93.3%), 2014/15 (50%), and not applicable in 2012. Advice provision regarding medication and monitoring was generally high, although there was room for improvement in providing information leaflets and warning patients about side effects. Monitoring bloods at 2, 4, 8, 12, and 16 weeks post-initiation were conducted in all patients in 2023, consistent with previous audits (2018/19 = 100%, 2014/15 = 100%, 2012 = 52%).

#### **Conclusion:**

While progress has been made in adhering to azathioprine prescribing guidelines, challenges remain, particularly in documentation and proforma utilisation. Continued efforts are warranted to ensure safe and effective

azathioprine use for patients with autoimmune and inflammatory skin diseases.

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Efficacy and tolerance of a prebiotic and panthenol-containing multipurpose healing dermocosmetic on patients with vulvitis, balanitis, or non-oozing diaper rash: Results of an international observational study

Stamatis Gregoriou<sup>1</sup>, Efstratios Vakirlis<sup>2</sup>, Malgorzata Maj<sup>3</sup>, Nohammed Al Ayoubi<sup>4</sup>, Emerson de Andrade Lima<sup>5</sup>, Tanongkiet Tienthavorn<sup>6</sup>, Nader Zaki<sup>7</sup>, Noelia Capellato<sup>8</sup>, Livia Bevilacqua<sup>9</sup>, Guenaelle Ledantec<sup>10</sup>, Samir Salah<sup>10</sup>, Delphine Kerob<sup>10</sup>

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# **Introduction & Objectives:**

Vulvitis, balanitis, and non-oozing diaper rash are common inflammatory skin conditions affecting the genital and diaper areas, respectively. These conditions often present with discomfort, redness, and irritation, significantly impacting patients' quality of life. Multipurpose healing dermocosmetic (DC) products containing prebiotic active ingredients (Aqua Posae Filiformis, a prebiotic complex made of ferments, sugars and plant extracts, panthenol, madecassoside, and zinc) offer a potential therapeutic solution for managing these conditions and promoting skin healing.

#### **Materials & Methods:**

This observational study, spanning 17 countries, enrolled patients of all ages presenting with vulvitis, balanitis, or non-oozing diaper rash. Treatment response was defined as a reduction of at least one severity grade on a five-point scale assessing key symptoms such as redness, irritation, and discomfort. Clinical evaluations by healthcare professionals, along with patient self-assessments, were conducted at baseline and at the end of the study visit. Additionally, the Dermatology Life Quality Index (DLQI) and Children's Dermatology Life Quality Index (cDLQI) were employed to assess the impact of dry eczematides on patients' quality of life.

# **Results:**

The study included 584 patients with a balanced gender distribution (50.7% female), a mean age of 18.5 years (SD=27.3), and 23.6% presenting with skin phototypes IV to VI. Diaper rash was the most prevalent condition, affecting 68.3% of the patients, while 31.7% presented with vulvitis or balanitis. The DC formulation was primarily applied twice or thrice daily (67.3%) by the patients. Following an average treatment duration of three weeks, significant improvements were observed across various clinical parameters. Erythema showed improvement in 89.9% of patients (P-value <0.001), while oedema and cracks improved in 92.1% (P-value <0.001) and 92.7% (P-value <0.001) of patients, respectively. Furthermore, 92.6% of patients reported reduced pain, and 92.0% experienced alleviation of burning sensations (P-value <0.001). The overall quality of life, as measured by DLQI and cDLQI, demonstrated significant improvement. Adults experienced an average improvement of 66.7% (P-value <0.001), while children showed a 73.9% improvement. Notably, the product exhibited a good tolerance rate of 91.1%.

## **Conclusion:**

This study suggests that the daily use of the DC improves clinical signs, symptoms and quality of life of people suffering from vulvitis, balanitis, and non-oozing diaper rash. The good tolerance profile further supports the DC as a promising approach for addressing these difficult to treat inflammatory skin conditions.

## Microbiome assessment in Rosacea: about Demodex and not only.

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# **Introduction & Objectives:**

In inflammatory rosacea are often prescribed systemic cyclins and topical drugs for their immunomodulating properties and anti-Demodex effects, but the impact of these treatments on skin microbiota cannot be ignored. Rosacea's microbiota is modified by drug treatments and is also influenced by the age of patients in terms of clinical severity [1], and in some published series in terms of bacterial diversity changes [2]. Our objective was to assess in an open clinical trial, the correlations between the clinical signs outcome and microbiota changes in rosacea patients under topical treatment by an emulsion "E1" (formulated with a vegetal extract of *Umbelliferae* modulating Toll-Like-Receptor-2)[3].

#### **Materials & Methods:**

In a pilot, open clinical trial were included adults with couperosis / light forms of rosacea (less than 4 papules/pustules). The E1 was applied in monotherapy BID for 1 month (1M), were assessed clinical signs (erythema, papules, pustules, skin discomfort, flushes – analogic scale from 0 to 4) and the dermatology life quality index DLQI [4]. At baseline and 1M: a. were made tape strips to assess the density of Demodex folliculorum; b. were collected skin swab samples from each patient for the analysis of microbiota by metagenomic, taxonomy of hypervariable regions V-V3 of ribosomal DNAr 16s of skin bacteria (kit Qiamp Cador Pathogen Mini QIAGEN 54,106, amplification and sequencing were made by Illumina-MiSeq 2x300 pb).

# **Results:**

At the moment of the manuscript submission, the clinical trial and microbiota analysis were ongoing. Partial results showed in a series of 30 rosacea patients (mean age 45 y.o. sex ratio f/m 4), at 1M all clinical signs DLQI were significantly improved, compared to baseline (p<0.0001). The density of *Demodex folliculorum* decreased significantly at M1 compared to baseline. The metagenomic analysis is ongoing.

# **Conclusion:**

In an ongoing pilot clinical trial and metagenomic analysis in a series of rosacea patients, the clinical scores of signs, symptoms and DLQI were significantly improved at one month compared to baseline (p<0.0001). The density of *Demodex folliculorum* significantly decreased at M1 vs baseline (p<0.005), the metagenomic assessment of skin microbiota is ongoing.

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# Causal relationship between cytokines and rosacea a two-sample bidirectional Mendelian randomization study

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# **Introduction & Objectives:**

Previous studies have reported the involvement of cytokines in the development of rosacea, however, the potential causal relationship between rosacea and cytokines remains unclear.

#### **Materials & Methods:**

Two-sample Mendelian randomization (MR)predicting bidirectional causal associations between 41 inflammatory cytokines and rosacea using genetic data from genome-wide association studies (GWAS), Causal associations were mainly analyzed using inverse variance-weighted method, supplemented by MR Egger, weighted median analysis. Heterogeneity of results was assessed using Cochrane's Q test. Horizontal pleiotropy was evaluated by MR-Egger intercept test and MR-PRESSO test. The leave-one-out method was used to test the stability and robustness of the results.

#### **Results:**

Effects of 41 cytokines on rosaced IVW analysis showed that higher levels of MIP1b (OR=0.92, 95% CI (0.85, 1.00), P=0.040) and TRAIL (OR=0.87, 95% CI (0.76, 0.96), P=0.004) were causally associated with a reduced risk of rosacea, while higher levels of RANTES (OR=1.21, 95% CI (1.01, 1.46), P=0.042) increased the risk of rosacea. If it is scatter plots of the positive results were visualized (Figure 2); where Cochran's Q test showed no significant heterogeneity (Q value=15.768, P=0.469, Q value=11.234, P=0.189, Q value=10.841, P=0.764), and MR Egger did not detect horizontal pleiotropy (intercepts=0.019, P=0.306; intercepts=-0.049, P=0.389; intercepts=-0.024, P=0.171), and MR-PRESSO did not detect significant outliers or evidence of horizontal pleiotropy (RSSobs=19.120,P=0.482; RSSobs=14.137, P=0.235; RSSobs=13.379,P=0.725), as shown in Table 1; the leave-one-out method further verified that the absence of a single SNP had a large impact on the overall causal association assessment (Figure 3).

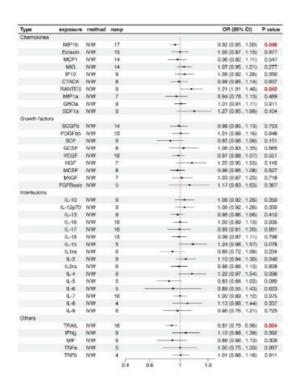


Figure 1 Results of a MR analysis of 41 cytokines and Rosacea

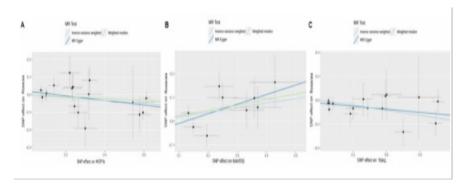


Figure 2 Scatter plots of MR analyses for MCP1b, RANTES and TRAIL(A,B,C) in Rosacea

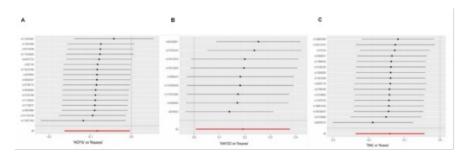


Figure 3 Leave-one-out plot of MR analyses for MCP1b, RANTES and TRAIL(A,B,C) in Rosacea

Exposure	Outcome	Heterogeneity test Q	P	Pleiotropy test  Egger_intercept	P	MR- PRESSO RSSobs	P
MIP1b	Rosacea	15.768	0.469	0.019	0.306	19.120	0.482
RANTES	Rosacea	11.234	0.189	-0.049	0.389	14.137	0.235
TRAIL	Rosacea	10.841	0.764	-0.024	0.171	13.379	0.725
Rosacea	RANTES	6.907	0.907	0.032	0.251	8.107	0.907

Table 1 The results of sensitivity analysis for MR analyses

The effect of rosacea on 41 cytokines IVW analysis showed that rosacea was causally associated with elevated circulating levels of RANTES (OR=1.11, 95% CI (1.01, 1.21), P=0.028), as shown in Figure 4. Cochran's Q test showed no significant heterogeneity (Q value=6.907, P=0.907), MR Egger did not detect horizontal pleiotropy (intercepts=0.032, P=0.251), and furthermore, MR-PRESSO did not find significant outliers, and there was no evidence of finding horizontal pleiotropy (RSSobs=8.107,P=0.907), as shown in Table 1; Scatter plots visualized the potential causal relationship between rosacea and RANTES (Figure 5A), the leave-one-out method further verified that no single SNP had a large effect on the overall causality assessment, proving the reliability of the results. (Figure 5B).

Туре	outcome	method	nsnp		OR (95% CI)	P value
Chemokines			7	ī.	A11 (C)	
	MIP1b	IVW	14		0.99 (0.93, 1.05)	0.625
	Eotaxin	IVW	14		1.06 (0.99 , 1.14)	0.107
	MCP1	IVW	14	-	1.01 (0.95 , 1.07)	0.837
	MIG	IVW	14		0.95 (0.87, 1.04)	0.256
	IP10	IVW	14		0.93 (0.84, 1.04)	0.215
	CTACK	IVW	14	-	1.01 (0.91 , 1.11)	0.884
	RANTES	IVW	14		1.11 (1.01 , 1.21)	0.028
	MIP1a	IVW	14		1.05 (0.95 , 1.15)	0.345
	GROs	IVW	14		1.04 (0.95 , 1.14)	0.428
	SDF1a	IVW	14		0.98 (0.91, 1.05)	0.513
	MCP3	IVW	13		0.85 (0.71, 1.01)	0.062
Growth factors						
	SCGFb	IVW	13		1.00 (0.91 , 1.09)	0.929
	PDGFbb	IVW	14	<u> </u>	1.01 (0.96 , 1.08)	0.646
	SCF	IVW	14	-	1.01 (0.95 , 1.07)	0.676
	GCSF	IVW	14	-	1.01 (0.95 , 1.08)	0.639
	VEGF	IVW	14		1.00 (0.94 , 1.07)	0.905
	HGF	IVW	14		0.96 (0.89 , 1.03)	0.266
	MCSF	IVW	14		0.99 (0.86 , 1.13)	0.865
	bNGF	IVW	14		0.94 (0.83 , 1.05)	0.274
	FGFBasic	IVW	14		1.00 (0.94 , 1.06)	0.93
Interleukins						
	IL-10	IVW	14		0.93 (0.84 . 1.04)	0.215
	IL-12p70	IVW	14		0.98 (0.92 , 1.05)	0.571
	IL-13	IVW	14		1.02 (0.93 , 1.12)	0.703
	IL-16	IVW	14		1.05 (0.96 , 1.16)	0.256
	IL-17	IVW	14		0.99 (0.93 , 1.05)	0.643
	IL-18	IVW	14		1.05 (0.96 , 1.15)	0.31
	IL-1b	IVW	14		0.99 (0.91 , 1.08)	0.88
	IL1ra	IVW	14		1.02 (0.93 , 1.11)	0.72
	IL-2	IVW	14		1.02 (0.93 , 1.12)	0,673
	IL2ra	IVW	14		1.03 (0.94 , 1.12)	0.55
	IL-4	IVW	14		0.99 (0.93 , 1.05)	0.623
	IL-5	IVW	14		0.98 (0.89 , 1.08)	0.699
	IL-6	IVW	14		0.98 (0.93 , 1.04)	0.589
	IL-7	IVW	14		1.08 (0.96 , 1.20)	0.187
	IL-8	IVW	14		1.01 (0.92 , 1.11)	0.811
	IL-9	IVW	14	1	1.01 (0.90 , 1.13)	0.91
Others	11.0	10.44	14		1.01 (0.00 , 1.10)	0.91
Omera	TRAIL	IVW	14		1.01 (0.94 , 1.08)	0.792
	IFNg	IVW	14		0.97 (0.91 , 1.03)	0.792
	MIF	IVW	14		0.99 (0.90 , 1.08)	0.804
	TNFa	IVW	14			
				1.	1.05 (0.96 , 1.16)	0.306
	TNFb	IVW	12		1.09 (0.93 , 1.28)	0.283

Figure 4 Results of a MR analysis of Rosacea and 41 cytokines

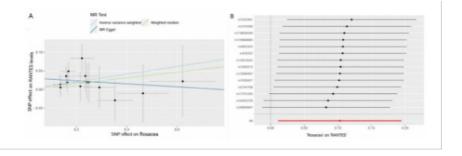


Figure 5 Scatter plot(A) and Leave-one-out plot(B) of MR analyses for Rosacea in RANTES

# **Conclusion:**

Genetically demonstrated potential of RANTES (CCL5), TRAIL, and MIP1b (CCL4) as biomarkers of rosacea.

## Beyond the lines of Blaschko: Unmasking Zosteriform Lichen Planus

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# **Introduction & Objectives:**

Zosteriform lichen planus (LP) is a form of cutaneous LP that can occur at the site of resolved herpes zoster (HZ) or spontaneously, without prior infection with varicella-zoster virus (VZV). It is most commonly characterized by distribution along the lines of Blaschko and can be easily mistaken for unresolved or recurrent HZ in clinical practice. Here, we present a case of clinically striking zosteriform LP and discuss its possible causes, as well as diagnostic challenges.

#### **Materials & Methods:**

A 44-year-old, previously healthy female, presented with asymptomatic pinpoint erythema on the skin of her right shin, emerging a day after laser hair removal. Over ensuing weeks, these lesions progressed into erythematous and livid papules and plaques spanning the entire right leg, accompanied by severe pruritus. Since the patient had experienced two episodes of HZ several years earlier, these changes were initially interpreted as HZ and treated by the family doctor with local and systemic acyclovir, without any improvement. Four months after onset of the changes, an infectologist suspected prolonged HZ and recommended repeating oral acyclovir therapy, which the patient declined due to past treatment failure. Finally, she was referred to a dermatologist for further assessment.

#### **Results:**

Skin examination revealed multiple erythematous-livid flat papules and plaques with mildly keratotic surface, distributed linearly along the posterior aspect of the right leg, following the anatomical trajectory of Blaschko's lines, from the inguinal region to the heel. Dermoscopic examination identified whitish reticular structures corresponding to Wickham's striae. Notably, visible mucous membranes were unaltered. Biopsy and subsequent histopathological analysis of a papule confirmed the diagnosis of LP.

## **Conclusion:**

In this case, potential triggers for the eruption of LP were two external factors – laser hair removal and reactivation of VZV virus. A consecutive scenario is also possible, in which hair removal played a role of a trigger for HZ, and the latter as a trigger for LP. Zosteriform LP can often be mistaken for HZ, as was in this case. Unresponsiveness to antiviral therapy, pronounced pruritus (as opposed to pain, typical for HZ), and distribution along Blaschko's lines (rather than dermatome!), along with the clinical presentation, should be sufficient for differentiating these two entities.

# Recalcitrant and widespread granuloma annulare successfully managed with tofacitinib

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# **Introduction & Objectives:**

Granuloma annulare (GA) is a granulomatous inflammatory skin disorder which can occasionally present as a widespread disease posing a management challenge. We report a case of a 63-year-old female who presented with widespread, itchy and annular plaques with raised papular and coalescing borders. The lesions initially presented on the neck, gradually involving the chest, upper limbs, torso and lower limbs. The differential diagnoses included Granuloma Annulare, Sarcoidosis and Systemic Lupus Erythematosus (SLE).

Her initial immunological screening showed negative ANA, ENA and anti-ds DNA antibodies. Skin biopsy revealed histological features consistent with GA.

Given the widespread nature of the disease, it caused anguish in the form of deteriorating physical and mental health. The extreme itch led to disturbed sleep, fatigue, anxiety and depression which were expressed as raised Dermatology life quality index (DLQI) score of 25.

Over the initial treatment period of four years, the interventions listed below offered little or no benefit: doxycycline, PUVA, doxepin, topical corticosteroids, hydroxychloroquine, tacrolimus 0.1% ointment, acitretin, mepacrine, ciclosporin, dapsone, pentoxifylline, hydroxycarbamide, fumaric acid esters, methotrexate, potassium iodide, rituximab, isotretinoin and mycophenolate mofetil.

Upon treatment with infliximab, she showed promising improvement in her GA. This unfortunately has to be withdrawn due to drug induced systemic lupus. This resulted in major impact on patient's physical and mental well-being as reflected on the deteriorating DLQI score of 27 and had to be commenced on Fluoxetine.

At this stage, she was started on Tofacitinib, a second-generation selective Janus kinase 1 & 3 inhibitor. The patient showed remarkable response with almost clear skin in a span of four months. This directly translated as an improvement in the patient's physical and mental well-being with improving DLQI score of 2.

Our case illustrates a recalcitrant widespread GA was treated successfully with Tofacitinib with positive patient outcome.

#### Materials & Methods:

This study has been conducted with patient's consent, utilising patient's medical records, face to face consultations and literature review.

#### **Results:**

Patient with recalcitrant widespread granuloma annulare was successfully treated with tofacitinib for the last 4 years with no side effects and improvement in her physical and mental health as indicated by DLQI scores.

## **Conclusion:**

Tofacitinib is a valid treatment option for recalcitrant widespread granuloma annulare.

## Skin Deep: Unraveling the Interplay of Psoriasis and Atopic Dermatitis

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**Introduction & Objectives:** In recent years, a growing body of literature has delved into the intricate relationship between psoriasis and atopic dermatitis, shedding light on shared pathophysiological pathways and overlapping clinical manifestations. These chronic inflammatory skin conditions, once thought to be distinct entities, are now recognized as part of a broader spectrum of immune-mediated dermatoses, with considerable implications for diagnosis and management. Understanding the complex interplay between genetic predisposition, immune dysregulation, and environmental triggers is essential for effectively addressing the needs of patients presenting with both psoriasis and atopic dermatitis.

**Materials & Methods:** We present the case of a 77-year-old patient with a complex dermatological presentation encompassing features of both psoriasis and atopic dermatitis. This overlapping phenotype posed a diagnostic challenge, necessitating a comprehensive evaluation to distinguish between the two conditions and formulate an appropriate treatment plan.

Complicating matters further, the patient's medical history was marked by a constellation of comorbidities, including chronic heart failure, atrial fibrillation, arterial hypertension, chronic kidney disease, and hepatocytolysis syndrome. These underlying health issues presented significant hurdles in selecting optimal therapeutic interventions, as certain conventional treatments for psoriasis and atopic dermatitis were contraindicated or required careful monitoring due to potential adverse effects on systemic health.

Given the complexities of the case, a multidisciplinary team approach was paramount. We collaborated closely with rheumatologists, internists, and other specialists to devise a tailored treatment strategy that addressed both the dermatologic and systemic aspects of the patient's condition. After meticulous consideration of the patient's medical history, contraindications, and treatment preferences, the decision was made to initiate biologic therapy with Secukinumab.

**Results:** Within three months, the patient experienced significant improvement, with notable reduction and eventual clearance of both psoriatic and atopic dermatitis lesions. Importantly, this therapeutic intervention was well-tolerated, with no exacerbations of the patient's underlying medical conditions observed during follow-up.

**Conclusion:** This case underscores the importance of a holistic, patient-centered approach to dermatological care, particularly in individuals with complex presentations and multiple comorbidities. By integrating multidisciplinary expertise, leveraging targeted therapies, and carefully navigating contraindications, clinicians can optimize outcomes and improve the quality of life for patients facing complex dermatologic challenges. Moreover, this case highlights the evolving landscape of dermatologic therapeutics, with biologic agents offering promising avenues for the management of refractory or overlapping skin conditions. Continued research and collaboration are essential for advancing our understanding of the pathophysiology of psoriasis and atopic dermatitis and refining treatment strategies to better meet the needs of patients in diverse clinical scenarios.

#### Paradoxical anti-TNF induced psoriasis in patient with ankylosing spondylitis

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#### **Introduction & Objectives:**

Psoriasis is chronic, inflammatory, autoimmune disease. Pathogenesis of psoriasis it is not fully understood, but it is known that it involves a mix of genetics and environmental factors. The most common trigger factors in people with a genetic predisposition to psoriasis include infections, stress and certain medications. The condition is life-long. There are many ways to treat psoriasis, and the treatment plan depends on the type and severity of the disease. In many inflammatory diseases, anti-TNF alpha is usually used in the treatment. In dermatology, anti-TNF alpha is also used in the treatment of psoriasis, but paradoxically, it can also trigger it. There have been described cases of patients who receive anti-TNF alpha for other inflammatory diseases, where after a certain period of time Paradoxical psoriasis (PP) appears in the patient without a previous history of its occurrence. This phenomenon occurs in approximately 5% of patients using anti TNF drugs.

## **Materials & Methods:**

Our case is 32 year old male, diagnosed with ankylosing spondylitis since 2018. He was treated with Infliximab three years before the changes occurred. The changes started to appear a year ago, initially with the appearance of changes in the nails and their thickening. They were treated with topical keratolytic therapy without particular success. Erythemo-squamous papules and plaques on the palms and soles, femoral region (laterally) and discrete erythematous changes on the chin and capillitium then appeared. The patient has no history of previous psoriasis and has a negative family history of psoriasis. With the appearance of the changes, the patient also had a worsening of the underlying disease with elevated markers of inflammation with severe arthralgia that led to painful and difficult movement in the patient. Histopathological examination showed epidermal hyperplasia, absent stratum granulosum, parakeratosis with neutrophils and perivascular inflammatory infiltrate with lymphocytes, neutrophils and eosinophils. Anti-TNF alpha was discontinued. We started methotrexate and new immunobiological drug was started by the rheumatologist (anti IL-17 antibody), after which the skin changes and the worsening of the underlying disease was improved.

#### **Conclusion:**

We presented one more case of PP triggered by anti-TNF alpha. PP occurs more in patients who are using infliximab. The mechanism underlying this paradoxical phenomenon remains unknown, but the increased production of interferon after TNF-a blockage might play a role, as IFN-y is a key element in the pathogenesis of psoriasis.

## Toxocariasis as a trigger of inflammatory skin diseases

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# **Introduction & Objectives:**

Toxocariasis is a cosmopolitan geohelminthiasis with higher prevalences in tropical areas. Its diagnosis is based on ELISA serology confirmed by Western Blot. In addition to visceral, ocular and neurological forms, a clinical pattern called *covert toxocariasis* has been described. Some studies have suggested its association with inflammatory skin disorders such as urticaria, atopic dermatitis and prurigo. However, there are conflicting data and few reports of symptoms clearance after antiparasitic treatment. French Guiana is a French overseas territory in South America, characterized by an Amazonian rainforest environment and a high incidence of parasitic diseases.

In this study, our aims were to determine the proportion of patients with positive toxocariasis serology presenting cutaneous signs, and establish if these cutaneous symptoms were cured after an antiparasitic course.

#### **Materials & Methods:**

We included all patients seen in French Guiana between March 2017 and September 2022, with positive toxocariasis serology confirmed by Western Blot.

#### **Results:**

A total of 169 serologies were requested. 74 serologies were positive (43%). Among them, 15 patients (20%) presented cutaneous symptoms. These included 7 cases of eczema (46%), 3 cases of atopic dermatitis (20%), 3 cases of pruritus (20%), 1 case of urticaria and one case of vasculitis. Of these 15 patients, 10 (66%) presented hypereosinophilia. 14 patients received antiparasitic treatment: 7 patients received albendazole (50%), 3 patients received ivermectin (21%), 4 patients received a combination of both (28%).

Of the 14 patients treated, 12 (85%) presented a complete remission of their skin symptoms, 1 was lost to follow-up. Only one patient with atopic dermatitis presented persistant prurigo lesions which did not decrease after the antiparasitic course and required a treatment with dupilumab. The only untreated patient had multiple recurrences of her eczema.

# **Conclusion:**

In this study, we show how skin symptoms in a context of positive toxocariasis serology can be completely cleared with antiparasitic drugs, avoiding useless treatments with topical steroids or antihistamines. Among the different regimens, albendazole 400mg bid for five days is probably the most appropriate, considering both our data and those from the literature. All serologies in our study were confirmed by Western blot, which increases specificity and avoids cross-reactions with other helminthiases. This study shows how covert toxocariasis can mimick skin inflammatory disorders such as atopic dermatitis, eczema or urticaria. On the other hand, one of the case suggests that toxocariasis can also trigger inflammatory skin symptoms which whill then persist on their own. This study suggests that a systematic screening of toxocariasis could be useful for patients presenting skin inflammatory disorders in areas of high helminthiasis incidence.

## Mysterious multiple fatty nodules

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# **Introduction & Objectives:**

Dercum's disease, is a rare disorder characterized by the development of painful lipomatous masses in various regions of the body. Its etiology remains elusive.

#### **Materials & Methods:**

We present the case of a 61-year-old female patient who exhibited classic symptoms of Dercum's disease. We discuss her clinical presentation, diagnostic workup, and the challenges associated with managing this rare condition.

#### **Results:**

A 61-year-old obese, hypertensive female patient presented with masses of soft to firm consistency, painful, poorly defined, non-sclerotic, located on the forearms, legs, and thighs. She reported concurrent asthenia. These masses had been evolving for a year. There was no similar family history. The patient initially underwent soft tissue ultrasound showing non-encapsulated fatty hypertrophy and MRI showing fatty hypertrophy without contrast anomalies. Skin biopsy revealed a discreet inflammatory dermal infiltrate with multi-nucleated giant cells. The diagnosis made was Dercum's disease in its diffuse generalized form.

# **Conclusion:**

Dercum's disease is a rare condition, usually sporadic, with an estimated incidence of 1 case per 100,000. It mainly affects postmenopausal women. Its cause is still unknown. It is characterized by the appearance of firm, painful, nodular lipomatous masses on various parts of the body, except the face, neck, hands, feet, and joint folds. Affected individuals may also experience vasomotor disturbances, fatigue, bruising, and psychological problems. The disease progresses in flare-ups towards significant obesity, which can cause significant functional impairment due to associated pain. Diagnosis is based on clinical, radiological, and histological findings. It remains a diagnosis of exclusion. Therapeutic management relies on analgesics, antidepressants, and liposuction with variable results.

## Occurrence of lichen aureus following a COVID-19 infection: A case report

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#### Introduction:

Lichen aureus (LA) is one of the less common variants of pigmented purpuric dermatosis (PPD), its pathogenesis remains unclear, yet seems to be related to chronic inflammation of the capillaries in the papillary dermis. We report a case of a lichen aureus occurring after a COVID-19 infection.

#### Case:

A 34-year-old female patient, presented to our consultation, reporting the appearance of chronic itchy round purpuric lesions on the medial surface of the lower legs that had progressed one month earlier and increased in size without any associated signs.

Upon questioning, the patient revealed no history of trauma, medication use or product application to the affected areas. And no other significant health problems or family history of similar disorders were noted, except for two Covid-19 infections, the last of which had occurred one month prior.

The examination found round golden-brown macules on the inner side of both legs, symmetrical and painless. With brownish-coppery diffuse coloration of the background, red dots, globules, on the dermoscope. No evidence of other skin diseases was noted.

A skin biopsy showed an atrophic epidermis in places and ortho-keratotic formed by regular acanthotic cells without spongiosis or exocytosis. The superficial papillary and reticular dermis shows a fairly dense lymphohistiocytic inflammatory infiltrate that erodes the basal layer in places with the presence of rare cystoid bodies. The infiltrate contains numerous melanophages, suggesting primarily a lichen aureus.

Given the clinical and histopathological arguments, the skin lesions were diagnosed as lichen aureus and the patient was treated with topical steroids with good improvement.

# **Discussion:**

Lichen aureus is a rare variant of pigmented purpuric dermatoses, with a chronic, benign course. It is generally asymptomatic, often appearing on the lower extremities in the form of brownish, coppery or golden erythematous macules and/or papules. Diagnosis is based on clinical and histopathological findings. Dermoscopic arguments are considered a useful tool in establishing the diagnosis.

The aetiology of lichen aureus remains unknown, but several mechanisms have been suggested, including venous insufficiency, infection and medications. It has been reported in the literature, that the SARS-CoV-2 infection provokes immunologic reactions leading to vasculitis. To our knowledge, three cases of pigmented purpuric dermatoses occurring after a SARS Cov19 infection have been reported: one case of Lichen Aureus and two cases of Schamberg's purpura occurred respectively 10 days and one week after the infection, which leads us to ask whether there is a link between pigmented purpuric dermatoses and viral infection, in particular COVID-19.

# **Conclusion:**

Reporting this case is important to help understand the aetiology of PPDs to improve disease recognition and care.

## Isolated conjunctival lichen planus: a diagnostic challenge

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# **Introduction & Objectives:**

Lichen planus is a common inflammatory autoimmune condition of unknown etiology, usually affecting the skin and mucous membranes. Isolated ocular lichen planus is an extremely rare presentation resulting in severe scarring, and is clinically indistinguishable from other causes of cicatricial conjunctivitis. We report the case of a patient with isolated ocular lichen associated with chronic bilateral blepharitis.

**Objective**: To draw attention to an extremely uncommon clinical presentation that threatens visual prognosis.

#### **Clinical case:**

A 69-year-old female patient with Ryenolds syndrome since 2021, on general corticosteroids and Azathioprine which she discontinued after 3 months, presented with chronic fibrosing conjunctivitis in relapse, resistant to symptomatic treatment. Ophthalmological examination revealed conjunctival hyperemia, blepharitis, meibomitis and bilateral symblepharon. The rest of the examination revealed no cutaneous, oral or genital lesions. A direct immunofluorescence biopsy revealed a lichen, with no IgG, IgA, IgM or C3 deposits. The patient was put on local corticoids, with a good evolution.

#### **Discussion:**

Lichen planus (LP) is an inflammatory condition of the skin and mucosa with no known cause. Available evidence points to a T-cell-mediated immunological response to an antigenic change induced in the basement membrane zone of the mucosa or skin. It appears as pruritic purplish papules and plaques, most often found on the wrists, lower back and ankles. The oral mucosa and tongue are the most frequently affected sites, and lesions on other mucosal surfaces, such as the anus, genitals and upper aerodigestive tract, can also occur. Ocular lichen planus is a rare disease that has been increasingly reported in the literature over the past two decades involving the conjunctiva, cornea and lacrimal drainage system.

Thorne *et al.*, characterized 6 cases of LP with scarring conjunctivitis, only one of which, a 51- year-old with bilateral symblepharon, presented with exclusive ocular involvement. The diagnosis was confirmed by histopathological findings, as in our patient.

The differential diagnosis of this unusual and severe subtype of LP must be established with other clinically indistinguishable diseases manifesting as cicatricial conjunctivitis, such as mucosal pemphigoid, pemphigus vulgaris, graft-versus-host disease, Stevens Johnson syndrome and paraneoplastic pemphigus.

Definitive diagnosis is crucial because persistent, chronic inflammation can lead to progressive subepithelial fibrosis, synechiae, secondary dry eye, entropion, trichiasis and corneal opacification, which are invariably associated with severe visual acuity loss and blindness.

## **Conclusion:**

Isolated conjunctival lichen planus remains a rare and severe cause of cicatricial conjunctivitis. Distinguishing this exceptional presentation from other inflammatory diseases with conjunctival involvement is crucial for early initiation of appropriate therapy to avoid irreversible damage to visual function.

## Sweet syndrome: a retrospective study of clinical characteristics and malignancy association in 19 patients

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# **Introduction & Objectives:**

Sweet syndrome, also known as acute febrile neutrophilic dermatosis, is an entity described by Robert Douglas Sweet in 1964 whose etiology remains not completely clarified to this day. Clinically, it presents as erythematoedematous papules, plaques or nodules, which frequently affect the upper extremities, neck and head. Based on its context of appearance, we can classify it into three types: idiopathic or classic, associated with malignancy or drug-induced. We have carried out a study with patients in our hospital diagnosed with Sweet syndrome, with the intention of studying its characteristics and its association with malignancy.

#### Materials & Methods:

We review all patients diagnosed with Sweet syndrome at the University Hospital of Fuenlabrada between July 2004 and July 2023. In this study, we analyze the demographic and clinical characteristics of the patients, laboratory findings and the association with malignancy; and we compare our findings with what is described in the literature published so far.

#### **Results:**

In our study, we have collected a sample with a total of 19 patients diagnosed with Sweet syndrome confirmed by skin biopsy, of which 5 had the histiocytoid variant of the disease.

12 of the patients were men and 5 were women, and the mean age was 65.3 years (43-91). 8 of the 19 patients had been or were subsequently diagnosed with a neoplasia, both solid and hematological. 11 of them showed analytical alterations, 9 presented fever and only one of them suffered mucosal involvement and arthralgia. The most affected areas were from most to least: trunk, upper limbs, lower limbs and head, with no involvement of palms or soles recorded. The majority (15/19) were treated with oral corticosteroids, while a minority was treated with other treatments (topical corticosteroids, antibiotics, immunosuppressants, etc.) or did not receive treatment. In 16 patients the condition remitted after a single outbreak, 2 of them had repeated outbreaks and one passed away due to his underlying neoplasm.

#### **Conclusion:**

Since its description, we know that Sweet syndrome is associated with malignancy in up to 21% of cases, with hematological tumors being the most frequent. In our case, this percentage is even higher, reaching 42% of the patients in the sample, 62.5% of them being hematological malignancies. Therefore, we must know the main characteristics of this entity in order to make a complete study of the patient, rule out associated malignancy and carry out correct treatment and follow-up.

# Understanding Diabetes' Impact on Granuloma Annulare and Necrobiosis Lipoidica: Insights and implications

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# **Introduction & Objectives:**

Granuloma annulare (GA) and necrobiosis lipoidica (NL) are rare noninfectious cutaneous granulomatoses, frequently associated with diabetes.

The aim of this work is to compare their epidemiological, clinical, therapeutic and evolutionary features in diabetic (DP) and non-diabetic (NDP) patients.

#### **Materials & Methods:**

A retrospective descriptive and analytical study collecting cases of GA/NL diagnosed clinically and/or histologically from January 2015 to April 2024.

## **Results:**

Forty-two patients were enrolled (24 DP and 18 NDP). The sex ratio (M/F) was 0.61. For DP, type 2 diabetes was the most prevalent (78.3%) associated with hypertension and dyslipidemia in 34.8% and 21.7% of cases respectively. The lesions had been evolving for 2.4 years in DP versus 9.8 months in NDP. Their appearance preceded diabetes in 43.5%.

The lesions were multiple in 82.6% of DP cases versus 42% of NDP cases. Pruritus was present in 26.1% of DPs and 42% of NDPs. The most frequent locations were the back of the feet in 58.8% and the hands in 47.8% in DP. However, 57.1% of the lesions in NDP were located on the legs. Histological study concluded GA in 83.8% and NL in 16.2% of cases. Collagen necrobiosis was found in 52.6% of DPs versus 14.2% of NDPs.

All patients were treated with topical steroids with improvement in 56.5% of DPs and 42.8% of NDPs. Colchicine or hydroxychloroquine were prescribed for 2 DP with improvement in only one patient and for 4 NDP with improvement in 3 patients.

#### **Conclusion:**

The comparison of data in DP and NDP showed that the delay of consultation was shorter in NDP, which would be explained by a higher frequency of pruritus. DP responded better than NDP to the topical steroids. The use of second-line treatment was more important in NDP (8.7% versus 28.5%).

Diabetes may succeed GA/NL and long-term follow-up is necessary for screening comorbidities.

## Subcorneal pustular dermatosis (Sneddon-Wilkinson disease)

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# **Introduction & Objectives:**

Subcorneal pustular dermatosis (SPD), also known as Sneddon-Wilkinson disease, is a rare neutrophilic dermatosis in which recurrent crops of sterile pustules appear in the most superficial (subcorneal) layers of the skin. The pustules are usually distributed in annular or serpiginous patterns and are most commonly located on flexural surfaces and on intertriginous skin. SPD is characterized by its clinical presentation, as its etiology is unknown and its nosology remains controversial. In the overwhelming majority of cases, SPD is a chronic and benign condition.

#### **Materials & Methods:**

We present the case of an 57-year-old woman diagnosed with SPD, who were mistakenly diagnosed with dermatophyte infections caused by Trichophyton rubrum and prescribed terbinafine without clinical response. After reviewing the photographs of the rash, a punch biopsy was performed with histological examination of the material.

#### **Results:**

The patient was prescribed systemic therapy - terbinafine tablets 250 mg once daily for 14 days. The next control was performed in 2 weeks. Progression of the rash with persistent itching was observed. During the patient's interview, photos of the rash before the visit to the medical institution were obtained, in one of the photos small pustules up to 3 millimeters in diameter were visible on the periphery of the lesion. The diagnosis was revised and a preliminary clinical diagnosis of SPD was established. A waiting tactic was chosen for the appearance of new pustular elements. After 2 weeks, the patient underwent a diagnostic punch biopsy of the rash area with the capture of part of the plaque and pustules. Histologically: hyper-orthokeratosis, focal parakeratosis, under which agranulosis is observed, is detected in the epidermis, in hyper- and parakeratotic masses, as well as in the spiny layer, there are accumulations of neutrophils (Munro microabscesses and spongiotic Kagoya pustules); moderate uniform acanthosis and mild diffuse spongiosis are also detected in the epithelium. In the papillary dermis, the following are determined clusters of coiled capillaries, dense perivascular and moderate diffuse lymphohistiocytic infiltrate with an admixture of single neutrophils and minor signs of exocytosis. When stained for and Grocott stains: no fungal elements were detected. Such a morphological picture allows us to attribute dermatitis to the group of pustular dermatitis and can be observed in SPD.

# Conclusion:

Based on the clinical and histological findings, the final diagnosis of SPD was made and treatment was prescribed: Acitretin 25 milligrams per day for 1 month with further correction of therapy, topical clobetasol propionate ointment 0.05% once daily, blood counts once a month. At the next examination, a significant regression of the rash was observed.

Taking the photographs\* of the rash by the patient can be the key to the diagnosis. Clinical and morphologic correlation is a basic skill of a dermatologist.

## A case of cutaneous sarcoidosis after injection of hyaluronic acid

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# **Introduction & Objectives:**

Sarcoidosis, or Besnier-Boeck-Schaumann disease, is a granulomatous systemic disorder of unknown etiology with highly polymorphic cutaneous manifestations. Among the different clinical forms of cutaneous sarcoidosis are post-traumatic forms (scar sarcoidosis, sarcoidosic granulomas). The introduction of foreign particles into the integument may be accompanied by reactions such as sarcoidosic granulomas. We report a case of cutaneous sarcoidosis in a 37-year-old woman after injections of hyaluronic acid (Skinbooster).

#### **Materials & Methods:**

A 37-year-old woman, without any particular pathological history, presented 3 weeks after hyaluronic acid injection (Skinbooster) with red nodules at the location of some injection sites progressively increasing in size, without any associated functional sign. The clinical examination noted the presence of several firm purplish red nodules, painless and non-mobile to palpation,  $\pm 1$  cm in diameter, located at the injection sites: the two cheeks and the periorbital area. Dermoscopy revealed translucent yellow-orange globules and linear vessels, typical of cutaneous sarcoidosis. The search for systemic sarcoidosis was negative. A biopsy was performed. Anatomopathological examination revealed a sarcoidosis granuloma characterized by small rounded nodules of epithelioid cells, surrounded by a narrow lymphocytic corona, and a few giant cells of Langhans type, without fibrinoid necrosis or caseation. We treated the patient with local and general corticosteroid therapy associated with immunosuppressant (MTX). The evolution was marked by the regression of papules under treatment with persistence of erythematous macules.

**Discussion:** \*\* The originality of this observation consists in the appearance of sarcoidosis granulomas at the sites of hyaluronic acid injections. There was no evidence of systemic sarcoidosis. This leads us to believe that it is a local sarcoidosis reaction by antigenic stimulation, and not a sarcoidosis of the type of scar reactivation which, as a general rule, manifests itself on real scars, corresponding to more or less ancient traumas. The appearance of sarcoidosis granulomas at the sites of introduction of various foreign bodies has been frequently reported in the literature. In the majority of cases, these reactions are localized but, in some cases, they may reveal systemic sarcoidosis. Even when the investigations are negative, as in this case, it is important to ensure long-term follow-up of the patients, as the later occurrence of systemic sarcoidosis cannot be excluded.

#### Conclusion:

Post-traumatic forms of cutaneous sarcoidosis are quite rare. In this observation, the injection of hyaluronic acid was the triggering element of such reactions

# Management of Pemphigus Foliaceus in Severe Sepsis: Will Our Patient Pull Through?

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## **Introduction & Objectives:**

Pemphigus foliaceus is an autoimmune bullous dermatosis, the coexistence of sepsis poses a rare but potentially fatal clinical challenge. Here, we report an original case of this association, shedding light on the diagnostic and therapeutic challenges encountered in managing this dual pathology.

#### **Case report:**

A 76-year-old patient with a history of type two diabetes and hypertension on treatment was under our care for the past 3 months for superficial pemphigus. Initially, he was on corticosteroid therapy at a dose of 1 mg/kg/day, with tapering, and dapsone 100 mg/day. Abrupt discontinuation of treatment by the patient led to disease relapse. Clinical examination upon admission revealed a stable, afebrile patient with diffuse post-bullous erosions throughout the body, involving the face and scalp without mucosal or nail involvement, indicative of oozing erythroderma. Infectious and systemic impact assessments were conducted. The patient received local care and oral antiviral therapy. On day 3 of hospitalization, he developed a fever of 39°C and hemodynamic instability, with blood pressure at 80/40 mmHg, heart rate at 120 beats per minute, and laboratory findings indicating anemia at hemoglobin 7 g/dL vs. 10 g/dL, leukocytosis with neutrophilia at 15,430/mm<sup>3</sup>, CRP of 200 mg/L, and procalcitonin of 3 ng/mL. Blood culture revealed multi-resistant Staphylococcus aureus sensitive to vancomycin, and urine culture showed multi-resistant Staphylococcus aureus and multi-resistant Escherichia coli sensitive to tienam and cephalosporins. Vital emergency management was crucial, on-site intensivists managed the patient with fluid resuscitation, vasopressor drugs, transfusion of packed red blood cells, and initiation of triple antibiotic therapy with amikacin 1.5 g/day, vancomycin 2 g/day and tienam 2 g/day. Corticosteroid reintroduction was deferred until sepsis control. Hemodynamic stability was achieved, sepsis was controlled but the emergence of edema necessitated cardiac, renal, and hepatic reassessment, which returned unremarkable results. However, serum albumin levels had plummeted to 15 g/L, likely due to diffuse oozing from dermatological lesions, prompting initiation of corticosteroid therapy as a background treatment for the dermatosis along with albumin infusions. Dapsone was discontinued because of the anemia and biologic therapy was considered for this patient. Within two weeks, our patient survived due to a multidisciplinary approach involving dermatologists and intensivists.

#### **Conclusion:**

The coexistence of pemphigus foliaceus with severe sepsis poses multiple challenges. This case highlights the importance of early recognition of infectious complications in autoimmune bullous dermatoses and the necessity for aggressive multidisciplinary management. Further studies are required to better elucidate the interaction between pemphigus and severe infections to optimize the management of these vulnerable patients.

A case of Vulvar foreign body granuloma misdiagnosed as genital wart, treated using combination 755nm and 1064nm laser.

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# **Introduction & Objectives:**

Foreign body granuloma is an inflammatory skin disease resulting from the reaction to an exogenous or an endogenous foreign body. Foreign body granuloma can mimic other skin conditions, here we present a case report of a 15 years old patient presented to our clinic seeking medical treatment for genital warts diagnosed in another clinic. After thorough clinical and dermoscopic examination the decision was made to perform a skin biopsy.

#### **Materials & Methods:**

This is a case report for a patient presented to our clinic with multiple verrucous lesions impeded in vulvar hair together with profuse vaginal discharge, the patient was diagnosed at previous clinics as genital wart and was advised to start Podophyllin therapy, patient was young and reported no previous sexual behavior, thus the diagnosis was a cause of great panic for her family especially due to conservative nature of the Egyptian culture.

Lesion was not clear due to lack of prober hygiene for the young patient, acquired lymphangioma was suspected thus we decided performing a hair removal session followed by skin biopsy to confirm diagnosis.

#### **Results:**

Histopathological testing showed perivascular lymphocytic inflammatory infiltrate admixed with histocytes, histological diagnosis was ruptured folliculitis resulting in F.body granuloma.

The patient was treated using a combination of both 755 nm and 1064 nm laser sessions.

7 sessions were performed resulting in near complete resolution of the lesion, patient is being followed up for recurrence.

#### **Conclusion:**

The diagnosis of genital wart can cause a great psychological burden especially in closed eastern communities therefore doubtful cases should be confirmed by biopsy. Foreign body granuloma as a result of neglecting prober hair removal techniqes responds well to laser therapy.

# Recalcitrant Folliculitis Decalvans Successfully Treated with Roflumilast 0.3%

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## **Introduction & Objectives:**

Folliculitis decalvans is a neutrophilic scarring alopecia believed to stem from an abnormal host immune response to staphylococcus aureus and presents with features including follicular pustules, lack of ostia, follicular tufting and perifollicular erythema. Treatments are focused on both inflammation and eradication of staph aureus and involve topical and systemic corticosteroids, antibiotics, antifungals, retinoids, and immunosuppression.

Roflumilast cream 0.3% is a potent topical phosphodiesterase (PDE4) inhibitor approved in 2022 by the FDA for the treatment of psoriasis including intertriginous disease and in 2023 as a foam formulation for the treatment of seborrheic dermatitis. Roflumilast is more potent than apremilast and crisaborole, with roflumilast more closely mimicking the three key binding sites of cAMP to PDE4. We report a case of treatment – refractory folliculitis decalvans that was tender and pruritic. Once daily treatment with roflumilast cream 0.3% resulted in marked improvement in disease severity within 4 weeks of treatment and eradication of pustules.

## **Materials & Methods:**

A 35-year-old male presented to clinic with a multi-year history of an episodic, tender, and pruritic pustular eruption of the scalp with scarring that interfered with sleep and other activities. The patient's past medical history includes seborrheic dermatitis treated with OTC topical antifungals and congenital heart disease that resulted in a cardiac transplant and chronic systemic immunosuppression. Upon examination, there were numerous follicular erythematous papules and few pustules on a narrow erythematous base, predominantly on the vertex and frontal scalp. There were few irregular patches of cicatricial alopecia, multiple tufted follicles with surrounding erythema and scant greasy scales through the scalp consistent with a diagnosis of folliculitis decalvans. Prior treatments included multiple OTC analgesics and mentholated shampoos. The patient was subsequently treated with ketoconazole shampoo, clindamycin solution, clobetasol shampoo and multiple courses of week-long oral antibiotics with only temporary and partial relief. The patient was then started on roflumilast cream 0.3% once daily as monotherapy and told to discontinue all other topical therapies.

#### **Results:**

At week-4 follow up, the patient reported no new pustules and a reduction of erythematous papules with improvement in tenderness and pruritus. Physical examination revealed no new pustules and an objective reduction in papules as compared to his baseline visit. For ease of application, the patient will continue on roflumilast foam 0.3% once daily and start isotretinoin 10mg every third day. The patient is to return for follow up again in 4 weeks.

#### Conclusion:

This case report of a 35-year-old male with folliculitis decalvans recalcitrant to topical antifungals, topical corticosteroids and oral antibiotics was successfully treated with roflumilast cream 0.3% resulting in a reduction of erythematous papules with improvement in tenderness and pruritus. These results suggest that roflumilast cream 0.3% may be a suitable treatment option for patients with folliculitis decalvans when other treatments offer limited support. Early, safe treatments are essential for stopping permanent cicatricial alopecia. Further clinical evaluation

is required to fully understand roflumilast cream 0.3% as a treatment option for folliculitis decalvans.

## Jak Inhibitor in a Refractory Case of penile HS

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# **Introduction & Objectives:**

Hidradenitis Suppurativa (HS) is a longstanding inflammatory illness that can result in variable presentations making it resistant to conventional therapies. We present the case of a 47-year-old man with recurrent HS flare-ups with a unique presentation of spread to the scrotum and surrounding tissue. Despite multiple hospital admissions and various treatment approaches including antibiotics and different immunomodulatory agents, the patient presented with a worsening clinical course. This led to treating his complex presentation with Jak inhibitors. This case report highlights the unique ways in which HS can present and novel therapies that aim to treat refractory HS.

#### **Materials & Methods:**

The clinical course of the patient was reviewed and relevant admissions and subsequent treatment and response to treatment was summarized.

#### **Results:**

The patient had multiple clinical presentations involving drainage, swelling, pain, and erythema in the groin and adnexal regions. First line of treatment included PO clindamycin, topical clindamycin, and benzoyl peroxide 10% solution. Subsequently, the patient returned to the emergency department complaining this course of treatment did not significantly help his symptoms. Therapy was escalated to 1cc of intralesional kenalog-10 injected into each lesion, moxifloxacin 400 mg daily, metronidazole 500 mg TID, and rifampin 300 mg BID along with topicals due to increased serosanguinous discharge from the area along with fever, tachycardia, and leukocytosis. As he was still not improving, the patient was then started on the biologic adalimumab, a TNF blocker. New complaints of scrotal swelling were noted, and the patient was diagnosed with HS Hurley Stage III (severe) complicated by scrotal/penile cellulitis. The patient failed several additional treatments including PO steroids, IV ertapenem, and seculuzimab (IL-17A inhibitor). He was also poorly controlled on infliximab (TNF alpha inhibitor) even when maxing out the infliximab dose to 10 mg/kg q4 weeks. Due to complications and poor control of HS in this patient, he will now be started on Tofacitinib (Jak inhibitor) in addition to a TNF alpha inhibitor for greater benefit. Additionally, cyclosporine was used as an off-label treatment to manage this patient's lesions while waiting for the maximum efficacy of the Jak inhibitor.

# Conclusion:

HS presents a challenging disease to treat due to its various presentations and resistance to standard therapies. In our case, we aim to highlight the importance of exploring alternative therapeutic avenues, such as Jak inhibitors, in refractory cases of HS. Continued monitoring of the patient's clinical course post-initiation of novel therapies will provide valuable insights into Jak inhibitor's efficacy and safety profile in managing severe HS.

# Sweet Syndrome: Clinical Course and Associations from a 14-Year Retrospective Cohort from a Tertiary Hospital in Mexico City

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# **Introduction & Objectives:**

Sweet syndrome (SS) is an uncommon reactive neutrophilic dermatosis. It has been classified into classical SS, malignancy-associated SS, and drug-induced SS. The skin lesions are highly variable, morphological variants include bullous SS, subcutaneous SS, and neutrophilic dermatosis of the dorsal hands. The diagnosis requires fulfilling a set of clinical, histopathologic, and laboratory criteria. Emphasis has seldom been made on admixed populations such as Mexican Mestizos. The Mexican population is greatly heterogeneous as it is the result of an intricate admixture process. Consequently, we performed this longitudinal retrospective study aiming to analyze the characteristics of Mexican patients diagnosed with SS in our Institution within a 14-year span.

#### **Materials & Methods:**

We conducted a retrospective longitudinal study on patients from our pathology records who had a confirmed diagnosis of SS, from January 2010 to March 2024, at a tertiary referral center in Mexico City. Their data were obtained from clinical electronic records. Descriptive statistics regarding the demographic and clinical data were calculated and analyzed.

## **Results:**

23 patients were included. Demographic and clinical data are summarized on Table I. The classic form comprised 60% of cases, the bullous variant represented 26%, the subcutaneous variant 8%, and only 1 patient had neutrophilic dermatosis of the dorsal hands. 13% had systemic lupus erythematosus (SLE), and hematological diseases were present in 39% of patients. Only 2 patients had acute myeloid leukemia. All patients had an abnormal C-reactive protein. Only two patients had an evident temporal association with a drug, one to G-CSF, and another with SARS-CoV-2 vaccination.

#### Conclusion:

Through this study, we attempt to contribute to the understanding of SS by analyzing the clinical characteristics and associations in a group of Mexican patients. Although hematologic diseases were the most common, acute myeloid leukemia represented only a minority of cases. SLE was associated with SS in 13% of cases, which is considerably higher than other reports that have only found it in less than 3% of cases. Interestingly, our study included six cases of bullous SS. 69% seemed to have a concurrent infection, but no further workup for extracutaneous SS was performed. In this group composed of Mexican Mestizos, SS seemed to be less related to acute myeloid leukemia, and more frequently associated with SLE and other hematologic diseases. Moreover, the bullous variant was not as infrequent in this study compared to how scarcely it has been reported in the literature. This warrants further studies in the Mexican population, ideally multicentric prospective cohorts, with a lower threshold to suspect extracutaneous involvement.

Table I. Epidemiological and clinical characteristics of Mexican patients with Sweet syndrome
Characteristics
Median age at diagnosis (in years)
Female
Recurrent episodes
Head involvement
Upper extremity involvement
Trunk involvement
Lower extremity involvement
Two or more segments involved
Systemic lupus erythematosus
Hematologic disease
Acute myeloid leukemia
Classic SS
Bullous SS
Subcutaneous SS
Concurrent infection
Drug-related SS

#### Extremely Rare Case of Unilateral Blaschkoid Distribution of Grover's Disease in a Woman

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#### **Introduction & Objectives:**

Unilateral Grover's disease (GD) is an acquired but idiopathic pruritic eruption, is a rare variant of GD distributed along Blaschko lines in a unilateral manner. It affects middle-aged and elderly adults, with a predominance in males (male-to-female ratio of 2-3:1) and in Caucasians. Its pathogenesis is not clearly defined. Histopathology reveals acantholytic clefts that may resemble the histopathological findings of pemphigus vulgaris, Darier's disease, and Hailey-Hailey disease. Diagnosis requires clinicopathological correlation. We report one new case.

#### **Materials & Methods:**

We present the case of a 27-year-old woman with a pruritic eruption persisting for 2 years, showing a recurrent pattern. The patient exhibited papulovesicular lesions distributed along the right flank following Blaschko's lines, with no other symptoms, findings on physical examination or family medical history. On dermoscopy, a pink-yellow background was observed in some lesions and erythematous in others, with fine scaling in the central area and the presence of crusts in some of them. Histopathological analysis revealed suprabasal clefts, acantholytic cells in the granular and cornified layers, and a mixed inflammatory infiltrate in the superficial dermis, consistent with Grover's disease. The clinicopathological correlation resulted in a diagnosis of unilateral GD. It was decided to opt for symptomatic treatment with topical emollients and corticosteroids.

#### **Results:**

Unilateral GD is an extremely rare variant that poses diagnostic challenges due to its unusual presentation, with few cases reported in the medical literature. Its etiology is acquired, yet idiopathic. Although the exact cause and development process of this condition are not fully understood due to its rarity, it generally follows a benign course. The primary differential diagnosis is made with linear Darier's disease; however, it is crucial to distinguish other acquired inflammatory papular dermatoses that may present a blaschkoid-linear distribution to achieve an accurate diagnosis. Regarding dermatoscopic findings in GD, while there is not much information available, generally, these can vary according to the clinical stage of the lesion. An erythematous pattern predominates with the presence of glomerular and linear vessels at the periphery in early lesions. Conversely, in lesions at an advanced stage, a pink-yellow background and vessels at the periphery predominate.

## **Conclusion:**

Unilateral GD is a rare variant with a challenging diagnosis, due to the few reported cases and its resemblance to other pathologies with a blaschkoid-linear distribution. Our case emphasizes the importance of considering this condition, particularly due to its rarity, highlighting the significance of healthcare professionals' familiarity with this uncommon condition.

## Linear Lichen Planus Pigmentosus on the lower limb - A rare presentation

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# **Introduction & Objectives:**

Lichen Planus pigmentosus is a variant of lichen planus, which presents as hyperpigmented macules and patches, usually over face, neck and upper limbs. The precise etiology of this condition is unknown. We present a case of lichen Planus pigmentosus presenting with hyper pigmented macules in linear distribution on the lower limb following immobilisation.

#### **Materials & Methods:**

A 42-year-old female patient, who is a home maker by occupation, presented with asymptomatic dark brown patches over the right thigh. The lesion began as a small macule and gradually evolved to multiple patches in a linear arrangement over the last 6 months. The patient also reported swelling of the involved leg due to immobilisation after surgery for osteoarthritis. The surgery was performed 2 months prior to the onset of the lesion. There was no history of preceding erythema or scaling and no history of significant sun exposure. There was no history of contact with chemicals, perfumes or plants. There were no lesions elsewhere and no nail changes. On examination, hyperpigmented macules and patches in a linear configuration were present over the medial part of the right knee. The pigmentation was brownish in hue and there was no surrounding erythema. Dermoscopy showed pigmentary globules and perifollicular accentuation of pigment.

The differential diagnoses included Lichen planus pigmentosus, erythema dyschromicum perstans, pigmented purpuric dermatitis, lichen striatus and post inflammatory hyperpigmentation. Histopathological examination revealed thinning of epidermis with basal layer vacuolisation. The superficial dermis showed pigment incontinence with lymphohistioctyic infiltration and deep dermis showed fibrocollagenous tissue, blood vessels and sweet glands surrounded by chronic inflammatory infiltrate, with features suggestive of lichen planus pigmentosus.

The patient was started on treatment with topical Tacrolimus 0.1% cream and is under follow up.

#### **Results:**

Lichen Planus pigmentosus is a variant of lichen planus commonly seen in women with darker skin types. The lesions are insidious in onset and are asymptomatic in contrast to the classic lesions of lichen planus. Mucosal involvement is rare. The common sites involved are the face, neck and upper limbs. Cases of lichen planus pigmentosus in segmental distribution have been reported in the Indian subcontinent but are rare. Our case showed the classic clinical and histopathological features of this condition but the site (lower limb) is unusual.

# **Conclusion:**

Our case showed features of lichen planus pigmentosus in linear configuration following prolonged immobilisation, which is previously not reported in literature. This highlights the diverse etiological factors that could possibly precipitate this condition.

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## Inhibition of the calcitonin gene-related pathway in treating rosacea-associated flushing and erythema

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# **Introduction & Objectives:**

Managing erythema and flushing in rosacea poses significant challenges. The neuropeptide calcitonin generelated peptide (CGRP) is implicated in rosacea pathogenesis. This phase II, non-randomized, single-center, openlabel trial aimed to explore whether inhibiting the CGRP pathway could alleviate erythema and flushing in rosacea.

#### **Materials & Methods:**

Conducted in Copenhagen, Denmark, from June 9, 2020, to May 11, 2021, the trial enrolled rosacea patients experiencing at least 15 days/month with moderate to extreme flushing and/or 15 days/month with moderate to severe erythema. Participants received subcutaneous erenumab injections every 4 weeks for 12 weeks, maintaining a daily diary to record flushing and erythema severity.

# **Results:**

Of the 30 participants included, 27 participants completed the 12-week study. Mean number of days with moderate to extreme flushing was 23.6 days (standard deviation  $\pm$  5.8 days) at baseline with a reduction of 6.9 days (95% confidence interval [CI], -10.4 to -3.4 days, p < 0.001) at weeks 9-12.

Adverse events were mostly mild and transient and included constipation (33%), flushing (13%), bloating (10%), and upper respiratory tract infections (10%) consistent with previous data.

#### **Conclusion:**

Erenumab demonstrated efficacy in reducing rosacea-associated erythema and flushing, with participants generally tolerating the treatment well. This suggests that CGRP-receptor antagonism holds promise in rosacea management.

# Sequence of Improvement of Signs, Symptoms, and Quality of Life in Patients With Prurigo Nodularis Receiving Dupilumab

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**Introduction & Objectives:** Dupilumab has demonstrated efficacy in the improvement of prurigo nodularis (PN) signs and symptoms in adults. However, the chronologic sequence of improvement in these measures has not been established. Here, we aim to report the sequence of improvement in PN signs and symptoms after initiation of treatment with dupilumab in the PRIME/PRIME2 studies.

Materials & Methods: Adult patients aged 18 to 80 years with moderate-to-severe PN who were enrolled in the randomized, double-blind, 24-week, phase 3 trials LIBERTY-PN PRIME (NCT04183335) and PRIME2 (NCT04202679), received 300 mg dupilumab (n = 153) or matched placebo (n = 158) every 2 weeks for 24 weeks. This analysis presents the sequence of achieving a ≥4-point improvement in Dermatology Life Quality Index (DLQI), ≥2-point improvement in sleep Numerical Rating Scale (NRS), mild or none in the Patient Global Impression of Severity (PGIS), moderate to very much better in the Patient Global Impression of Change of disease (PGIC), and ≥4-point improvement in Worst Itch NRS (WI-NRS) over 24 weeks of dupilumab treatment.

**Results:** In the 152 dupilumab-treated patients evaluated, the first endpoint achieved by patients during the treatment period, before all other endpoints, was most commonly DLQI (51%), followed by sleep NRS (28%), PGIC (23%), and PGIS (15%). These were more commonly achieved before WI-NRS (12%). The proportion of patients achieving DLQI rapidly increased at Week 4 (73%) and was maintained from Week 8 (84%) to Week 24 (88%). The proportion of patients achieving improvement in sleep NRS, PGIC, PGIS, and WI-NRS also increased at Week 4 (24%, 38%, 21%, 18%), and continued to improve at Week 8 (33%, 59%, 40%, 32%) and Week 24 (49%, 84%, 69%, 65%). Overall safety was generally consistent with the known safety profile of dupilumab.

**Conclusion:** Patients reported rapid and sustained improvements in DLQI with half of patients achieving a 4-point improvement in DLQI before all other endpoints. More patients achieved improvements in sleep NRS, PGIC, and PGIS before WI-NRS, although consistent improvements in these were seen over 24 weeks. An understanding of this sequence of improvement with dupilumab may inform patient and caregiver expectations in clinical practice.

# Identifying the effects of social determinants of health on chronic inflammatory dermatoses: an Australian single-centre experience

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# **Introduction & Objectives:**

Atopic dermatitis (AD) and psoriasis are common chronic inflammatory skin conditions in Australia, with lifetime prevalences of 16.4% and 2.38% respectively. However, the relationship between social determinants of health and the clinical features and outcomes of inflammatory skin diseases is not well-established. We conducted a retrospective cohort study to identify and characterise the effects of social determinants of health on two chronic inflammatory dermatoses at an Australian tertiary referral centre.

#### **Materials & Methods:**

Patients who attended a specialist outpatient dermatology clinic between January 2021 and December 2022 were identified from clinical records and their demographic and clinical features were analysed with descriptive statistics. Four populations were defined based on Australian priorities for addressing disparities resulting from social determinants of health: Aboriginal and/or Torres Strait Islander (ATSI) patients, those from Culturally and Linguistically Diverse (CALD) backgrounds, patients from remote and rural communities, and those with a comorbid mental health illness. Outcomes of interest were disease severity, frequency of hospitalisation, access to systemic treatments and failure to attend clinic.

#### **Results:**

313 patients (193 with AD and 120 with psoriasis) were included, of whom 166 (53%) had moderate-to-severe disease. 1 patient (0.3%) identified as ATSI. 81 (25.9%) were from CALD backgrounds and had similar rates of moderate-to-severe disease to non-CALD background patients for AD (RR 1.04) but higher rates for psoriasis (RR 1.14). The CALD patients were less likely to receive systemic treatment for AD (RR 0.37) but more likely to receive systemic treatment for psoriasis (RR 1.21). 51 patients (16.3%) had a mental health condition and had higher rates of moderate-to-severe disease and need for systemic therapy for both AD (RR 1.44 and 2.75) and psoriasis (RR 1.10 and 1.12). Amongst patients with AD, being from a CALD background was associated with a lower hospitalisation rate (RR 0.24) whereas a comorbid mental health illness was associated with a higher hospitalisation rate (RR 1.31). 14 patients (4.5%) were from rural or remote communities. All patients from these four groups had higher rates of failure to attend clinics.

#### **Conclusion:**

In this study patients with identified socioeconomic determinants of poorer health outcomes showed trends towards different disease characteristics and clinical journeys. These factors should be considered by treating dermatologists to address health disparities in these groups. Larger multi-centre studies would be useful to further characterise the healthcare needs of these patients.

# A case of neutrophilic dermatosis of the dorsal hands mimicking a post-herpetic erythema multiforme

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# **Introduction & Objectives:**

Neutrophilic dermatosis of the dorsal hands (NDDH) is a rare and recently described entity, of which the nosology is still debated since, for many authors, it is in fact no more than an acral form of Sweet's syndrome, due to their substantially comparable anatomo-clinical presentation and evolutionary profile.

We report an unusual case of neutrophilic dermatosis of the dorsal hands strongly mimicking a post-herpetic erythema multiforme.

#### **Materials & Methods:**

#### Results:

## Case presentation:

A 61-year-old patient with a recent history of perioral herpes two weeks prior, consulted our department for an acute painful rash of the hands that had been evolving for ten days in a context of flu-like syndrome combining fever, myalgias, inflammatory arthralgias and a slight decline in general condition. Clinical examination revealed variable-sized, erythemato-violaceous inflammatory plaques, roughly confluent in places, and creating a cocardelike pattern in others, with a bullous center and an irregular surface, electively located bilaterally and symmetrically on the palmar and dorsal surfaces of the hands and fingers, giving them a swollen, pseudocellulitic appearance. The diagnosis of post-herpetic erythema multiforme in its minor form was initially considered in view of the recent history of herpes, but the suspicion of a probable neutrophilic dermatosis of the hands ultimately led to a skin biopsy. Blood tests found an elevated erythrocyte sedimentation rate with an increase in CRP, with no associated neutrophil polynucleosis. As for the histologic features, they demonstrated a dense and diffuse dermal inflammatory infiltrate comprised almost entirely of neutrophils, with no signs of vasculitis. The diagnosis of neutrophilic dermatosis of the dorsal hands (NDDH) was therefore confirmed, and the search for an extracutaneous location or an associated disease, particularly hematological, digestive or tumoral, was negative. Treatment was both local with dermocorticoids and oral with colchicine 1mg/day and vitamin therapy. The evolution was rapidly favorable, with progressive regression of the lesions until their total disappearance within three weeks.

#### **Conclusion:**

NDDH stands out from Sweet's syndrome in terms of its occurrence in older subjects, its tropism for the backs of the hands and its clinical polymorphism, which may variably combine infiltrated erythemato-violaceous plaques, vesiculo-pustules and ulcerations. General signs and biological inflammatory syndrome are often missing. The histology is indicative of a dermal neutrophilic dermatosis, with an occasionally associated leucocytoclastic vasculitis. The evolution is generally favorable under treatment, although a spontaneously resolving course has also been described.

Our case differs from others firstly in the fact that the eruption occurred following a herpetic infection, thus leading to possible confusion with erythema multiforme, and secondly in the involvement of both the palms and

the back of the hands, which is relatively rarely reported. It also highlights the practical difficulty of distinguishing different forms of neutrophilic dermatosis, thereby reinforcing the notion of a continuum in neutrophilic disease. Lastly, NDDH is still a little-known entity, often mistaken for an infectious process and therefore wrongly treated with antibiotic therapy or, worse, unnecessary disfiguring surgical procedures, avoidable by a simple at-a-glance diagnosis.

## Pyoderma gangrenosum with unusual localization - a case report

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# **Introduction & Objectives:**

Pyoderma gangrenosum (PG) is an ulcerative disorder that falls into the category of neutrophilic dermatoses. Although the disease is idiopathic in 25–50% of patients, an underlying immunologic abnormality is currently favored. Although the classic morphologic clinical presentation of PG is an ulcer, there are several variants which differ by their clinical presentation, location, and associated diseases. We herein report a case of PG with unusual localization.

#### Materials & Methods:

An 66-year-old caucasian male presented with a 7 month history of multiple ulcerations of various shapes and sizes, with violaceous margins, covered with purulent deposits, occurring on erythemato-violaceous plaques located at the right groin, scrotum and glans, accompanied by intense pain. The patient reported long-lasting medical history of chronic myeloproliferative neoplasia, controlled with Ruxolitinib for 3 years. Cutaneous pathological changes required a wide spectrum of differential diagnosis. The bacterial swabs were positive for Escherichia coli. Histopathological evaluation ruled out infectious or other autoimmune causes, highlighting non-specific changes: abundant polymorphic inflammatory infiltrate with areas of superficial dermal necrosis and lymphocytic vasculitis. The diagnosis of pyoderma gangrenosum of the inguinal site was made. A systemic therapy with high-dose dexamethasone and antihistamines was initiated, associated with topical treatment with antibiotic ointment and epithelial cream. Healing at the margins and decrease in size of the lesion was noted after 1 month of follow-up. Clinical examination shows progressive epithelialization bult also a painful vesicular eruption on the penile body, consisting of multiple small vesicles grouped in clusters. Antiviral therapy was added to the treatment regimen, with rapid resolution of the genital herpes.

#### Results:

PG is a diagnosis of exclusion both clinically and histologically. According to the diagnostic criteria, both major and three of the minor criteria were met. Though PG has been reported to occur over the genitalia, it rarely presents with concurrent involvement of the groin. Even if pyoderma ulcers are sterile, poor hygiene can lead to colonization with pathogenic bacteria and accumulation of purulent secretions. Definitive treatment guidelines for PG do not exist. Given the rapid evolution and extension of the lesions, systemic glucocorticoids were the first treatment option, with a favourable response after one month. Steroids produce a rapid decrease in inflammation, but can lead to immunocompromise, increasing risk for infection. Consequently, close monitoring and follow up of patients is necessary.

# **Conclusion:**

This case is reported to emphasize that PG is one of the differential diagnoses in those genital and inguinal ulcers in which no demonstrable cause is identified.

## Photodynamic Therapy: A Game-Changer for Lichen Sclerosus Patients.

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# **Introduction & Objectives:**

Lichen sclerosus (LS) is a rare chronic inflammatory disorder primarily afflicting peri-menopausal women. It predominantly affects the anogenital region, presenting with whitish atrophic patches, accompanied by pruritus, dyspareunia, and pain, posing diagnostic challenges over extended periods. Initial management typically entails glucocorticosteroids or calcineurin inhibitors; however, due to high recurrence rates, photodynamic therapy (PDT) has emerged as a promising therapeutic avenue. This study endeavors to evaluate the efficacy of PDT in managing anogenital lichen sclerosus.

# **Materials & Methods:**

The study recruited adult patients diagnosed with lichen sclerosus, deemed suitable candidates for 5-aminolevulinic acid-induced PDT. Diagnosis confirmation was established via histopathological examination. PDT efficacy was assessed through clinical examination scores ranging from 0 to 4 across four domains. Subjective symptoms were quantified using a 0-10 scale for pruritus, burning sensation, and pain before treatment initiation, post 10 weekly PDT sessions, and at the 6-month follow-up. Patient demographics, comorbidities, mean time to diagnosis, Dermatology Life Quality Index (DLQI) scores, and treatment satisfaction levels were also analyzed.

#### **Results:**

Among the 62 adult patients enrolled, 58 (93.5%) were females and 4 (6.5%) were males, with an average age of 49 years. The mean duration from symptom onset to diagnosis was 3 years and 4 months. Significant enhancements were observed in clinical examination findings, particularly in terms of sclerosis, hyperkeratosis, and ulcerations, at the 6-month follow-up. Subjective symptoms notably decreased following 10 PDT sessions. DLQI scores demonstrated a decrease from 16.0 to 4.0 at the 6-month follow-up, with 92.0% and 84.0% of patients expressing high treatment satisfaction at 10 sessions and 6 months, respectively. Autoimmune comorbidities were present in 25.0% of patients, predominantly autoimmune thyroiditis. Furthermore, 48.0% of patients necessitated mental health referrals due to reported psychological distress.

## **Conclusion:**

PDT exhibits notable efficacy in ameliorating both clinical and subjective symptoms associated with anogenital

lichen sclerosus, thereby significantly improving patients' quality of life. This study underscores PDT's role as a safe and effective therapeutic modality for managing this challenging condition.

# Neutrophil-poor vs. classical Sweet's syndrome: a clinical, histological and immunohistochemical comparative study

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## **Introduction & Objectives:**

Neutrophil-poor (incl. lymphocytic) cases of Sweet's syndrome (SS) have been reported previously. Several of these cases have been associated with underlying hematologic malignancy. The aim of the present study was to compare clinical, histopathological, and immunological characteristics of classical and neutrophil-poor Sweet's syndrome.

#### **Materials & Methods:**

Patients diagnosed with classical Sweet's syndrome were compared to patients with the neutrophil-poor variant of the disease. The von den Driesch (1994) diagnostic criteria for classical SS were applied, whereas neutrophil-poor patients fulfilled the previous definition except the presence of a predominantly neutrophilic infiltrate. Clinical records from 62 patients and their respective biopsies were retrospectively reviewed. In addition, immunohistochemical staining for CXCL8/IL-8, ICAM-1, TWEAK, and E-selectin was performed in skin biopsies of 12 patients with classical and neutrophil-poor Sweet's syndrome. Data were analyzed with the SPSS statistical package.

#### **Results:**

Cases with classical SS had an older age (67 vs 47 years, p=0.02). Fever and lesions in the cervical region were observed more often in the classic SS (p=0.000 and p=0.019). Medication was a more common cause in the neutrophil-poor Sweet (p=0.01) but not autoimmune disease, infection, or cancer. Of the laboratory findings, peripheral blood leukocytosis was more common in classical SS (p=0.0000), with no or marginal differences in lymphocyte or eosinophil counts. Response to treatment did not differ between groups. Epidermal spongiosis (p=0.035) and a more intense dermal inflammatory infiltrate (p=0.001) were observed in classical SS. Neutrophilic infiltrates (p=0.0000), leukocytoclasia (p=0.016), eosinophils (p=0.0000) and lymphocytes (p=0.0015) were of greater intensity in classical SS. In relation to the vascular component, endothelial edema was more pronounced in the classical Sweet (p=0.0057). Immunohistochemical stains did not reveal TWEAK or E-selectin expression in SS. Expression of CXCL8/IL-8 was associated with the intensity of neutrophilic infiltrates (p=0.036) and of leukocytoclasia (p=0.017), but not the intensity of lymphocyte or eosinophil infiltrates. CXCL8/IL-8 expression was marginally associated with the presence of ICAM-1 in epidermal keratinocytes (p=0.061). ICAM-1 was not expressed in endothelial cells, although there was clear swelling of them. Expression of ICAM-1 in the epidermis was associated -as was CXCL8/IL-8- with neutrophil exocytosis (p=0.038) and epidermal spongiosis (p=0.047).

## **Conclusion:**

The present study highlights clinical and histological differences between the classical and the less known variant of neutrophil-poor SS. Moreover, it places the chemokine CXCL8/IL-8 at the forefront as a key player for

differentiating between neutrophil-poor and classical SS. CXCL8/IL-8 correlated not only to the degree of the neutrophilic infiltrate, but also with other signs of neutrophilic activation, such as leukocytoclasia and neutrophil exocytosis. Noteworthy is the absence of markers of endothelial activation (ICAM-1, E-selectin) in SS, despite the presence of endothelial involvement in routine histology.

# Microbiological evaluation of perilesional skin and punch biopsies in hidradenitis suppurativa patients: Insights from a preliminary study

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# **Introduction & Objectives:**

Hidradenitis suppurativa (HS) is an inflammatory skin disease characterized by painful nodule, abscesses and tunnel, whose aetiology is still poorly understood. In recent years, researchers investigated the potential role of bacteria in HS, but conflicting results have emerged. It still remains uncertain whether bacteria play a role in HS pathogenesis or, more likely, may represent a consequence of the ongoing inflammatory process. The aim of the study is to correlate clinical and non-invasive diagnostic methods (pH and fluorescence) with microbiological examination in patients affected by moderate to severe HS.

#### **Materials & Methods:**

A group of 14 patients (9 males and 5 females) with moderate and severe HS localized to the axilla (7/14), groin (5/14) and gluteal region (2/14) were enrolled. All the patients presented HS tunnels in the absence of clinical signs of infection or critical colonization. Microbiological analysis was performed prior to antibiotic treatment: superficial cutaneous swab samples and punch biopsy samples of HS lesions were collected and the aerobic microflora cultured and quantitatively measured from each sample under standard laboratory conditions. Moreover, pH measurements were performed at the level of draining tunnels and the perilesional skin areas and a non-invasive auto-endogenous fluorescence device was used to detect bacterial loads in HS lesional and perilesional skin.

#### **Results:**

Microbiological culture analyses demonstrated that almost all samples were polymicrobial containing at least 2 or 3 different bacterial species. Bacterial load of swab samples (CFU/gr) was significantly higher than biopsy samples (P<0.05). Most of the bacteria isolated were part of the normal microbial flora of the skin. Among them, Staphylococcus spp was isolated at higher frequency (from 9/14 biopsies and from all the swab samples) followed by Corynebacterium spp (from 6/14 biopsies and from 8/14 swabs). Proteus mirabilis, a component not usually part of the skin microflora was isolated from 3 biopsy samples, but from only one swab sample. The non-invasive auto-endogenous fluorescence device showed increased red coloration in patients who had skin swabs positive for Staphylococcus spp. 11/14 patients showed pH measurements within the normal range (6.5 - 7.5) for both lesional and perilesional skin, while in the 3/14 patients, that revealed pH values ranging from 7.5 to 8.8, clinical signs of active inflammation (drainage, intense pain and oedema) were observed.

#### **Conclusion:**

Our preliminary results revealed a dominant colonization of HS lesion with normal skin commensal flora, detected either by microbiological examination and through the fluorescence device. This observation suggests that commensal bacteria may elicit inflammatory responses in genetically susceptible individuals. Microbiome analysis of profound HS lesions (biopsy samples) compared to the superficial (swab) ones may give further insights to the role of bacteria in the etio-pathogenesis of the disease.

Furthermore, the finding of higher pH values in patients with actively draining but clinically and microbiologically non-infected lesions might suggest that this biochemical parameter could serve as a biomarker indicative of a pro-inflammatory microenvironment. Further investigations with larger samples are necessary to understand the complex integration between pH values and the inflammatory or infectious status of HS lesions.

# Eosinophilic Fasciitis: Case Series on the Role of Cutaneous Ultrasound.

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# **Introduction & Objectives:**

Eosinophilic fasciitis (EF) is a form of deep morphea that manifests as inflammatory thickening of the fascia and subcutaneous tissue. While biopsy remains a cornerstone for diagnosis, its efficacy can be compromised by sampling errors, often missing affected areas. While a biopsy is valuable for diagnosis it is an invasive technique and is not helpful for the follow-up of these patients. Magnetic resonance imaging (MRI) is the imaging technique most commonly used to diagnose these patients. However, its cost and limited access are disadvantages for its use in routine practice.

This study aims to deepen our understanding of the demographic, clinical and diagnostic features of EF, with a focus on understanding the potential advantages of using skin ultrasound (UC) as an adjunct to biopsy and MRI, thus moving towards a more comprehensive diagnostic approach to EF.

# **Materials & Methods:**

A retrospective study of patients with EF at a tertiary hospital was conducted between 2017 and 2024. The patient 's inclusion required clinical suspicion of EF confirmed by muscular fascia biopsy. Epidemiological, clinical, and imaging data were obtained from clinical records. CU evaluations included fascia thickening, echogenicity, and Doppler flow assessment. Additionally, MRI and Positron Emission Tomography-Computed Tomography (PET-CT) were performed in selected cases where clinical presentation suggested the need to rule out a concurrent neoplastic disorder.

#### **Results:**

Thirteen patients were included. The mean age at diagnosis was 61 years. Mean PROM scores were: 5 (shoulders and ankles), 4 (wrists), and 2 (feet). 3 patients had concurrent neoplasia. Eosinophilia was seen in 11 cases, with a mean count of 1798 cells/ $\mu$ L. Elevated hyaluronic acid was evident in 2 cases (107  $\mu$ g/L avg.); aldolase in 4 (7.56 U/L avg.), and procollagen III in 1 (22.7  $\mu$ g/L avg.). 2 patients presented increased N-telopeptide of Type I collagen (NTx) (59 nMol/mM avg.).

CU found fascial thickening in all patients, predominantly in the affected areas. Increased vascularization was evident with color Doppler in subcutaneous tissue and around affected fasciae. Doppler revealed median systolic and diastolic velocities of 15.7 cm/sec and 4.3 cm/sec, respectively. The mean resistance index was 0.96. Median fascial thicknesses were arms (3 mm), forearms (2.1 mm), thighs (3.6 mm), and legs (1.7 mm). Follow-up showed reduced Doppler flow in responsive patients and, in some, normalized fascial thickness.

Treatment outcomes varied: 4 patients improved with prednisone + methotrexate, 2 with prednisone + IV immunoglobulins, 1 with prednisone + methylprednisolone bolus + methotrexate, 1 with methotrexate alone, 1 with IV immunoglobulins alone, 1 with lung cancer treatment, 2 with hematologic stem cell autotransplantation, and 1 patient showed no response. The mean time to maximal improvement was 10 months.

#### **Conclusion:**

CU promises to diagnose and monitor EF. CU can identify increased Doppler signals in the subcutaneous tissue and around the muscle fascia in patients with active disease. Affected patients typically exhibit systolic velocities that are more significant than 10 cm/sec and thickened muscle fasciae. CU offers several advantages: It can be performed during the same medical visit as the patient, it does not require contrast administration and it is more cost-effective than other imaging modalities.

## Polymorphic bullous erythema with atypical presentation

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**Introduction & Objectives:** Polymorphic Erythema (PE) is an acute condition mediated by the immune system characterized by the appearance of typical skin lesions in the form of target lesions, accompanied by erosions or blisters affecting mucous membranes.

**Materials & Methods:** The patient is a 39-year-old individual without prior history; admitted to our facility for an acute presentation without evidence of infection or medication intake, presenting with erythematous-bullous lesions, targetoid infiltrated centrally and always bullous, surrounded by a lighter first ring and a second rose ring more infiltrated. The entire area is surrounded by bubbles arranged in a rosette pattern. These lesions confluently occur on the back, armpits, pelvis, and buttocks, where there was also noted the presence of a post-bullous erosion. Additionally, large tense bubbles of several centimeters in diameter with clear content were present on the dorsal surface of the feet. Examination of the mucous membranes revealed: bilateral conjunctival hyperemia, with ophthalmological examination revealing the appearance of blepharitis and conjunctivitis, rhinorrhea, dysphagia, and a silent airway corresponding to laryngitis. Given this clinical picture, a drug-induced toxic reaction, linear IgA dermatosis, and PE with bullous presentation were considered. The diagnosis of the latter was confirmed by the result of a skin biopsy, with the origin of this PE remaining undetermined. Consequently, our patient benefited from symptomatic treatment: topical ocular corticosteroids, mouthwash for oral involvement, and general corticosteroids for laryngitis. The course was marked by complete regression across all dimensions.

**Results:** PE is primarily a hypersensitivity disease of post-infectious origin, with some cases being idiopathic. Mucosal involvement affects over 60% of patients. Depending on the number of mucous membranes affected, two forms of PE must be distinguished: minor PE (0 or 1 mucosal involvement) and major PE (2 or more mucosal involvements). The typical elementary cutaneous lesion is the target lesion with three rings. This presents as a ring-shaped papular lesion formed by a central purpuric area with or without vesiculo-bullous detachment, surrounded by a white circle, then an external red ring. Our patient's presentation consists of two patterns: a targetoid pattern with four rings, the last consisting of bubbles arranged in a rosette, and another bullous pattern. The Nikolsky sign was positive in both. This clinical presentation has never been described before, to our knowledge. Antiviral treatment is not effective in the acute phase; the introduction of corticosteroids is controversial. This was done for our patient to treat his laryngitis. The evolution was completely favorable within 2 months.

**Conclusion:** We report a case of idiopathic bullous PE mimicking a blister for clinicians to be aware of a new clinical aspect of polymorphic erythema and to avoid diagnostic delay.

## Localized Sweet's syndrome associated with post-mastectomy lymphedema

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## **Introduction & Objectives:**

Sweet syndrome, also known as acute febrile neutrophilic dermatosis, is a rare inflammatory disorder characterized by the abrupt onset of tender, erythematous papules and plaques accompanied by fever and leukocytosis. Although classically described as a systemic condition, localized forms of Sweet syndrome have been increasingly recognized in recent years. One intriguing association that has garnered attention is the occurrence of localized Sweet syndrome in the setting of post-mastectomy lymphedema, a complication of breast cancer treatment characterized by lymphatic obstruction and tissue swelling.

#### **Results:**

A 73-year-old woman was referred to our department by her oncologist because of a three-day history of numerous infiltrated, erythematous, and livid patches on her right forearm. Twenty-four years ago, the patient had an ipsilateral mastectomy due to breast adenocarcinoma, after which she developed lymphedema. Before skin lesions erupted, the patient had a respiratory infection and high body temperature. C reactive protein was slightly elevated at 11.5 mg/L, while a complete blood count and biochemical analysis revealed no abnormalities. Histopathology of plaque showed acanthosis, dense infiltration of lymphocytes, numerous neutrophils in the deep dermis, and multiplied myofibroblasts separated by bundles of collagen and mucin. The patient was treated with clobetasol propionate cream and empirically administrated amoxiclav. After seven days of the therapy, complete clinical regression was achieved. No recidivism was observed in the three-month follow-up period.

#### **Conclusion:**

The pathophysiological mechanisms underlying post-mastectomy lymphedema involve disruption of lymphatic vessels, leading to fluid accumulation and tissue inflammation. Recent evidence suggests that this inflammatory milieu may predispose individuals to develop neutrophilic dermatoses, though the precise mechanisms remain elusive. Neutrophilic dermatosis associated with post-mastectomy lymphedema is easily misdiagnosed as cellulitis, erysipelas, herpes zoster, or even cutaneous metastases. Clinical courses with unilateral localization, mild systemic symptoms, and histological findings are crucial to establishing an adequate diagnosis.

By shedding light on this intriguing association, our study aims to raise clinician awareness of the potential occurrence of localized Sweet syndrome in patients with post-mastectomy lymphedema. Enhanced recognition of this dermatological manifestation may facilitate prompt diagnosis and appropriate management, avoiding unnecessary delay of chemotherapy.

## Pigmented lichen planus in the mouth simulating malignant melanoma

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Introduction: Oral lichen planus is a chronic inflammatory mucocutaneous disease of unknown cause. Manifestations can occur on the skin in the form of a papular lesion and can also affect the mucous membranes, with their presentation being more frequent on the oral mucosa. Case Report: Patient, 38 years old, female, housewife, non-smoker, was referred to the Dermatology Oncology Outpatient Clinic due to a pigmented lesion on the oral mucosa with suspected melanocytic melanoma. Patient reporting that about 6 months ago, pigmented, blackish lesions appeared distributed in the oral cavity, asymptomatic. He reports that the lesions initially appeared in the buccal mucosa, later affecting the palate, floor and gums region. The lesions were hyperpigmented patches of shades ranging from violet to black, without relief, with irregular contours. After the biopsy results, the diagnostic hypothesis of hyperpigmented oral lichen planus was confirmed, ruling out the hypothesis of melanoma. After general examinations, oral treatment with dapsone 100mg once a day was started. Conclusion: Many pigmented lesions can affect the oral cavity and may be related to several factors, such as racial pigmentation, systemic manifestations and melanoma. Therefore, the diagnosis of these lesions is a challenge, since they are often not identified by clinical examination alone and the definitive diagnosis is normally made with the help of histopathological evaluation. Considering the presentation of the lesions and the characteristic pigmentation, the hypotheses of melanoma were raised, which was ruled out by biopsy, and oral lichen planus, the latter being confirmed. Therefore, treatment with dapsone 100 mg was instituted for the patient.

#### Combination of brimonidine 0.33% and ivermectin 1% in the treatment of papulopustular rosacea

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# **Introduction & Objectives:**

Rosacea is a chronic inflammatory, multifactorial disease for which combination therapy could be an effective treatment.

In this study, we evaluate the effect of the combination therapy of brimonidine 0.33% and ivermectin 1% as a single cream for treatment of papulopustular rosacea

#### **Materials & Methods:**

A stable and appropriate formulation was prepared by adding the aqueous phase to the lipid phase while being stirred. The stability and physicochemical properties of the formulation were evaluated under accelerated conditions. Twelve patients (36-60 years) with mild to moderate papulopustular rosacea and a Demodex count of five or more were treated with the combination of brimonidine 0.33% and ivermectin 1% cream. Clinician's Erythema Assessment (CEA), Patients Self-Assessment (PSA), skin erythema ( $\Delta$ E) and lightness ( $\Delta$ L), and skin biophysical parameters including transepidermal water loss (TEWL), skin hydration, pH, and sebum content, as well as erythema and melanin index and ultrasound parameters, were measured before treatment and four and eight weeks after. Adverse drug reactions were also recorded.

## Results:

CEA and PSA decreased significantly from 3 to 2 after eight weeks, respectively (p-value = 0.014 for CEA and 0.010 for PSA).  $\Delta E$  and  $\Delta L$ , as well as skin erythema index and TEWL improved after eight weeks of treatment (P<0.05). Two patients withdrew from the study in the first week because of local adverse effects; one developed flushing following treatment and left the investigation after four weeks and another patient withdrew from the study after four weeks due to deciding to become pregnant.

## **Conclusion:**

Eight-week treatment with the combination of brimonidine 0.33% and ivermectin 1% was shown to be effective for improvement of erythema and inflammatory lesions in mild to moderate papulopustular rosacea.

## Disseminated ulcerative extragenital lichen sclerosus - a therapeutic challenge

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## **Introduction & Objectives:**

Lichen sclerosus is a benign, chronic, inflammatory skin disorder distinguished by the presence of atrophic plaques on the skin or mucous membranes that manifests in both anogenital and non-genital areas. These extragenital manifestations typically manifest as porcelain-white, hypopigmented or hyperpigmented, atrophic plaques on the skin of the thighs, neck, trunk, and lips with lesions of variable size.

#### **Materials & Methods:**

A 65-year-old woman presented with a brownish-pigmented lesion on the skin of the upper back, initially appearing seven years ago. Over the ensuing years, there has been notable progression, exhibited by eruption of new sclerotic, lichenified papules and plaques on the skin of the trunk and the extremities, alongside ulceration development in the lesions of the upper back and right breast. She had previously been treated with topical corticosteroids, which resulted in substantial regression of the condition.

# Results:

Skin examination revealed sharply defined brownish-pigmented plaque, with biggest one measuring 17.5x11 cm on the skin of the upper back, accompanied by whitish porcelain-like atrophic areas and visible follicular hyperkeratosis. Within the plaque, there were two shallow ulcerations, each about 1.5 cm in size. The genital areas were unaffected. Routine examinations, including a complete blood count, ultrasound, chest X-ray, and urinalysis were within normal limit. Skin biopsy and subsequent histopathologic analysis confirmed lichen sclerosus, showing markedly atrophic epidermis with compact hyperorthokeratosis and subepidermal pronounced area of hyaline sclerosis, accompanied by broad sclerotic collagen fibers of the dermis and the reduction of skin adnexa. The patient underwent 29 treatments of PUVA cream photochemotherapy, alongside hydrocolloid dressings application on the ulcerations. Treatment resulted in partial regression, as evidenced by lesions being less sclerotic and the complete epithelization of the ulcerations occurred. Also, post-treatment there was no additional lesion development.

#### **Conclusion:**

This case report describes a rare form of ulcerative extragenital lichen sclerosus that was successfully managed with PUVA cream therapy and hydrocolloid dressings. The plaques became less sclerotic, the ulcerations completely healed, and no new lesions developed during and after the treatment period. This outcome suggests that combining photochemotherapy with advanced wound care can be a successful strategy for managing complex dermatological cases.

## Prurigo pigmentosa during pregnancy: case report

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## **Introduction & Objectives:**

Prurigo pigmentosa is a rare inflammatory dermatosis of unknown cause distinguished by symmetrical, pruritic, recurring erythematous papules that leave a pigmented scarring network on the trunk. Vesicular or bullous forms have been described infrequently. We provide a case of this syndrome in a pregnant woman.

#### **Materials & Methods:**

Case report

#### **Results:**

A 33-year-old female presented with a pruritic rash that had been developing in remission-like episodes for a year, with the most recent episode lasting 10 days. The woman was pregnant at 10 weeks of amenorrhea, and the papulovesicular rash was limited to the cleavage, back, and neck, with a pronounced butterfly-wing appearance. The pre-pregnancy flare-ups occurred in an apyretic environment and resolved spontaneously, resulting in hyperpigmentation. The histological examination revealed spongiform dermatosis with perivascular dermal infiltration of lymphocytes, a few histiocytes, and neutrophilic and eosinophilic leukocytes. Direct immunofluorescence was negative. Prurigo pigmentosa was diagnosed based on the characteristic clinical presentation, a lack of a differential diagnosis, and histological findings. The rash resolved on its own, so no treatment was required.

## **Discussion:**

Prurigo pigmentosa is a rare inflammatory dermatosis that was initially described by Nagashima in Japan in 1971, although other occurrences have been reported around the world, most notably in France. Prurigo pigmentosa is diagnosed mostly clinically, with a distinctive rash of erythematous macules that progresses to urticarial papules or papulovesicles and eventually to reticulated pigmentation. The histological appearance varies greatly depending on the stage of the eruption; the first stage is characterized by a predominantly neutrophilic perivascular infiltrate of the superficial dermis, followed by spongiosis with a mixed lymphocytic and neutrophilic infiltrate, and finally parakeratosis with a lymphocytic perivascular infiltrate. The cause of prurigo pigmentosa remains unknown. However, variables such as extreme youth, anorexia, and type 1 diabetes.

Several examples of prurigo pigmentosa have been reported during pregnancy, including two cases in patients who presented with severe vomiting: the uniqueness of our case stems from our patient's lack of vomiting and the existence of comparable episodes in previous pregnancies. There are several therapeutic options available, with cyclins being the treatment of choice due to their anti-inflammatory properties, and the prognosis is often favorable, with spontaneous remission likely.

#### **Conclusion:**

Prurigo pigmentosa is an uncommon dermatosis with an unknown etiology; diagnosis might be challenging. A

clinical and pathological link is essential for reaching a diagnosis. Prurigo pigmentosa is more likely to occur during pregnancy.

## lichen nitidus, you have to think about it.

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**Introduction:** lichen nitidus(LN) is a rare chronic inflammatory disease; of unknown etiology, first described in 1907 by PiNKUS, we report a case of lichen nitidus.

**Observation:** A 10-year-old child, with no significant pathological history, consulted for discreetly itchy papular lesions. The skin examination finds multiple monomorphic minipapules, measuring 1 to 2 mm, with a flat or slightly bulging surface, shiny, translucent or slightly pink. The lesions are diffuse to the neck, décolleté, abdomen, back and limbs. The rest of the integument, mucous membranes and hair are unharmed. Histological examination of a biopsy fragment shows five small lesional foci in the dermal papillae; these lesions are indeed constituted by an accumulation of histiocytic lymphocytic elements dilating the dermal papillae and coming to nibble the basal in a focal way, the epidermis is rather thinned. Clinical and histological data allowed to retain the diagnosis of lichen nitidus.

**Discussion:** Lichen nitidus is. chronic inflammatory dermatosis that affects children and young adults selectively; regardless of gender or ethnicity. This condition is usually asymptomatic, sometimes discreetly itchy. The eruption consists of multiple monomorphic papules, the size of a pinhead, flesh or pink, shiny, flat or domed. Each papule remains isolated from the neighbouring element within groups of about ten papules. Generalized lichen nitidus is a particular form characterized by an eruption that affects the entire body. However, palmoplantar, nail or oral mucosa involvement is exceptional. Pruritus more or less intense is classic, unlike localized lichen nitidus. The histological image is characteristic; it shows an atrophic parakeratotic epidermis, a dense infiltrate well limited lymphohistiocyte with epithelial and gigantitocellular cells, located in the papillary dermis bilaterally surrounded by elongated papillae. Epithelial infiltrate, parakeratosis and the appearance of the papillae differentiate lichen nitidus from lichen planus. The cause of lichen nitidus remains mysterious. Its association with juvenile chronic arthritis, trisomy 21 or postpartum thyroiditis has been reported occasionally, as well as its occurrence in the aftermath of interferon alfa treatment. The evolution is unpredictable. Spontaneous remissions are observed in the majority of cases, however disabling pruritus, persistent or refractory lesions may require treatment. Antihistamines, dermocorticoids, systemic corticosteroids, phototherapy with Puvatherapy or narrow-spectrum UVB, retinoids, antituberculosis, asté-mizole were proposed, and more recently topical pecrolimus.

**Conclusion:** Lichen nitidus remains a benign disease whose diagnosis is based on the typical appearance on anatomopathological study. The prognosis is unpredictable, but most patients (69%) progress to spontaneous recovery within one year.

# Regenerative Medicine in the Treatment of Specific Dermatologic Disorders: A Systematic Review of Randomized Controlled Clinical Trials

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# **Introduction & Objectives:**

The aim of this study is to systematically review randomized controlled clinical trials (RCTs) studying various types of regenerative medicine methods (such as platelet-rich plasma, stromal vascular fraction, cell therapy, conditioned media, etc.) in treating specific dermatologic diseases. Rejuvenation, scarring, wound healing, and other secondary conditions of skin damage were not investigated in this study. **Materials & Methods:** 

Major databases, including PubMed, Scopus, and Web of Science, were meticulously searched for RCTs up to January 2024, focusing on regenerative medicine interventions for specific dermatologic disorders (such as androgenetic alopecia, vitiligo, alopecia areata, etc.). Key data extracted encompassed participant characteristics and sample sizes, types of regenerative therapy, treatment efficacy, and adverse events.

## **Result:**

In this systematic review, 64 studies involving a total of 2,888 patients were examined. Women constituted 44.8% of the study population, while men made up 55.2% of the participants, with an average age of 27.64 years. The most frequently studied skin diseases were androgenetic alopecia (AGA) (45.3%) and vitiligo (31.2%). The most common regenerative methods investigated for these diseases were PRP and the transplantation of autologous epidermal melanocyte/keratinocyte cells, respectively. Studies reported up to 68.4% improvement in AGA and up to 71% improvement in vitiligo. Other diseases included in the review were alopecia areata, melasma, lichen sclerosus et atrophicus (LSA), inflammatory acne vulgaris, chronic telogen effluvium, oral lichen planus, and dystrophic epidermolysis bullosa. Regenerative medicine was found to be an effective treatment option in all of these studies, along with other methods. The regenerative medicine techniques investigated in this study comprised the transplantation of autologous epidermal melanocyte/keratinocyte cells, isolated melanocyte transplantation, cell transplantation from hair follicle origins, melanocyte-keratinocyte suspension in PRP, conditioned media injection, a combination of PRP and basic fibroblast growth factor (bFGF), intravenous injection of mesenchymal stem cells, concentrated growth factor (CGF), stromal vascular fraction (SVF), a combination of PRP and SVF, and preserving hair grafts in PRP.

#### Conclusion:

Regenerative medicine holds promise as a treatment for specific dermatologic disorders. To validate our findings, it is recommended to conduct numerous clinical trials focusing on various skin conditions. In our study, we did not explore secondary skin lesions like scars or ulcers. Therefore, assessing the effectiveness of this treatment method for addressing these conditions would necessitate a separate study.

# Artificial Intelligence-Based Identification of Generalized Pustular Psoriasis: Early Diagnosis to Potentiate Timely Treatment

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# **Introduction & Objectives:**

Generalized pustular psoriasis (GPP) is a rare condition characterized by serious flares. GPP remains underdiagnosed, with patients experiencing substantial delays in access to effective management and treatment. Improved methods of identifying and diagnosing GPP earlier are critical to reducing these delays. Artificial intelligence (AI) methods excel at identifying patterns in datasets, including those reflecting treatment, and can use information describing existing patients' journeys through isolation of distinctive digital phenotypes associated with eventual diagnosis. Treatment patterns may be sufficient on their own to signal disease, even without formal diagnosis or condition-specific treatment. In this effort, the use of GPP patients' treatment history prior to diagnosis was explored for 'early indicators' of eventual GPP diagnosis.

## **Materials & Methods:**

Patients with diagnosed GPP were identified using diagnosis codes within two linked datasets: DataDerm, the American Academy of Dermatology's clinical data registry, and the OM1 Real-World Data Cloud, a large, multi-source claims and electronic health record dataset. Within this group, GPP patients with a preexisting psoriasis diagnosis and dermatologist care were isolated. An AI tool was then used to identify GPP patients based on their health history data prior to first GPP diagnosis. Performance was evaluated using patients' full records, as well as their coded medication histories alone. Results were assessed to characterize patterns in treatment history associated with eventual GPP diagnosis.

## **Results:**

A cohort of 10,988 patients with GPP was isolated from the source datasets. Using all available data in these patients' histories for evaluation in a validation sub-cohort, the AI tool performed well (AUC: 0.79). When restricted to medication information alone, performance dropped but remained acceptable (AUC: 0.70). The patterns within these data lending greatest power to the AI tool included evidence of specific psoriasis treatment in patients eventually diagnosed with GPP, versus more general treatments in those patients without eventual GPP diagnosis.

**Conclusion:** This study demonstrated the ability of an AI tool to identify GPP using patients' health history data, including treatment information to recognize GPP patients prior to their official diagnosis. Furthermore, the AI algorithm identified specific patterns of medication usage and treatment interventions within the spectrum of psoriasis treatment that are predictive of future GPP diagnosis. This differentiation indicates that these patients are treated differently before they are 'known' to have GPP. These insights will be explored further and can help inform earlier GPP diagnosis and management. With new and effective treatment regimens approved for GPP, the ultimate goal is to decrease patient suffering by identifying patients earlier for definitive diagnosis and ensuring access to effective treatment.

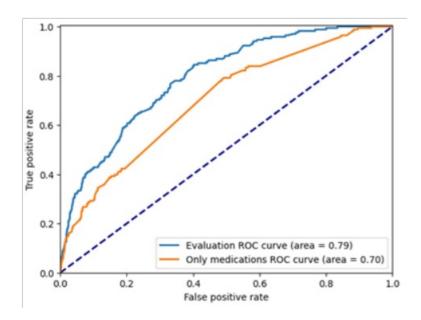


Figure 1. Performance of the AI tool in identifying GPP patients using all pre-diagnosis health history information, and using only pre-diagnosis medication information. Substantial performance is retained even after all non-medication information is removed.

Wolf isotopic response: the value of the dermoscopic tool in the diagnosis and follow-up of 2 cases of zosteriform lichen planus.

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#### Introduction:

Wolf's isotopic response describes the occurrence of a new skin disorder at the site of an other already healed skin disease. Many disorders can develop on the same site, including infections, skin tumors, and mainly lichenoid reactions as Lichen planus. We presented our case because of its rarity as a variant of lichen planus and its appearance in the area of healed shingles as an isotopic response. The particularity of our observation also lies in the contribution of dermoscopy to the diagnosis and follow-up of Zosteriform Lichen Planus.

# **Case report:**

**Observation 1:** Male 48 years old patient presented a pruritic eruption which occured exactly in the area of a healed intercostal herpes zoster 3 weeks earlier. Clinical examination revealed multiple, shiny, erythematous papules. The skin lesions were characteristic of lichen planus. There were no signs of oral or genital mucous membrane lesions, nor scalp or nail involvement. The patient refused skin biopsy. Dermoscopic evaluation revealed an erythematous background with blood vessels and Wickham striae. Topical corticosteroid therapy was prescribed with progressive reduction in itching.

**Observation 2:** Male 66 years old patient with itchy, multiple, slightly rose-colored and shiny papules which appeared exactly in the area where he had been affected by an intercostal herpes zoster few months ago. Clinical hypothesis of lichen planus was made and a skin biopsy was performed. The histopathological features were not typical of Lichen Planus. Dermoscopy evaluation showed brown dots, diffuse brown pigmentation and white dots.

# **Discussion:**

Lichen planus is an idiopathic inflammatory disease of the skin and mucous membranes characterized by erythematous to violaceous shiny and pruritic papules. The major challenge for our case was distinguishing between the isotopic phenomenon from the isomorphic response. Indeed, in linear lichen planus, papules may develop a linear pattern secondary to trauma (koebnerization's isomorphic response) or as spontaneous isolated eruptions. The eruption follows Blaschkow lines which do not follow any known vascular or nervous structures in the skin. Zosteriform Lichen Planus is an eruption developing at the site of healed herpes zoster. In our case, the eruption follows the course of a peripheral cutaneous intercostal nerve and its branches. This can best be explained as Wolf's isotopic response at the site of healed herpes zoster. Based on clinical and dermoscopic findings, patients had lichen planus, and all of these conditions lead to the diagnosis of Zosteriform Lichen Planus. Several possibilities have been described in the pathogenetic mechanism of the isotopic response, but the pathogenesis remains unclear. Interval between initial infection and the development of secondary disease varies from days to years. Many cases in the litterature were categorized as Zosteriform Lichen planus, although the histopathological feature were not typical as in our second patient's case. Our cases illustrate the value ot the dermoscopy tool, which can helps to avoid biopsy, and is also a promising option in the diagnosis and follow-up of inflammatory dermatoses.

## Management of psoriasis and hidradenitis suppurativa in the patient with therapy-resistant KID syndrome

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# **Introduction & Objectives:**

Keratitis ichthyosis deafness (KID) syndrome is a rare, genetic, multi-system disorder associated with mutations of the connexin 26 gene, resulting in keratitis, erythrokeratoderma, and neurosensory deafness. In addition to the characteristic clinical triad, affected individuals often suffer from chronic infections and have an increased risk of cutaneous tumors. There are just a few reports in the literature on the association of both psoriasis and hidradenitis suppurativa (HS) with KID syndrome.

The objective of this report is to present a rare case of the coexistence of psoriasis and HS within KID syndrome and a successful treatment with an IL-17 inhibitor, highlighting the therapeutic potential of this approach.

#### **Materials & Methods:**

A 28-year-old female patient presented with a worsening of erythematous hyperkeratotic skin lesions on soles and palms which are present from birth as part of the KID syndrome. In addition, a few months ago, typical psoriatic erythemato-squamous plaques appeared on the knees, elbows, thighs, pubic area, face, and in the nuchal region. The patient reported severe itching that disturbs her sleep and severe pain in her feet. In the scales of severity evaluation, a PASI of 15, BSA of 10%, and DLQI of 30 were obtained. As a part of the diagnosis of hidradenitis suppurativa, many livid-erythematous nodules and scars were present in the inguinal, pubic, and axillary regions. (Hurley 2). She also had atrophic acne scars on her face.

The patient was already treated with PUVA cream locally and with acitretin and isotretinoin systemically without any positive effect. A few years ago, the patient received treatment with adalimumab which was abolished due to ineffectiveness. Additionally, she underwent multiple surgical interventions with skin grafting in the axillary and genital regions. Given the resistance to several treatment methods, it was decided to start secukinumab according to the usual dosage regimen for psoriasis and with careful monitoring of possible side effects as part of the KID syndrome.

# **Results:**

After 4 months patient presented with the regression of verrucous changes on the soles and palms, while psoriasis lesions were only present on the scalp. Some cystic lesions and scarring changes were observed in the axillae and armpits, with the Hurley stage 1 and HiSCR of more than 50%. The patient reported a significant improvement in quality of life and was satisfied with the treatment outcome. Severity indexes improved, with scores of PASI=0,8, BSA =0,5%, and DLQI=0.

# **Conclusion:**

In conclusion, this case highlights the challenging management of psoriasis and hidradenitis suppurativa (HS) within the context of therapy-resistant KID syndrome. Secukinumab, an IL-17 inhibitor, demonstrated remarkable

efficacy in resolving not only the typical psoriatic and HS lesions but also the long-standing erythematous hyperkeratotic skin changes associated with KID syndrome. While secukinumab has been previously successful in treating psoriasis and HS, this case extends its therapeutic potential to include the complex cutaneous manifestations of KID syndrome, emphasizing its role as a promising therapeutic option in rare genetic disorders.

## Orofacial granulomatosis associated with periodontitis: a causal relationship?

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#### Introduction:

Orofacial granulomatosis (OFG) is a rare and chronic granulomatous inflammation, characterized by a recurrent or persistent swelling of the orofacial soft tissues.

Its etiology remains unclear and the pathogenesis is multifactorial involving genetics, immunology, allergy and infectious agents.

To our knowledge, the relationship between orofacial granulomatosis and gingival alteration have only been described in anecdotal cases in the literature. We report a rare case of association of orofacial granulomatosis and periodontitis.

# Case report:

A 21-year-old female patient, presented with a persistent swelling of the left cheek and lip, evolving progressively since the age of 12, with recurring and intermittent flare-ups between remissions.

She had a medical history of allergic rhinitis and urticarial skin rash, no history of gastrointestinal symptoms nor tuberculosis.

Clinically, there was an asymmetric painless swelling of the left cheek, perioral region and upper lip with redness and a high temperature of the skin. Cervical lymphadenopathy was found and no facial paralysis. Oral examination revealed a left mucosal hyperplasia and diffuse gingival inflammation.

Laboratory blood tests were within normal range, chest X-ray was normal and panoramic X-ray was suggestive of apical periodontitis. Facial MRI showed homogeneous hypertrophy of the left jugal subcutaneous fatty tissue, without circumscribed cystic or tissue lesions.

A biopsy from the hyperplasia of the left buccal mucosa was performed and histopathology confirmed the diagnosis of OFG with non-necrotizing granuloma.

Periodontal infection was treated with a combination of systemic antibiotics and oral hygiene with a reduction of orofacial enlargement. The patient received intralesional steroid injection and cyclins for persistent symptoms of the OFG with a good improvement at follow-up.

#### **Conclusion:**

Our case highlights a potential effect of periodontal infection in triggering OFG symptoms. Correlation with a systemic condition such as sarcoidosis, Crohn's disease or tuberculosis was excluded. However, our patient's atopic history is a possible underlying cofactor of the disease. Further studies and randomized controlled trials are needed to confirm the relationship between periodontitis and OFG, and to address the lack of standardized treatment protocol.

# Sweet syndrome: a 10-year retrospective study from a tertiary hospital in Portugal

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# **Introduction & Objectives:**

Sweet's syndrome, also known as acute febrile neutrophilic dermatosis, is a rare inflammatory disorder characterized by abrupt onset of fever, neutrophilic leukocytosis, and tender erythematous skin lesions. This retrospective study aims to provide an analysis of all cases of Sweet's syndrome diagnosed at our hospital over the past 10 years, shedding light on its clinical characteristics, associated conditions, and treatment outcomes. Classically, Sweet syndrome has three subcategories: classical Sweet syndrome (usually preceded by an infection (respiratory, gastrointestinal), associated with inflammatory conditions, related to pregnancy or idiopathic), malignancy-associated or drug-induced.

#### **Materials & Methods:**

A retrospective review of medical records identified 105 patients diagnosed with Sweet's syndrome between January 2014 and December 2023 at our institution. Sixty-five patients met the inclusion criteria, with confirmed diagnoses based on histopathological examination showing dense neutrophilic infiltrates without evidence of leukocytoclastic vasculitis. Forty cases were excluded due to failure to meet diagnostic criteria.

# **Results:**

The mean age at diagnosis was 53,9 years old, with a slight female predominance (60%). Fever (83.1%) and painful skin lesions (95.4%) were the most common presenting symptoms. Idiopathic Sweet syndrome cases amounted to 33,8% of all reported cases. 32.3% had a preceding infection (90.5% of these had a respiratory infection). Underlying systemic diseases were found to be the cause in 10.8% of cases: 85.7% of which corresponding to inflammatory bowel disease. Therefore, the classic Sweet syndrome subtype was found in 76,9% of all cases. We found no cases associated with pregnancy. We report a total of 10.8% cases of malignancy-associated Sweet syndrome: of which 71.4% were hematological malignancies. We also found 12.3% of cases to be drug-induced: the most common offender being filgastrim, followed by trimethoprim/sulfamethoxazole, bortezomib and beta-lactam antibiotics. Treatment with corticosteroids resulted in rapid and complete resolution of symptoms in 72.3% of cases. Recurrence occurred in 27.7% of patients, primarily in those with underlying systemic diseases or malignancies.

#### **Conclusion:**

This retrospective analysis highlights the clinical spectrum and management outcomes of Sweet's syndrome in a hospital setting. Recognizing its association with systemic diseases is crucial for timely diagnosis and appropriate management. Fortunately, this condition responds rapidly to systemic steroids, but often follow-up is mandatory to perform the necessary work-up to identify the underlying cause, which often requires multidisciplinary discussions. The lack of international guidelines often leads to unnecessary testing, thus suggesting that a future prospective study could be helpful to subgroup patients according to clinical history and to tailor testing and management thereafter, to improve outcomes and diagnostic accuracy.

## cyclines and intralesional corticosteroids in the management of meisher's cheilitis: case report

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<sup>1</sup>CHU mohammed VI, marrakech, dermatology and venereology

# **Introduction & Objectives:**

Orofacial granulomatosis (OFG) is an uncommon chronic granulomatous condition with a multifactorial etiology and pathogenesis. Genetic, immunologic, allergic, and infectious mechanisms have been implicated. It is clinically characterized by recurrent or persistent orofacial swelling. OFG encompasses a spectrum of known granulomatous diseases, including localized lip swelling known as Miescher cheilitis, as well as more extensive inflammation known as Melkersson-Rosenthal syndrome.

#### **Materials & Methods:**

We present the case of a 33-year-old female patient referred for persistent upper lip swelling for 3 months. The patient was asymptomatic in terms of digestive and pulmonary symptoms. Clinical examination revealed homogeneous and grossly symmetrical lip edema, angular cheilitis, and a supra-labial eczematous plaque. Additionally, there were no findings of macroglossia, folded tongue, facial paralysis, or oral aphthosis. Biopsy of the macrocheilitis revealed epithelioid granulomatous inflammation with confluent microgranulomas without caseous necrosis. Screening for other orofacial granulomas is important. Crohn's disease and tuberculosis were ruled out due to lack of symptomatology, sarcoidosis due to negative serum angiotensin-converting enzyme level test and normal chest x-ray findings, and foreign-body reaction due to lack of history of injuries. Therefore, the diagnosis of Miescher's cheilitis was adopted. Our patient received 5 injections of intralesional corticosteroids at 4-week intervals each. A course of cyclines was associated since the second month of treatment to prevent light recurrences since the swelling was refractory 3 weeks after each injection. Remission was complete and persistent through 1 year of subsequent follow-up.

## **Results:**

The diagnostic challenge lies in the fact that Miescher's cheilitis may be an oral manifestation of a systemic disease such as sarcoidosis, Crohn's disease, and more rarely, Wegener's disease or tuberculosis. Due to a lack of knowledge about the etiology, various treatments have been proposed, including clofazine, monoclonal antibodies, intraosseous corticosteroids, and intralesional corticosteroid injections, which proved effective in our case. Aesthetic plastic surgery may be considered in case of treatment failure or after-effects.

## **Conclusion:**

Miescher's cheilitis represents a monosymptomatic form of Melkersson-Rosenthal syndrome. It can lead to functional and aesthetic discomfort for the patient. Conservative treatments should be considered as the first line of therapy.

## Increased levels of calcitonin gene-related peptide in plasma of individuals with rosacea

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# **Introduction & Objectives:**

Rosacea is a common, chronic skin disease affecting primarily the facial skin. The pathophysiology involves both the innate and adaptive immune system but is yet to be fully uncovered. Rosacea has been connected with the neurological disease migraine, and a pathophysiological link has been suggested. Increased levels of the neuropeptide calcitonin gene-related peptide (CGRP) have been found in plasma of individuals with migraine and skin biopsies in individuals with rosacea. However, levels of CGRP in blood has never been investigated in individuals with rosacea. Our aim was to investigate whether levels of CGRP in plasma were increased in individuals with rosacea.

#### **Materials & Methods:**

This was a cross-sectional case-control study set in Copenhagen, Denmark. Blood samples from the antecubital vein were collected from individuals with rosacea and healthy controls to measure plasma levels of calcitonin gene-related peptide.

## **Results:**

A total of 123 individuals with rosacea and 86 controls were enrolled. Individuals with rosacea had a mean age (SD) of 47.1 years (13.4 years) and healthy controls were 35.2 years (11.5 years). Median (IQR) disease duration for rosacea was 10 years (5 – 14 years) and the distribution between rosacea subtypes was: 73% with erythematotelangiectatic rosacea; 50% with ocular rosacea (overlapping with other subtypes); 23% with papulopustular rosacea, and 4% with phymatous rosacea. Of the participants included, 25% reported to currently use topical rosacea treatment and 3% reported to use systemic rosacea treatment. Plasma levels of CGRP were significantly elevated in those with rosacea (mean = 136.3 pmol/L, 95% confidence interval = 130.5 – 142.1 pmol/L), compared with controls (mean =110.77 pmol/L, 95% confidence interval = 96.81 – 124.72 pmol/L, p = 0.0084) when adjusting for age and sex. CGRP plasma levels were not affected by age, sex, rosacea sub- or phenotype, concomitant diseases, or current topical or systemic treatment.

#### **Conclusion:**

Plasma levels of CGRP were significantly elevated in individuals with rosacea compared with healthy controls. Our data suggest that CGRP may play a role in the pathophysiology of rosacea, possibly implicating CGRP signaling as a possible future target in individuals with rosacea.

## Fermentation-derived 2'-Fucosyllactose: A Multifaceted Solution for Inflammatory Skin Conditions

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## **Introduction & Objectives:**

Previous clinical studies have shown that infant formulas containing human milk oligosaccharides can help support immune function. Our study highlights the exceptional potential of one of the most abundant oligosaccharides in human milk, 2'-Fucosyllactose (2'-FL), as a versatile solution for managing inflammatory skin conditions. Inflammatory skin diseases, such as psoriasis, atopic dermatitis (AD), irritant contact dermatitis (ICD), and rosacea, are critical in dermatology due to their widespread prevalence and impact on patient well-being. Our research encompasses *in vitro* and *ex vivo* studies where we evaluated the anti-inflammatory properties of 2'-FL, its ability to reduce keratinocyte proliferation, and skin barrier restoration capabilities, among other attributes.

#### **Materials & Methods:**

To evaluate the potential of fermented-derived 2'-FL to improve the profile of inflammatory skin conditions, we utilized in-house developed *ex vivo* skin models of psoriasis, ICD, AD, and rosacea. We have assessed the therapeutic effectiveness of 2'-FL on different inflammatory skin models by analyzing specific markers of inflammation, keratinocyte proliferation, and epidermal homeostasis using immunohistochemistry and gene expression analysis.

# **Results:**

In a psoriasis model, 2'-FL has been found to be an effective treatment as it significantly reduces key proinflammatory cytokines. Additionally, markers of proliferation such as K16, K17, and psoriasin were notably reduced, similar to betamethasone, which is a widely used anti-inflammatory agent. In *ex vivo* models of ICD and AD, 2'-FL has shown promise by reducing pro-inflammatory cytokines and promoting skin barrier restoration. This comprehensive approach involves enhancing filaggrin and involucrin expression while reducing thymic stromal lymphopoietin, addressing both inflammation and skin barrier function, which are crucial aspects in managing dermatological conditions. Furthermore, in a rosacea model utilizing stromal vascular fraction derived from adipose tissue, 2'-FL displayed its potential by inhibiting the formation of new blood vessels, a pivotal factor in rosacea pathogenesis.

#### **Conclusion:**

Our findings underscore 2'-FL's versatility and efficacy as a potential treatment for various inflammatory skin conditions. It has multibenefits, including reducing inflammation, hyperproliferation, skin barrier function, and angiogenesis. This innovative molecule holds great potential to revolutionize the field of dermatology and skincare.

## A Rare Case of Prurigo Pigmentosa in North Afric

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# **Introduction & Objectives:**

Prurigo Pigmentosa is a rare pruritic inflammatory skin condition of unknown etiology, presenting as a pruritic papulovesicular or erythematous eruption on the trunk, which leaves a reticulated pigmentation and evolves chronically with episodes of exacerbation and remission. Prurigo pigmentosa is mainly described in Asia, and mostly affects women aged 20-30 years. We report a case of prurigo pigmentosa in a young Algerian man

#### **Materials & Methods:**

Case- A 28-year-old patient, with no significant medical history, reported the appearance of papulovesicular lesions on the trunk for the past 4 years, preceded by intense pruritus for a few days, with regression in about ten days, leaving residual reticulated hyperpigmentation. These lesions evolved in episodes of exacerbation and remission, with periods of remission lasting a few weeks. Over time, the patient reported an extension of the lesions to the thighs and buttock.

The results of the digestive exploration, including esophagogastroduodenal fibroscopy and measurement of antiendomysial antibodies, were normal. In addition, direct immunofluorescence tests on the skin biopsy and the search for anti-basement membrane and anti-interkeratinocyte antibodies were negative.

The histological examination described, in a papulovesicular lesion, a spongiotic epidermis overlaid with a wet parakeratosis containing serosity. In the dermis, there was a polymorphous perivascular and interstitial inflammatory infiltrate composed of lymphocytes and polymorphonuclear cells. For hyperpigmented lesions, the pathological examination revealed post-inflammatory pigmentary incontinence.

The patient received a treatment based on doxycycline at a dose of 200 mg per day for a period of one month, followed by a dose of 100 mg per day for a duration of two months.

## **Results:**

The lesions were progressing very well under treatment, with a decrease in the frequency of flare-ups. The diagnosis of dermatitis herpetiformis was considered unlikely. The diagnosis of prurigo pigmentosa was retained based on anatomoclinical data and the evolution of the lesions.

#### **Conclusion:**

Prurigo pigmentosa is a rare condition whose mechanism remains unknown, but several theories involve neutrophilic infiltration. It is characterized by progression in three phases: an initial phase with the appearance of urticarial plaques, followed by the formation of vesicular and papular lesions, and then a late phase with pigmented macules arranged linearly. Treatment mainly relies on cyclines. Although few cases are reported outside of Asia, characteristic anatomoclinical and evolutionary aspects allow for a quick diagnosis. Our patient is one of the few cases reported in Africa. Dermatologists should be aware of this pathology due to its clinical uniqueness.

# Exploring Fermentation-derived Cannabigerol (CBG) for skin health – a promising avenue for inflammatory skin conditions

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# **Introduction & Objectives:**

Inflammatory skin conditions can significantly impact one's quality of life. While corticosteroids are typically used to alleviate symptoms, these medications may lose effectiveness over time and come with a range of side effects. Cannabigerol (CBG) is a cannabinoid found in the *Cannabis sativa* L. plant that has been reported to have antimicrobial, anti-inflammatory, and analgesic properties. Unlike THC, CBG does not have any psychoactive effects. However, CBG has only recently gained attention due to its limited availability. Given its potential benefits in improving quality of life, we have explored fermentation-derived CBG as a bioactive ingredient to improve skin health in various inflammatory skin models that simulate conditions such as psoriasis, atopic dermatitis, irritant contact dermatitis, and rosacea.

## **Materials & Methods:**

To determine whether CBG can improve inflammatory skin conditions such as psoriasis, irritant contact dermatitis (ICD), atopic dermatitis (AD), and rosacea, we developed, optimized, and validated *ex vivo* skin models for these conditions, as well as validated psoriasis *in vivo*. To compare the inflammatory and healthy models, we used immunohistochemistry for specific proteins and markers of inflammation and assessed keratinocyte proliferation. We assayed CBG at 0.5% (w/v) in a squalane and sunflower oil formulation for its therapeutic potential and assessed gene expression profiles.

#### **Results:**

In the psoriatic model, fermentation-derived CBG significantly reduced inflammation and hyperproliferation of keratinocytes, two major characteristics of this skin condition. Unlike betamethasone, CBG did not cause hypertrichosis, a common side effect. Moreover, in an *in vivo* study, CBG significantly reduced psoriasis plaques. Additionally, CBG in the ICD and AD models restored the epidermal barrier and decreased inflammatory markers. Finally, CBG was found to reduce the development of new blood vessels in the rosacea model.

## **Conclusion:**

CBG is a promising option for promoting skin health, given its ability to reduce inflammation. These findings are significant in the field of dermatology and offer a potential new avenue for topical treatments of skin disorders.

Efficacy and safety of ruxolitinib cream in patients with cutaneous lichen planus: Results from a phase 2, randomized, vehicle-controlled study

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# **Introduction & Objectives:**

Lichen planus (LP) is a chronic, highly pruritic, immune-mediated inflammatory disease that affects the skin and other tissues. LP pathogenesis involves increased susceptibility of keratinocytes to CD8+ T-cell autoimmune cytotoxicity in a process mediated by interferon-γ and Janus kinases (JAKs). Ruxolitinib (RUX) cream is a JAK1/JAK2 inhibitor designed for topical administration. Proof of concept in LP was previously demonstrated in a single-arm, open-label trial of 12 patients with cutaneous LP. Here, we report results from a phase 2, randomized, double-blind, vehicle-controlled (DBVC) study of RUX cream in patients with cutaneous LP.

#### **Materials & Methods:**

This study (NCT05593432) included adults (aged ≥18 y) with predominantly cutaneous LP, an Investigator's Global Assessment (IGA) score of 3 or 4, Itch Numerical Rating Scale (NRS) score ≥4, and an affected body surface area ≤20%. Patients were randomized 1:1 to apply 1.5% RUX cream or vehicle twice daily (BID) for 16 weeks in the DBVC period. Subsequently, eligible patients applied RUX cream BID as needed (ie, symptomatic lesions) in a 16-week open-label extension (OLE). The primary endpoint was IGA treatment success at Week 16 (IGA-TS; IGA 0 or 1 [clear/almost clear lesions] with a ≥2-grade improvement from baseline). Secondary endpoints included IGA-TS, ≥4-point improvement in Itch NRS from baseline (Itch NRS4), Skin Pain NRS change from baseline (CFB), and safety over time. Patients with missing data were imputed as nonresponders for IGA-TS and Itch NRS4 during the DBVC period. Statistical significance for IGA-TS was assessed using a Cochran-Mantel-Haenszel test. Time to Itch NRS4 was assessed using a Cox regression model. Other endpoints were reported as observed.

#### **Results:**

Patients (N=64) had a median (range) age of 57 (18–78) years, 71.9% were female, and 62.5% were White. Baseline mean (SD) Itch and Skin Pain NRS scores were 6.5 (1.6) and 4.7 (2.5), respectively; 93.8% of patients had an IGA of 3, the median (range) disease duration was 4.9 (0.1–41.9) years, and 90.6% of patients received prior treatment for LP. At Week 16, significantly more patients who applied 1.5% RUX cream vs vehicle achieved IGA-TS (50.0% vs 21.9%, respectively [P=0.0129]), and more patients achieved Itch NRS4 (48.4% vs 16.1% [P=0.0044]). Itch NRS4 was achieved earlier (median, 17 vs 97 days [P=0.0008]), and a greater reduction in Skin Pain NRS was observed with RUX cream vs vehicle (mean CFB, -3.02 vs -1.25). During the OLE period, patients who crossed over from vehicle to as-needed RUX cream showed improvements in all endpoints and, by Week 32, had comparable results to patients initially randomized to RUX cream (IGA-TS, 60.9% vs 60.0%; Itch NRS4, 73.3% vs 84.2%; and Skin Pain NRS CFB, -3.51 vs -4.25). RUX cream was generally well tolerated, with no serious treatment-emergent adverse events (TEAEs) or TEAEs leading to discontinuation.

# **Conclusion:**

In this first randomized DBVC trial of a topical JAK inhibitor in cutaneous LP, significantly more patients who applied 1.5% RUX cream BID achieved treatment success in IGA vs vehicle. In addition, patients applying 1.5% RUX

cream had higher rates of responses in symptom relief (ie, itch and pain) vs vehicle. Clinical responses continued or further increased with as-needed use in the OLE. RUX cream represents a promising potential treatment for cutaneous LP.

# Ruxolitinib cream for mild-to-moderate hidradenitis suppurativa: 32-week data from a randomized phase 2 study

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# **Introduction & Objectives:**

Hidradenitis suppurativa (HS) is a chronic, progressive, debilitating, inflammatory skin condition associated with painful inflammatory nodules and abscesses. There are no approved therapies for milder HS; topical treatments include antibiotics and/or corticosteroids but often do not provide adequate responses. Dysregulation of Janus kinase (JAK)-dependent signaling pathways is implicated in HS. Ruxolitinib is a selective inhibitor of JAK1 and JAK2. In a phase 2 study in patients with mild-to-moderate HS, twice-daily (BID) continuous 1.5% ruxolitinib cream demonstrated significant efficacy vs vehicle in the primary endpoint (mean change from baseline [CFB] in abscess and inflammatory nodule [AN] count) at Week 16 of the double-blind, vehicle-controlled period and was well tolerated. The objective of this analysis was to assess efficacy and safety of 1.5% ruxolitinib cream BID applied as needed through Week 32 (open-label extension [OLE] period) of the phase 2 study (NCT05635838).

#### **Materials & Methods:**

Adults (N=69) with Hurley stage I/II HS, no draining tunnels, and a total AN count of 3–10 (mean [SD], 5.4 [1.8]) were equally randomized to 1.5% ruxolitinib cream or vehicle for a 16-week continuous BID treatment, after which all patients applied ruxolitinib cream BID as needed (AN count  $\geq$ 1 and/or Skin Pain Numerical Rating Scale score  $\geq$ 1) during a 16-week OLE. Efficacy was assessed by the mean CFB in AN count; the proportion of patients who achieved  $\geq$ 50%,  $\geq$ 75%,  $\geq$ 90%, and 100% reductions in AN count from baseline (AN50, AN75, AN90, and AN100, respectively); the proportion of patients who achieved HS Clinical Response (HiSCR50,  $\geq$ 50% AN count reduction with no increase in abscess or draining fistula count); and mean CFB in the International HS Severity Score System (IHS4). Data are reported as observed.

#### **Results:**

Among patients initially randomized to ruxolitinib cream, clinical responses at Week 16 were sustained through Week 32 (AN count mean CFB, −4.04 to −3.95; AN50, 79.2% to 81.0%; AN75, 54.2% to 66.7%; AN90 and AN100, both 20.8% to 19.0%; HiSCR50, 79.2% to 81.0%; and IHS4 mean CFB, −4.46 to −4.10). Patients who switched from vehicle to ruxolitinib cream at Week 16 (beginning of the OLE period) demonstrated clinical improvement at Week 32 (AN count mean CFB, −2.38 to −3.96; AN50, 56.3% to 88.5%; AN75, 25.0% to 61.5%; AN90 and AN100, both 12.5% to 38.5%; HiSCR50, 50% to 88.5%; and IHS4 mean CFB, −2.66 to −4.50). Overall, ruxolitinib cream was generally well tolerated, with low incidences of serious treatment-emergent adverse events (TEAEs), grade ≥3 TEAEs, and TEAEs leading to discontinuation.

#### **Conclusion:**

Application of 1.5% ruxolitinib cream on an as-needed basis through Week 32 of the OLE study period resulted in sustained or improved clinical signs of HS and was generally well tolerated. Ruxolitinib cream may be a novel approach to address an unmet medical need in the treatment of milder HS, for which there are currently no approved treatments. Confirmation of these findings in larger randomized placebo-controlled trials is warranted.