

**Abstract N°: 53****toxic epidermal necrolysis in a seropositive status**

Kiran Vasant Godse¹

¹D Y PATIL HOSPITAL, DERMATOLOGY, NAVI MUMBAI, India

Introduction & Objectives:

TEN is a life threatening, usually drug induced mucocutaneous reaction that is characterized by flaccid bullae and cutaneous and mucosal epithelial denudation. It is a systemic disease involving other systems in addition to the skin.

Incidence of TEN is 0.4 to 1.2/million, TEN plus HIV infection- 1000-fold increase.

Materials & Methods:

A 37-year old male presented with painful red lesions all over the body for 3 days and rapidly spread to involve the entire body (including mucosa, palms and soles), f/b spontaneous blistering associated with difficulty in opening mouth and swallowing food and burning micturition. Multiple, well-defined flaccid bullae all over the body with crusting lesions on mucosa along with scrotal edema.

Patient has a positive pseudo-nikolsky sign

Non pitting B/L pedal edema.

Clinical diagnosis of toxic epidermal necrolysis (TEN) and Histopathology findings were consistent with TEN

His SCORTEN was 1 on admission and on day 10 of admission progressed to 3.

His HIV-ELISA was reactive with an Absolute CD4 count of 348, Blood culture positive for Staphylococcus haemolyticus (MR CONS) and a high Serum. Creatinine (and diagnosis of AKI acute kidney injury was established)

Results: Initially patient was given high dose steroid and high dose antibiotic coverage, however lesions progressed.

Patient was given oral cyclosporine, was tolerated well new lesions stopped developing in 10 days and old lesions healed with hyperpigmentation but without scarring.

For duration of hospitalization ART was withheld and eventually started towards the end.

Conclusion:

Cyclosporine works well in sero positive patient with TEN.



**Abstract N°: 108****Methotrexate-associated Erectile Dysfunction**Saif Al Hamrashdi*¹, Raqiya Mohamed Amur Al Rajaibi¹Muscat, dermatology, Muscat, Oman**Introduction & Objectives:**

Methotrexate (MTX) causing sexual dysfunction (SD) have been rarely reported in the literature. Here we report a case of vitiligo who started to have erectile dysfunction after 4 weeks of initiation of MTX.** MTX is widely used in different dermatological diseases. There are many known side effects of MTX, but some are rarely reported like SD. SD is under recognised side effects of MTX by both patients and physicians due to feeling embarrassed to report and decrease awareness respectively.

Materials & Methods:

A 26-years-old male, unmarried, known case of acrofacial vitiligo for 6 years, on topicals but poorly controlled. He can't attend phototherapy due to his work circumstances. He was recently started on Methotrexate (MTX) with a test dose of 7.5 mg for 2 weeks then increased to 10 mg for 4 weeks. He developed erectile dysfunction after 4 weeks of increasing the dose. Patient reported this only 3 weeks after onset because he was reluctant to say thinking it is unrelated to MTX.

Results:

Patient reported erectile dysfunction after the 4th dose of (10 mg for 4 weeks) , in contrast Methotrexate was therefore stopped and his erectile dysfunction significantly improved after 2 weeks.

Conclusion:

Literature review showed total of 10 dermatological cases associated with SD secondary to low dose MTX. Duration of onset of SD ranged between 2 weeks to 2 years. All cases reported resolution of SD within 2–4 weeks after discontinuation of MTX.

This case report aims to increase awareness of treating physicians regarding importance of discussing such rare side effect of MTX with male patients before initiating treatment.



**Abstract N°: 150****Skin Toxicities with Cyclin-Dependent Kinase 4/6 Inhibitors in Breast Cancer: A Comprehensive Review**

Amjad Alghamdi¹, Amal Alomari¹, Amal Abualola¹, Abdulaziz Aljuaid¹, Lugean Alomari¹, Esraa Shaheen¹, Ahmed Baabdullah², Abdulhadi Jfri¹

¹King Saud bin Abdulaziz University for Health Sciences (KSAU-HS), Jeddah, Saudi Arabia, ²King Abdulaziz University, Department of Dermatology, Jeddah, Saudi Arabia

Skin Toxicities with Cyclin-Dependent Kinase 4/6 Inhibitors in Breast Cancer: A Comprehensive Review**Abstract:**

Cyclin-dependent kinase (CDK)-4/6 inhibitors (palbociclib, ribociclib, and abemaciclib) are relatively new therapeutic agents that first obtained regulatory approval for hormone receptor 1-positive and human epidermal growth factor receptor 2-negative advanced breast cancer patients who have progressed or relapsed on standard endocrine therapy. (CDK)-4/6 inhibitors have been shown to increase progression-free survival when used in combination with endocrine therapy following disease progression over endocrine therapy alone, with an overall good toxicity profile. However, their administration has been accompanied by variable adverse events, a significant proportion of which are cutaneous reactions. Alopecia and rash were the most frequently reported cutaneous adverse events. Nevertheless, other rare cutaneous adverse events occurred including vitiligo-like lesions, cutaneous lupus erythematosus, bullous skin rash, Stevens–Johnson syndrome, toxic epidermal necrolysis, radiation recall dermatitis and radiation dermatitis, Henoch–Schonlein purpura, cutaneous leukocytoclastic vasculitis, histiocytoid Sweet’s syndrome, and erythema dyschromicum perstans. We aimed to provide a comprehensive review regarding these cutaneous adverse events, including their occurrence as a result of administering CDK4/6 inhibitors and their recommended management.



**Abstract N°: 176****atypical presentation of symmetrical drug related intertriginous and flexural exanthem: a case series**Anisha Biswal¹¹ims and sum hospital, dermatology venerology and leprosy, bhubaneswar, India**Introduction & Objectives:**

Symmetrical Drug-Related Intertriginous and Flexural Exanthema (SDRIFE) is a well-documented T-cell-mediated drug reaction characterized by symmetrical erythema affecting the gluteal and intertriginous regions without systemic involvement. We present a case series of atypical morphological variant of SDRIFE in the form of bullous and pustular eruptions, which has been rarely reported in literature.

Materials & Methods:**Patient 1:**

A 41-year-old female, developed fluid-filled bullae and intense erythema over bilateral axillary, inguinal, and cubital regions shortly after taking azithromycin and amoxicillin for fever. The onset of symptoms was rapid, occurring within 8-9 hours of intake of drug. Laboratory investigations ruled out systemic involvement, and a 5-day course of low-dose oral steroids resulted in resolution of bullae and lessional erythema.

Patient 2:

A 35 year old male took fluconazole for fungal infection. He noted painful erythema around bilateral axillary folds, medial thighs and inguinal folds the following morning, with formation of pustules over intertriginous folds that night. All lab investigations were within normal limits. Biopsy revealed subepidermal blister, focal basal vacuolar changes, rare apoptotic keratinocytes, dermal edema and superficial perivascular infiltrate comprising neutrophils and eosinophils, and subcorneal pustules. He was prescribed oral steroids for 3 days after which lesions subsided. In a span of 1 week the lesions healed with desquamation.

Results:

Patient 1: 5-day course of low-dose oral steroids resulted in resolution of bullae and lessional erythema.

Patient 2: He was prescribed oral steroids for 3 days after which lesions subsided. In a span of 1 week the lesions healed with desquamation

Conclusion:

This case series highlights the atypical presentation of bullous and pustular SDRIFE, an infrequently reported manifestation. These cases emphasize the importance of considering SDRIFE as a potential diagnosis when encountering such unusual skin reactions in the flexural aspect following drug exposure. Early recognition and appropriate management, can lead to a favorable outcome.





Abstract N°: 694

Keratosis pilaris-like reaction associated with chromatin remodeling complex inhibition in uveal melanoma: a case series

Riyad Seervai*¹, Madison Taylor², Ziba Rahbar², Sapna Pate², Kelly Nelson², Victor Prieto², Jonathan Curry²

¹Oregon Health & Science University, Portland, United States, ²MD Anderson Cancer Center, Houston, United States

Introduction & Objectives:

Uveal melanoma is a rare and aggressive intraocular malignancy with a propensity for fatal liver metastasis. Activity of the BRG/Brahma-associated factor (BAF) chromatin remodeling complex is essential for uveal melanoma cell proliferation. FHD-286 is a highly potent and small-molecule inhibitor of the BAF complex with selective allosteric binding to Brahma-related gene 1 (BRG1) and Brahma (BRM). Here, we describe the first cutaneous toxicities to FHD-286 in patients with treatment-refractory metastatic uveal melanoma.

Materials & Methods:

Description of three clinical cases and review of the literature.

Results:

Three adult patients with metastatic uveal melanoma presented with a follicular-based papular eruption clinically resembling keratosis pilaris (KP) within 2 weeks of initiating treatment with FHD-286. The rash was present on the trunk in all patients, the lower extremities in two patients, and the upper extremities in two patients. It was associated with pruritis in two patients, and one patient experienced scabbing on the hands and face. All patients saw improvement or resolution when holding the treatment and recurrence when FHD-286 resumed. One patient improved with topical corticosteroid therapy and regular moisturizer; the other two patients received supportive measures only. Other common mucocutaneous manifestations included dysesthesias, dysgeusia, and xerostomia with and without tongue fissures. Examination of multiple step sections a cutaneous punch biopsy demonstrated KP-like features with lymphocytic folliculitis and follicular dyskeratosis, focal areas of hyperparakeratosis, and plugging of the follicle.

Conclusion:

This case series presents a constellation of novel adverse reactions in patients receiving treatment targeting activity of the BAF chromatin remodeling complex. There were no other significant cutaneous reactions noted in the nine other patients enrolled in the trial. The rash was follicular based and exhibited some clinical features of KP eruptions seen with BRAF inhibitors (up to 40%) and combination BRAF/MEK inhibition (3-10%). Histopathology showed features of a lymphocytic folliculitis with associated abnormal keratinization but lacked the prominent hyperkeratosis typically observed in KP lesions.

BAF inhibition has been posited to work through transcriptional reprogramming in uveal melanoma cells. Here, epigenetic perturbations via early inactivation of BAP1 followed by later mutations in BAF complex genes PBRM1 and BRD9 and other components of the chromatin remodeling machinery are likely involved in tumor evolution and progression. In epidermal cells, the BAF complex and the transcription factor p63, a master regulator of epidermal development, mutually recruit each other to maintain lineage-specific open chromatin regions. It is thus possible that disruption of this interaction and the resulting epigenetic dysregulation leads to the KP-like changes

and other cutaneous reactions seen in our patients.

FHD-286 is not being pursued further as monotherapy for uveal melanoma but is in clinical trials with decitabine or cytarabine in patients with relapsed/refractory AML. The incidence of associated toxicities with BAF inhibition thus remains unknown. A deeper understanding of the associated skin-directed adverse event profile is needed for their early recognition and treatment to reduce morbidity and minimize interruptions in these life-saving treatments.

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**Abstract N°: 967****Methotrexate: side effect serious following an error dosage: need for information and cooperation between the doctor and the patient**Omar Boudghene Stambouli¹¹Dermatology and Venereology Medical Office Tlemcen, Dermatology and Venereology Medical Office Tlemcen, Tlemcen, Algeria**Introduction & Objectives:**

Methotrexate is used at low doses in dermatology for the treatment of psoriasis. We report an observation of a dosage error in methotrexate administered orally in the treatment of psoriasis and leading to relatively serious side effects.

A case of a man with psoriasis treated with methotrexate aged 26 years with a history of psoriasis referred for skin ulcerations and mucous membranes appeared following a methotrexate dosage error 20mg dose per week but the patient who did not receive sufficient information took 20mg of methotrexate as a daily dose. After a total dose of 60mg appeared erosive lesions of the skin and mucous membranes oral, genital and anal. The ophthalmological examination revealed macular dystrophy. Biological tests revealed thrombocytopenia, leukopenia and a syndrome inflammatory. Crystals were found during macroscopic examination and microscopic urine.

Materials & Methods:

The diagnosis of a methotrexate overdose following a dosage error was withheld and this medication was immediately discontinued. Overhydration alkaline was started with local care for skin and mucous membrane lesions. The evolution was favorable after a few days.

Results:

patient who experienced relatively serious adverse effects following a methotrexate overdose caused by a dosage error. The main manifestations found in our patient were: renal damage with formation of crystals visible macroscopically, hematological damage, skin and mucous membrane ulcerations with oral, genital, duodenal, anal involvement and finally a maculopathy whose attributability to methotrexate could not be confirmed. To avoid the recurrence of this type of error with methotrexate orally, preventive measures are proposed internationally.

Conclusion:

Methotrexate is a widely used therapeutic drug. dermatological information to the patient as well as good doctor cooperation patient constitute an important step in their prescription thus allowing to avoid serious or even fatal accidents.



**Abstract N°: 968****TAHOR-induced dermatomyositis (Atorvastatin) prescribed for hyper cholesterolemia: an observation exceptional**

Omar Boudghene Stambouli¹

¹Dermatology and Venereology Medical Office Tlemcen, Dermatology and Venereology Medical Office Tlemcen, Tlemcen, Algeria

Introduction & Objectives:

Iatrogenic dermatomyositis (DM) is exceptionally described. Statins represent the most incriminated drug class.

Materials & Methods:

We report an observation of dermatomyositis occurring after the introduction atorvastatin (TAHOR).

Results:

62-year-old patient with type II diabetes on metformin 1,000 mg/day and gliclazide 160 mg/day, hypertensive on irbesartan 150 mg/day. She was referred to us for a cutaneous-muscular syndrome that appeared two months ago. after the introduction of atorvastatin Tahor R 10 mg/d for hyper

Skin examination revealed heliotropic edematous erythema, extending to the cheeks, and neckline, with signs of Gottron and positive manicure. The musculoskeletal examination revealed muscular weakness, with bilateral deficit and symmetrical predominant at the level of both shoulder and pelvic girdles. Muscle enzymes (CPK, CPKmb, aldolase) were increased. the EMG found a myogenic pattern. the diagnosis of dermatomyositis was made, induced, the assessment for neoplasia or an associated autoimmune disease was negative, atorvastatin was promptly discontinued. The clinical picture presented by the patient regressed after a few weeks after stopping the statin. A recurrence was observed eight months later, upon reintroduction of the statin.

Conclusion:

Our observation encourages vigilance in the face of any MD so as not to misunderstand a medicinal origin; and the discussion of the indications for treatment with statins in any patient with an immunological history



**Abstract N°: 1020****Carbozantinib-Induced Scrotal Erythema**Wei Qiang Chng^{*1}, Oh Choon Chiat Oh²¹Tan Tock Seng Hospital, Dermatology, Singapore, Singapore, ²Singapore General Hospital, Dermatology, Singapore, Singapore**Introduction & Objectives**

Targeted therapy drugs can cause cutaneous adverse effects. The effects caused by tyrosine kinase inhibitors can be specific in their clinical manifestations. Scrotal erythema is an uncommon but unique cutaneous reaction consisting of well-circumscribed pruritic erythematous plaques, generally located in the scrotal area. In this report, we describe a gentleman who developed scrotal erythema with Carbozantinib.

Materials & Methods

The drug exerts a powerful inhibitory effect on vascular endothelial growth factor receptors (VEGFRs), platelet-derived growth factor receptors, and the stem cell factor receptor c-KIT. A range of cutaneous adverse effects have been described for pazopanib, including hair depigmentation, alopecia, and nonspecific rashes. A 68-year-old man presented to the dermatology clinic with a 3-day history of scrotal pain and swelling. These had occurred a few weeks following the administration of Carbozantinib, a tyrosine kinase inhibitor used to treat his newly diagnosed metastatic clear cell renal cell carcinoma. On examination, his scrotal skin was strikingly erythematous and tender, and spared the rest of his genitalia. Scrotal erythema secondary to the use of Carbozantinib, a rarely reported phenomenon in the literature, was suspected and it was stopped on admission.

Results

Histopathological studies are often non-specific, and in his case, demonstrated acanthosis and parakeratosis with increased dermal eosinophils. Based on the clinical and histologic findings and the improvement observed following withdrawal of Carbozantinib, the diagnosis was Carbozantinib-induced toxic drug eruption. It is postulated that VEGF-induced neo-vascularisation and increased vascular permeability and hypoxia-inducible factor 1a plays a role in its pathogenesis. A range of conditions, in particular irritant or allergic contact dermatitis, psoriasis and extramammary Paget's disease need to be considered in the differential.

Conclusion

The diagnosis of scrotal erythema is essentially clinical, and it is important to be familiar with this entity to ensure correct diagnosis and appropriate treatment. Proposed treatments include physical measures to reduce skin friction and pressure, barrier creams and ointments, and as a last alternative, dose reduction. If all else fails, treatment interruption may be required.





Abstract N°: 1122

Challenging Features of Toxic Erythema of Chemotherapy in a Patient with EMZL Lymphoma and HIV-1: Case Report

Karent Isela Méndez Verdejo¹, Luis Daniel López Varela¹, Alejandro García Vargas², Abisai Suárez Martínez¹

¹Hospital Specialties Issste, Internal Medicine, Veracruz, Mexico, ²Hospital Specialties Issste, Dermatology, Veracruz, Mexico

Introduction & Objectives:

Toxic erythema of chemotherapy (TEC) is an umbrella term coined in 2008 by Bologna et al. that encompasses a group of overlapping dermatological toxicities, exhibiting similar features: dysesthesia prodromes followed by severe erythema and often oedema. These include hand-foot syndrome, palmoplantar erythrodysesthesia, toxic acral erythema, and Burgdorf's reaction.

Commonly affects the hands and feet, but less frequently the intertriginous zones, knees, elbows, and ears. TEC is associated with many cytotoxic chemotherapies: capecitabine (50%–60%), docetaxel (6%–58%), pegylated liposomal doxorubicin (40%–50%), 5-fluorouracil (6%–34%), and cytarabine (14%–33%).

The clinical presentation of TEC guides the diagnosis. While histopathologic findings lack specificity, they often mimic toxic dermatitis. Onset is typically within 2 to 21 days following the administration of chemotherapeutic agents, but it may appear 10 months later.

Materials & Methods:

We present the case of a 50-year-old man with HIV-1 and extranodal marginal zone B-cell lymphomas (EMZL), who experienced dermatological reactions related to chemotherapy. Using the search terms “toxic erythema of chemotherapy” and “hand-foot syndrome,” we conducted a bibliographic review in PubMed database, yielding 420 findings and including 15 publications.

Results:

A 50-year-old man with a medical record of HIV-1 detected 20 years ago, treated with Bictegravir, Emtricitabine, and Tenofovir Alafenamide; viral load <50 copies/mL and a CD4+ T-cell count of 206/mm³; and EMZL lymphoma of the parotid gland detected 3 months ago, undergoing chemotherapy in his fourth cycle with cyclophosphamide, doxorubicin, vincristine, prednisone, and rituximab (R-CHOP).

He began experiencing erythema and pain in his feet and hands two weeks after his previous chemotherapy treatment. This is impacting daily activities such as writing and object manipulation.

During his current hospitalisation, he presents with severe erythema, desquamation, and dysesthesia on his hands and feet. A physical exam showed palmar erythema, as well as violaceous erythema plaques with desquamation on the soles and medial aspects of the feet, accompanied by onycholysis. Laboratory tests were unremarkable. Histological examination revealed hyperkeratotic epidermis, parakeratosis, and vacuolar interface dermatitis. We diagnosed TEC grade 2, and treated it with topical corticosteroid and pregabalin, which produced adequate clinical skin reaction. No chemotherapy dose changes were needed. Nevertheless, it persists with changes in nail beds.

Conclusion:

TEC encompasses the spectrum of dermatological toxicities that manifest in response to chemotherapy.

Due to the patient's HIV-1 status, opportunistic infections must be considered as a differential diagnosis. HIV may also be associated with onychodystrophy and palmoplantar paresthesia. Also, a variant of TEC with onycholysis was considered, but the patient did not receive any taxanes.

Our specialists determined the diagnosis of doxorubicin and cyclophosphamide-induced TEC, carefully considering his medical history and histological findings linked to chemotherapy treatment over time.

In conclusion, TEC is a common dermatologic toxicity in patients undergoing chemotherapy. Early recognition and appropriate management are crucial to improving patient outcomes and quality of life.

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Abstract N°: 1138

Fatal selective serotonin reuptake inhibitors-Induced leukocytoclastic vasculitis mimicking drug Reaction with Eosinophilia and Systemic Symptoms Syndrome

Lahouel Maha¹, Dalel Kemicha¹, Ben Kahla Marwen¹, Ben Rejeb Mohamed¹, Fetoui Ghariani Nadia¹, Saad Sarra¹, Rouatbi Jacem¹, Mokni Sana¹, Aounallah Amina¹, Ghariani Najet¹, Denguezli Mohamed¹

¹Farhat Hached university hospital, sousse, dermatology department, sousse, Tunisia

Introduction & Objectives:

Drug-induced leukocytoclastic vasculitis (LCV) can mimic severe cutaneous adverse drug reactions (Scar), when complicated by multiple organ failure. Differentiating LCV with systemic involvement (SI) from Scar can be challenging. Here, we report the first case of LCV induced by Selective Serotonin Reuptake Inhibitor (SSRI) with systemic involvement, appeared initially to be as drug reaction with eosinophilia and systemic symptoms (DRESS) syndrome, complicated with fatal outcome.

Materials & Methods:

A 55-year-old male was newly diagnosed with bipolar disorder and was prescribed selective serotonin reuptake inhibitors. One week later, the patient developed painful, symmetrically distributed purpuric papules appeared first in the lower extremities. 2 weeks later, the cutaneous lesions extended up to thighs, trunk, chest, and upper extremities. There was no fever, no facial edema, no scaling, no mucous membranes involvement, or lymphadenopathy. Biological tests showed hypereosinophilia (5500/uL). DRESS syndrome and cutaneous vasculitis were suspected, and SSRI was withdrawn. Skin biopsy was expected to show DRESS-like features, but instead revealed a perivascular inflammatory cells, fibroid necrosis of vessel walls, and extravasated erythrocytes, consistent with the LCV diagnosis. No immune complex deposits on direct immunofluorescence study. Based on the biopsy results, selective serotonin reuptake inhibitors -induced LCV with SI features was more likely considered as the calculated RegiSCAR score was 3 indicating a "possible" DRESS. Prednisolone was started and the cutaneous vasculitis features started to subside within 1 week. While tapering prednisone dose, the patient had a relapse of vasculitis, with dyspnea and passed away probably from the intraalveolar hemorrhage. Selective serotonin reuptake inhibitors -induced LCV with SI features was retained in view of clinical features, histological findings, the suggestive temporal relationship, and exclusion of differential etiologies. According to the Naranjo probability scale, causality relationship of selective serotonin reuptake inhibitors was probable.

Results:

Distinguishing drug-induced LCV from other mimickers such as Scar is challenging and LCV with SI might share some overlapping clinical features with DRESS. However, the histopathology of DRESS is distinct from that of LCV, and DRESS lacks fibroid necrosis of the vessel walls, neutrophilic infiltrate, and hemorrhage. Despite the highly variability of histological picture of DRESS, lymphocytic infiltrate is constantly observed, which was not the case in our patient. LCV related to selective serotonin reuptake inhibitors (SSRIs) is rarely reported, with the majority of cases being skin-limited vasculitis with no other organ involvement, unlike our case. In fact, in the majority of cases, drug-induced LCV has a favorable course.

Conclusion:

Leukocytoclastic vasculitis (LCV) induced by selective serotonin reuptake inhibitors (SSRIs) is rarely reported. Our case differs from previous reports by presenting systemic involvement.





Abstract N°: 1173

allopurinol induced dress sundrome complicated with pancreatitis and ascites: Always look beyond the skin

Meryem Khallouki¹, Fatima-Ezzahraa Zeroual¹, Bendaoud Layla¹, Maryem Aboudourib¹, Ouafa Hocar¹, Said Amal¹

¹Mohammed VI University Hospital of Marrakech , Department of Dermatology and Venereology, Marrakech, Morocco

Introduction & Objectives:

Drug reaction with eosinophilia and systemic symptoms DRESS syndrome is a serious adverse drug reaction characterized by general malaise, pruritus, and fever associated with a generalized rash with systemic involvement. Hepatitis is one of the most frequent visceral manifestations, while pancreatitis occurs in <5% of cases. Here, we present the case of patient diagnosed with DRESS syndrome after allopurinol therapy complicated with pancreatitis, ascites, and renal failure.

Materials & Methods: case report

Results:

A 54-year-old male patient with a history of hypertension for the past 2 years was admitted to the dermatology department with pruriginous maculopapular skin rash, facial edema, and fever after the initiation of allopurinol for hyperuricemia 6 weeks previously. Dermatological examination revealed generalized erythema with scales, along with facial edema, cheilitis, and lymphadenomegaly. Laboratory tests showed eosinophilia at 2850/mm³, increased liver enzymes (alanine aminotransferase at 821 UI/l, aspartate aminotransferase at 258 UI/l, alkaline phosphatase at 278 UI/l), functional renal failure with creatinine at 74.59 mg/dL, and increased pancreatic lipase enzyme at 508. Abdominal sonography revealed normal renal size and a low-abundance ascites. A diagnosis of Dress syndrome was confirmed based on the diagnostic criteria of the RegiSCAR group with a score of 8. The incriminating drug was interrupted, and the patient received topical treatment, oral corticosteroids at a dose of 1 mg/kg/day and supportive care, including rehydration. Clinical and biological remission was achieved on corticosteroid therapy, with whitening of skin lesions and improvement in biological parameters.

Discussion:

Allopurinol is a drug used primarily to treat hyperuricemia and its complications, including chronic gout. The frequency of allopurinol-induced DRESS syndrome is about one in 260 patients treated with this drug. At least one internal organ is involved in approximately 90% of the patients, most commonly the liver, kidney, and lung. Hepatitis is one of the most frequent visceral manifestations, while pancreatitis occurs in <5% of cases. Pancreatic involvement most commonly manifests as type 1 diabetes mellitus, while acute pancreatitis is the second commonest manifestation seen in 37.9% of patients with pancreatic involvement, with reported causes being lamotrigine, allopurinol, and cotrimoxazole. Pancreatitis might also be underreported since many manifestations are non-specific, short-lasting, and usually do not warrant further investigation. Renal involvement manifests as acute interstitial nephritis, most frequently with allopurinol. A 32-year-old patient reported leflunomide-induced dress syndrome with systemic involvement, including minimal ascites.

The diagnostic criteria proposed by the International Registry of Severe Cutaneous Adverse Reactions (RegiSCAR) help establish the diagnosis of the dress syndrome. The management of dress syndrome is based on early detection and diagnosis, followed by prompt withdrawal of the culprit agent and appropriate supportive therapy

in order to minimize the associated morbidity and mortality.

Conclusion:

Allopurinol-induced DRESS syndrome is associated with significant mortality due to systemic manifestations. Judicious use of allopurinol for accepted indications is the only way to decrease the incidence and morbidity caused by this syndrome.

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Abstract N°: 1224

Subacute cutaneous lupus erythematosus induced by biological therapy of psoriasis: a literature review

Ilija Gunjic¹, Neda Delic^{*2}, Milica Markovic¹, Olivera Delic³, Vladislav Glusac⁴, Petar Popovic¹

¹University of Belgrade Faculty of Pharmacy, Department of Pathobiology, Belgrade, Serbia, ²University Clinical Center of Serbia, Clinic of Dermatology and Venereology, Belgrade, Serbia, ³University of Belgrade Faculty of Pharmacy, Belgrade, Serbia, ⁴University of Belgrade Faculty of Medicine, Belgrade, Serbia

Introduction & Objectives:

Due to the increasing availability and use of biological therapy, adverse reactions to these medications are being carefully monitored and studied. Cytokine and immune imbalance caused by certain biologics can trigger autoimmune diseases, including lupus-like syndrome, specifically one of its cutaneous forms – subacute cutaneous lupus erythematosus (SCLE). This literature review aimed to identify and analyze SCLE cases associated with biological therapy of psoriasis reported to date.

Materials & Methods:

A detailed review of three bibliographic databases identified 8 eligible publications, yielding 8 clinically and histopathologically confirmed SCLE cases induced by biological therapy of psoriasis. All cases were scored as *probable* according to the Naranjo Adverse Drug Reaction Probability Scale, based on the available clinical data.

Results:

Five (62.5%) of the identified cases were related to interleukin-17 inhibitors (secukinumab n=3, brodalumab n=1, ixekizumab n=1). Two patients received TNF- α inhibitors (infliximab and adalimumab), while only one case of interleukin-12/23 inhibitor (ustekinumab) induced SCLE has been reported. Two patients (25%) had concomitant psoriatic arthritis and psoriasis. Drug incubation time averaged 20 (range 3-88) weeks. Women to men ratio was 5:3, and the average age at SCLE onset was 55.1 ± 8.9 years. The lesions were dominantly psoriasiform (5/8, 62.5%), extending outside the photoexposed regions in 3/8 (37.5%) patients. The lupus band test of lesional skin was negative in three assessed patients. Antinuclear antibodies (ANA) were positive in all tested (n=7) patients. Anti-Ro antibodies were present in 3/7 (42.9%) patients' sera, while anti-La antibodies were found in 2/7 (28.6%) cases. One patient fulfilled the criteria for systemic lupus erythematosus. The biological drug was discontinued in 7/8 patients. Additionally, all but one received specific treatment with topical (n=4) or systemic (n=3) corticosteroids, antimalarials (n=2), or cyclosporine (n=1), which led to the resolution of lesions in all cases.

Conclusion:

There are several putative mechanisms by which anti-TNF agents could cause a lupus-like syndrome, including a cytokine shift toward Th2 cytokines or reduced clearance of nuclear debris, leading to the production of autoantibodies. However, the pathogenesis of interleukin 17 and interleukin 12/23-induced lupus is largely unknown, which calls for further research. Regarding the clinical presentation, a psoriasiform pattern of lesions may pose a diagnostic pitfall, demanding correlation with histopathological and immunological findings to diagnose SCLE in lieu of a psoriasis flare. Testing for ANA before starting biological therapy could aid in identifying individuals at higher risk of lupus-like adverse reactions.

In conclusion, SCLE is a relatively rare adverse effect of biological therapy for psoriasis. As given reports indicate, the course of the disease is favorable, demonstrated by the resolution of lesions upon discontinuing the offending

agent and adjuvant short-term dermatological treatment. Follow-up data is needed for the assessment of long-term outcomes.

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**Abstract N°: 1225****Linear IgA induced by vancomycin**Fer Fer¹

¹The National Institute of Health Sciences and Nutrition “Salvador Zubirán”, Dermatology, Ciudad de México, Mexico

Introduction & Objectives:

Linear IgA disease is an autoimmune disorder characterized by the formation of subepidermal blisters with deposition of IgA in the basement membrane. Most cases are idiopathic; however, it has been associated with certain drugs, vancomycin being among the most common.

A 78-year-old male patient was admitted to the ICU after developing community-acquired pneumonia and multiorgan failure. Broad-spectrum antibiotics were initiated, including meropenem and vancomycin. After 10 days of treatment, he developed a localized dermatosis to the genitals, which spread to the trunk and four limbs bilaterally and symmetrical. It affected the penile body, glans, scrotum, and inguinal region characterized by tense blisters with serous content on an erythematous base, negative Nikolsky sign. He had a history of hypertension, mild cognitive impairment, diverticular disease, and coronary artery disease.

Materials & Methods:

Laboratory tests showed leukocytosis (18,000), elevated C-reactive protein (21), and vancomycin levels at 36 (15-20). Tzanck test was performed, as well as PCR for herpes virus 1, 2, and varicella-zoster virus, all of which were negative. Suspecting adverse drug reaction vs bullous pemphigoid, two biopsies were taken from the left inguinal area for conventional staining and direct immunofluorescence. Presence of subepidermal blister with superficial and perivascular infiltrate predominantly neutrophilic was observed. Linear IgA deposition at the dermoepidermal junction was observed in immunofluorescence.

Results:

Linear IgA can occur in both adults and children, with two peaks of incidence in the second and sixth decades of life. The incidence varies between 0.2-2.3 per million per year.

Although the mechanism is not well determined, both humoral and cellular responses influence pathogenesis. Anti-basement membrane antibodies directed against the 97 kDa portion of bullous pemphigoid antigen 2 (BPAG2) are deposited in the lamina lucida. Some patients may have autoantibodies to LAD-1 (the 120 kDa domain) or against laminin-332, laminin gamma 1, or collagen VII (COL7), particularly when induced by vancomycin.

Among the risk factors, drug use is important, with approximately 50% associated with vancomycin, and other associated medications include penicillins, cephalosporins, NSAIDs, ACE inhibitors, allopurinol, atorvastatin, and acetaminophen, among others.

Diagnosis is made histopathologically with evidence of a subepidermal blister and predominantly neutrophilic infiltrate. Direct immunofluorescence is considered the gold standard with linear IgA deposition at the dermoepidermal junction; IgG and C3 deposition may also be found.

Conclusion:

Establishing a causal relationship is difficult in most patients, especially due to polypharmacy and not always having only one causal risk factor. Treatment consists of discontinuing the causative agent; dapsone is the first-line drug, however, it is not available in many centers and must be monitored for adverse effects. Topical steroids or oral prednisone at doses of 0.5 - 1 mg/kg per day may be an alternative, especially in critically ill patients to avoid serious adverse effects and interactions.

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Abstract N°: 1233

A case of Toxic Epidermal Necrolysis in an adult Filipino Pregnant Patient successfully treated with Systemic Corticosteroids

Manuel Mendoza, Jr.^{*1}, Nica Minerva Olivar-Floro¹

¹Region 1 Medical Center (Main), Dermatology, Dagupan, Philippines

Introduction & Objectives:

N/A

Materials & Methods:

N/A

Results:

A 26-year-old female patient presenting with vesiculobullous lesions was referred to our dermatology service. 2 weeks prior to admission, the patient complained of hypogastric pain and was given omeprazole, metoclopramide, and hyoscine. The patient also tested positive on pregnancy test. 1 week prior to admission, progressing vesicles, bullae, and mucosal erosions prompted consult with subsequent admission. Past medical history noted angioedema to amoxicillin. Drug history revealed the first-time use of omeprazole, metoclopramide, and hyoscine. Ob-Gyne history revealed a G3P1 (1011) patient at 5 weeks age-of-gestation (AOG) based on last menstrual period. The patient had one spontaneous abortion and a successful delivery via normal spontaneous delivery. The patient is a heterosexual female in a monogamous sexual relationship with no history of sexually transmitted infection. Physical examination noted tender generalized flaccid serous-filled bullae and vesicles with erosions and crusts (90% Body Surface Area). Nikolsky Sign and Asboe-Hansen Sign were present. Complete blood count noted peripheral blood leukocytosis with neutrophilia. Creatinine, urea, blood sugar, and liver function tests were normal. No multinucleated giant cells were seen in Tzanck Smear. Patient was referred to the Ob-Gyne service confirming the pregnancy. Histopathology reports subepidermal blister with epidermal necrosis. Dermoscopic findings noted epidermal detachment on red background, consistent with EN. Direct Immunofluorescence favored EN, ruling out autoimmune blistering disorder. Hence, a diagnosis of TEN was made. By utilizing SCORTEN (1, Surface Area > 10%), good prognosis is expected with 3.2% mortality rate. Improvement was noted with intravenous Hydrocortisone at 4 mg/kg/day (mkd) which was later shifted to oral Prednisone at 0.5 (mkd) with gradual tapering. Anti-histamine, moist dressing, and thoroughly soap-washed banana leaves used as bed lining were utilized given the limited resources. Majority of EN cases in pregnancy are attributed to Anti-retroviral therapy (90%), followed by antibiotics and gestational medications. However, this case emphasizes that seemingly low-risk drugs like omeprazole (incidence rate: 1/1,000,000 for first-time users), hyoscine, and metoclopramide could still potentially trigger EN. Although preterm birth had been mentioned in previous reports, the patient had delivered a live baby girl weighing appropriately for her gestational age at 36 weeks AOG via normal spontaneous delivery without complications. Few studies noted the safety and efficacy of corticosteroids on the treatment of drug-induced TEN in pregnancy.

Conclusion:

This case presents a rare case of TEN in an adult Filipino pregnant patient successfully treated with systemic steroids. This case also highlights the importance of pharmacovigilance and the safety and cost-effectiveness of systemic corticosteroids in the prevention and treatment of EN in Pregnancy.



**Abstract N°: 1240****Severe lichenoid drug eruption after pembrolizumab plus vibostolimab treatment in a patient with endometrial cancer**Emre Bayindir*¹, Özkan Sever¹, Burhan Engin¹¹Cerrahpaşa Medical Faculty, Dermatology and Venerology, Istanbul, Türkiye**Introduction & Objectives:**

Lichenoid drug eruption is an uncommon, cutaneous adverse effect of several drugs. It is characterized by a symmetric eruption of flat-topped, erythematous or violaceous papules resembling lichen planus on the trunk and extremities. The time interval between the initiation of the offending drug and the appearance of the cutaneous lesions varies from several weeks to a year or more. Pembrolizumab is an immune checkpoint inhibitor. It is a monoclonal antibody that binds to the programmed cell death protein 1 (PD-1) on the surface of T cells. Vibostolimab is a humanized IgG1 monoclonal antibody that binds to T-cell immunoglobulin and ITIM domain and blocks its interaction with its ligands, CD112 and CD155. We present a case of lichenoid drug eruption induced by pembrolizumab plus vibostolimab therapy for metastatic endometrial carcinoma.

Materials & Methods:

A 60-year-old woman was diagnosed with endometrial carcinoma and surgically treated 2 years ago. She received a total of 6 sessions of chemotherapy after surgery and lung metastasis was detected. After 10 sessions of pembrolizumab plus vibostolimab treatment, the patient first developed eruptive lesions on the lips, followed by severe itchy, violaceous lesions that spread to different parts of the body, and these lesions did not respond to topical corticosteroid treatment. Physical examination revealed crusty, eroded lesions on the lips, violaceous, erythematous papules especially on extensor surfaces of extremities, trunk and back.

Results:

Skin biopsy from papules located on the extremities revealed orthokeratosis, focal parakeratosis, wedge-shaped hypergranulosis, apoptotic keratinocytes, basal vacuolar degeneration in the epidermis, capillary vessel proliferation, lymphocyte and histiocyte infiltration in perivascular pattern and extravasated erythrocytes in the upper dermis. Direct immunofluorescence analysis was negative for IgA, IgG, IgM, C3 and fibrinogen. Based on clinical and histopathologic findings, lichenoid drug eruption due to pembrolizumab plus vibostolimab was considered as the diagnosis. It was decided to terminate the current treatment in consultation with the gynecooncologist. She received a 48 mg per day oral methyl prednisolone followed by a tapering regimen. A mixture of topical mometozan furoate and 4% urea was also applied to all lesions twice a day. At 1 month after the initiation of corticosteroid treatment, the lesions on the patient's lips were completely healed and the lesions on her body were almost completely healed and pruritus had disappeared.

Conclusion:

Pembrolizumab plus vibostolimab therapy is an immunotherapy combination with clinical trials in the treatment of solid tumors. Although there is no case of lichenoid drug eruption related to this combination therapy in the literature, cutaneous side effects such as lichenoid drug eruption related to pembrolizumab use are frequently reported. The immunological mechanism of pembrolizumab-induced lichenoid drug reactions is thought to be a T cell-mediated response. Expression of PD-L1 on keratinocytes has been found in lichen planus lesions, and it has been suggested that anti PD-1 may cause lichenoid reactions by blocking the interaction between PD-L1 on

keratinocytes and PD-1 on T cells. In conclusion, attention should be paid to cutaneous side effects that may occur especially during the use of immune checkpoint inhibitors and treatment should be terminated rapidly in such cases.

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**Abstract N°: 1276****Pigmented purpuric dermatosis as an adverse reaction to SARS- COV- 2 vaccine and COVID-19 infection: A report of two cases**Zinah Sharara¹, Mohammed Al Abadie²

¹National Health Service (NHS), Community Dermatology Clinics (Health Harmonie). United Kingdom, Dermatology, Wolverhampton, United Kingdom, ²North Cumbria Integrated Care NHS Foundation Trust, UCLAN Medical School, United Kingdom. , United Kingdom

Introduction & Objectives: Pigmented purpuric dermatoses (PPDs) are a group of skin conditions that are characterized by petechiae, dusky macules with post-inflammatory hyperpigmentation, and dermal hemosiderin deposition, primarily localized to the lower extremities. Schamberg disease is the most common form of PPD, presenting as pruritic spots resembling cayenne pepper with orange-brown pigmented macules on the legs and feet. Other clinical variants, such as Majocchi Purpura, Gougerot-Blum Purpura, Eczematoid Purpura of Doucas and Kapetanakis, and Lichen Aureus, have been reported, all sharing similar histopathologic features.

The aetiology of PPDs is not well understood, and there is currently no definitive therapy. However, some measures such as emollients, topical steroids, and oral antihistamines have been suggested for management.

It is recognized that COVID-19 has a multi-systemic impact with different manifestations including skin involvement. SARS-CoV-2 vaccines have significantly reduced the incidence, morbidity, and mortality related to the pandemic; however it can also cause skin adverse reactions.

As of September 2023, a total of 13,513,017,637 vaccine doses have been administered worldwide, with 771,151,224 confirmed cases of COVID-19.

Materials & Methods: In this article, we present two cases of PPD following either COVID-19 infection or vaccination. The first patient, a 69-year-old female, developed a non-blanchable, palpable purpuric rash on both lower limbs three days after a confirmed COVID-19 infection. The rash gradually expanded to the pelvic girdle and lower back over the following 6-8 weeks. The second patient, a 57-year-old female, developed purpuric non-blanchable hyperpigmented patches on the upper thighs eight weeks after receiving her second dose of the COVID-19 vaccine. Both patients had histopathologic findings consistent with PPD.

Results: While the exact causal relationship between PPDs and COVID-19 infection or vaccination is yet to be clarified, there appears to be a potential correlation based on the timing of events and lack of other clinical features or new medication use. Previous reports have also described PPDs following anti-SARS-CoV-2 vaccination. The self-resolving nature of PPDs and the absence of associated symptoms suggest that these dermatoses may not warrant a contraindication to vaccine administration. However, dermatologists should remain vigilant in recognizing and differentiating these cutaneous findings from more serious widespread reactions.

Conclusion: PPDs may be an uncommon cutaneous manifestation following COVID-19 infection or vaccination. Although the exact pathophysiology remains unclear, increasing reports in the literature suggest a potential association. Dermatologists should be aware of these cutaneous findings and work towards ruling out more severe reactions. With the widespread use of COVID-19 vaccines and ongoing infection waves, it is essential to recognize and appropriately manage these skin conditions**





Abstract N°: 1284

Erosive pustular dermatosis of the scalp due to EGFR inhibitors: A multicentric study by EADV Task Force of “Dermatology for Cancer Patients”

Luca Rapparini¹, Bianca Maria Piraccini¹, Stephano Cediriani¹, Federico Quadrelli¹, Francesca Pampaloni¹, Francesca Bruni¹, Cosimo Misciali¹, Zoe Apalla², Davide Fattore³, Sonia Segura⁴, Dimitra Koumaki⁵, Matilde Iorizzo⁶, Yannick Elshot⁷, Azael Freitas Martinez⁸, Pietro Sollena⁹, Florentina-Silvia Delli¹⁰, Ane Jaka¹¹, Vasiliki Nikolaou¹², Damien Giacchero¹³, Julia Riganti¹⁴, Vincent Sibaud¹⁵, Michela Starace¹

¹University of Bologna, Italy, ²Aristotle University, Thessaloniki, Greece, ³University of Naples Federico II, Naples, Italy, ⁴Hospital del Mar, Barcellona, Spain, ⁵University Hospital of Heraklion, Greece, ⁶Private Dermatologic Practice, Lugano/Bellinzona, Switzerland, ⁷Amsterdam UMC, University of Amsterdam, Netherlands, ⁸Hospital Ruber de Juan Bravo, Universidad Europea, Madrid, Spain, ⁹Policlinico Universitario Agostino Gemelli IRCCS, Rome, Italy, ¹⁰Hippokratio General Hospital of Thessaloniki, Greece, ¹¹Hospital Universitari Germans Trias i Pujol, Universitat Autònoma de Barcelona, IGTP, Badalona, Spain, ¹²National and Kapodistrian University of Athens, Greece, ¹³University Côte d’Azur, Centre Antoine Lacassagne, Nice, France, ¹⁴Hospital Italiano de Buenos Aires, Argentina, ¹⁵Institut Universitaire du Cancer, Toulouse Oncopole, France

Introduction & Objectives:

Erosive pustular dermatosis of the scalp (EPDS) is an uncommon inflammatory disorder affecting the scalp, characterized by the presence of erosions, thick brown-yellowish crusts, and pustules with serum-hematic exudate that gradually develop in atrophic skin and scarring alopecia. EPDS typically manifests in elderly individuals with pre-existing severe androgenetic alopecia and sun-damaged scalp, frequently accompanied by a history of local trauma. It has recently been shown that epidermal growth factor receptor (EGFR) inhibitors can trigger EPDS. EGFR inhibitors are used for the treatment of some malignant neoplasms where EGFR is overexpressed.

We conducted a multicenter, retrospective study involving patients diagnosed with cancer and undergoing treatment with EGFR inhibitors. This research specifically focused on individuals who developed EPDS because of their treatment.

Materials & Methods:

We documented patient demographics, primary cancer type, oncologic treatment protocols, prescribed medications, EPDS clinical, trichoscopic, and histological characteristics, as well as other related cutaneous toxicities. Fifteen Oncodermatology Units sharing their data.

Results:

The study involves 46 patients with various primary tumours, mainly non squamous cell lung carcinoma and colorectal carcinoma, treated with EGFR inhibitors. EGFR inhibitor-induced EPDS is characterised by diffuse erythema, hyperkeratotic crusted lesions and erosions, with an average onset of EPDS at 17 weeks post-treatment initiation. Patients have also experienced other EGFR-related skin toxicities, such as acneiform rash and trichomegaly.

Trichoscopic features of EPDS induced by EGFR inhibitors closely resemble classic EPDS, including serous exudate, perifollicular pustules, erosions, dilated vessels, hyperkeratosis, skin atrophy, absent follicular ostia, broken hairs, tufted hairs, and black crusts. Histological features include inflammatory infiltrate, spongiform pustules, epidermal

hyperplasia, granulation tissues, hair shaft remnants, epidermal necrosis, dermal fibrosis, and subepidermal fibrin deposition.

Treatment primarily involved high-potency topical corticosteroids, often combined with oral tetracyclines, with favorable outcomes observed in half of the cases. Some patients have required adjustments to their cancer therapy due to skin complications. Despite this, most patients tolerated oncological treatment without dose reductions.

Conclusion:

This study underscores the importance of recognizing EGFR inhibitors as potential triggers for EPDS and emphasizes the need for multidisciplinary approaches involving dermatologists and oncologists for effective management and improved patient outcomes. Balancing oncological benefits with skin complication management remains crucial for optimizing patient quality of life during cancer therapy.

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Abstract N°: 1320

Clinical-Pathological Correlations in Ponatinib Reactions: Beyond the Typical Stevens-Johnson Syndrome Presentation.

Judith Corona Herrera¹, Fanny Carolina López Jiménez¹, Verónica Monserrat Díaz Sánchez¹, Betzabé Quiles Martínez¹, Linda García Hidalgo¹, Judith Guadalupe Domínguez Cherit¹, Amparo Hernández Salazar¹, Silvia Méndez Flores¹

¹Salvador Zubirán National Institute of Health Sciences and Nutrition, Ciudad de México, Mexico

Introduction & Objectives:

Ponatinib, a third-generation TKI, targets the T315I mutation. So far cutaneous reactions reported to ponatinib include conditions like pityriasis rubra pilaris-like eruptions, ichthyosiform eruptions, and erythematous rash.

Materials & Methods:

We reported this case due to the importance of documenting new cutaneous reactions associated with molecular therapies, that are still under study. To our knowledge, this is the first documented case presenting as Stevens-Johnson syndrome (SJS) in histopathological findings, although clinically didn't correlate with those findings.

Results:

A 59-year-old woman diagnosed with Philadelphia chromosome-positive acute lymphoblastic leukemia (ALL) in 2022 was initially treated with with Imatinib, a tyrosine kinase inhibitor (TKI). Due to a T315I mutation, treatment was switched to ponatinib at a dosage of 45 mg daily. Twenty-seven days later, she developed a dermatosis that affects all body segments in a generalized manner, characterized by the presence of plaques with erythematous-purpuric and ochre hues, arranged in a reticular pattern and surrounded by a halo of increased erythema. In some central areas of the lesions, there is evidence of fine adherent scaling. Over time, these plaques evolve into a presentation with fine, adherent, blood-tinged scaling. No involvement of mucous membranes was observed.

Histopathologic examination showed pauci-inflammatory subepidermal blistering dermatosis with multiple necrotic keratinocytes and lymphocytic and neutrophilic infiltration. Although these histological features are consistent with findings described in Stevens-Johnson syndrome (SJS) and other drug reactions, the absence of other clinical features such as mucosal involvement, conjunctival inflammation, and absence of blisters or the Nikolsky sign, leads us to conclude that SJS was a unlikely diagnosis in our patient.

The emergence of molecular therapies targeting specific cellular pathways has significantly improve cancer prognosis. However, these advancements bring diverse adverse cutaneous effects. These reactions can vary in severity, with some posing serious risks such as SJS wich has been reported as an adverse reaction induced by other TKIs like imatinib and masitinib, but to our knowledge there have been no reports of SJS induced by ponatinib

Ponatinib is a third-generation TKI targets the gatekeeper T315I mutation. It's approved for treating chronic myeloid leukemia and Ph+ ALL. Cutaneous reactions associated with ponatinib include conditions such as pityriasis rubra pilaris-like eruptions, ichthyosiform eruptions, and erythematous rash.

Conclusion:

We reported this case due to the importance of documenting new cutaneous reactions associated with molecular

therapies, as all these therapies are still under study. It is imperative for both healthcare professionals and patients to recognize these potential risks and diligently monitor for any signs of adverse reactions when starting new medications. Early detection and prompt intervention are essential to mitigate the risk of severe complications and to ensure the safe and efficacious utilization of novel therapies.

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Abstract N°: 1324

Immune Checkpoint Inhibitor-Induced Vitiligo-Like Depigmentation: A large Multicenter study

Stephano Cedirian¹, Luca Rapparini¹, Alessandro Pileri¹, Cristina Carrera², Priscila Giavedoni², Teresa Alonso de Leon², Lukas Krähenbühl³, Yannick Elshot⁴, Zoe Apalla⁵, Chrysoula Papageorgiou⁵, Vasiliki Nikolaou⁶, Tatjana Radevic⁷, Zsuzsanna Lengyel⁸, Pietro Sollena⁹, Ketty Peris⁹, Ernesto Rossi¹⁰, Davide Fattore¹¹, Dimitra Koumaki¹², Aram Boada¹³, Ana-Maria Forsea¹⁴, Sonia Segura¹⁵, Azael Freitas Martinez¹⁶, Julia Riganti¹⁷, Emily Avitan-Hersh¹⁸, Nada Saffuri¹⁸, Lucie Peuvrel¹⁹, Frederic Dezoteux²⁰, Vincent Sibaud²¹, Bianca Maria Piraccini¹, Michela Starace¹

¹Dermatology Unit, IRCCS Azienda Ospedaliero-Universitaria di Bologna, Policlinico S. Orsola-Malpighi, Bologna, Italy, Department of Medical and Surgical Sciences, Alma Mater Studiorum University of Bologna, Italy,

²Department of Dermatology, Hospital Clínic de Barcelona, University of Barcelona, Barcelona, Catalonia, and Centro de Investigación Biomédica en Red de Enfermedades Raras (CIBERER), Instituto de Salud Carlos III, Spain.,

³Department of Dermatology, University Hospital Zurich (USZ), University of Zurich (UZH), 8091 Zurich,

Switzerland., ⁴Department of Dermatology, The Netherlands Cancer Institute - Antoni van Leeuwenhoek, Amsterdam, The Netherlands., Department of Dermatology, Amsterdam UMC, University of Amsterdam,

Amsterdam, The Netherlands., ⁵First Department of Dermatology, Aristotle University, Thessaloniki, Greece.,

⁶Department of Dermatology-Venereology, Faculty of Medicine, National and Kapodistrian University of Athens,

“A. Sygros” Hospital for Skin and Venereal Diseases, Athens, Greece., ⁷Department of Dermatology and Venereology, Medical Faculty of the Military Medical Academy, University of Defense, Belgrade, Serbia.,

⁸Department of Dermatology, Venerology and Oncodermatology, University of Pécs, Hungary., ⁹Dermatology Unit, Department of Surgical and Medical Sciences, Fondazione Policlinico Universitario Agostino Gemelli IRCCS, Rome, Italy, ¹⁰Division of Medical Oncology, Fondazione Policlinico “A. Gemelli” Istituto di Ricerca e Cura a

Carattere Scientifico, Rome, Italy., ¹¹Section of Dermatology, Department of Clinical Medicine and Surgery,

University of Naples Federico II, Naples, Italy., ¹²Department of Dermatology, University Hospital of Heraklion,

Heraklion, Greece, ¹³Dermatology Department, Hospital Germans Trias I Pujol de Badalona, Badalona., ¹⁴Carol Davila University of Medicine and Pharmacy Bucharest, Department of Oncologic Dermatology, Elias University

Hospital Bucharest, Bucharest, Romania., ¹⁵Department of Dermatology, Hospital del Mar, Parc de Salut Mar,

Institut Hospital del Mar d’Investigacions Mèdiques (IMIM), Barcelona, Spain, ¹⁶Department of Dermatology,

Hospital Ruber de Juan Bravo, Universidad Europea, Madrid, Spain., ¹⁷Dermatology Department, Hospital Italiano de Buenos Aires, Buenos Aires, Argentina., ¹⁸The Bruce Rappaport Faculty of Medicine, Technion - Israel Institute

of Technology, Haifa, Israel., Department of Dermatology, Rambam Health Care Campus, ¹⁹Institut de

Cancérologie de l’Ouest, 44800 Saint-Herblain, France., ²⁰CHU Lille, Service de Dermatologie, Univ Lille, INSERM

U1286, Lille Inflammation Translational Research Institute (INFINITE) F-59000, Lille, France., ²¹Oncodermatology Department, Institut Universitaire du Cancer, Toulouse Oncopole, Toulouse, France.

Introduction & Objectives:

Immune checkpoint inhibitors (ICIs) have revolutionized cancer treatment, demonstrating efficacy in various malignancies but are associated with immune-related adverse events (irAEs). Vitiligo-like depigmentation (VLD) is an emerging irAE, yet comprehensive clinical data beyond case reports is lacking. To comprehensively assess and characterize ICI-induced VLD across multiple cancer types in a large multi-center retrospective study.

Materials & Methods:

A retrospective multi-center study conducted between January 2023 and July 2023 involving 200 patients diagnosed with metastatic cancer receiving anti-PD1/PD-L1 therapy. Data included patient demographics, primary cancer types, VLD characteristics, and management.

Results:

VLD developed on average 8.1 months after ICI initiation, primarily affecting sun-exposed areas. Most cases were mild to moderate (CTCAEv5 Grade 1) with a varied body surface area involvement. Various concurrent skin toxicities were noted. Approximately 56.5% of patients received no specific therapy for VLD, while others were managed with topical corticosteroids or calcineurin inhibitors. VLD progression post-ICI cessation was observed in a subset of patients.

Conclusion:

This comprehensive study of 200 patients with ICI-induced VLD, spanning diverse cancer types, contributes substantial clinical data. The study underscores the need for vigilant monitoring of dermatologic irAEs during ICI therapy and highlights areas for future research to improve VLD management and understand its influence on cancer therapy outcomes.

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Abstract N°: 1369

When trying to prevent bed bugs bites you: drug reaction with eosinophilia and systemic symptoms (DRESS) secondary to ivermectin

Aoife Boyle^{*1}, Aoibheann Flynn¹

¹Mater Misericordiae University Hospital , Dermatology, Dublin, Ireland

Introduction:

Drug reaction with eosinophilia and systemic symptoms (DRESS) is a severe drug hypersensitivity syndrome characterised by fever, mucocutaneous involvement, internal organ involvement and haematological abnormalities including eosinophilia and atypical lymphocytes. Typical cutaneous presentations include an urticated papular exanthem, morbilliform eruption or erythroderma. Rarely, an erythema multiforme-like eruption can occur, which is associated with a more severe systemic phenotype and liver involvement. Common culprit drugs include allopurinol, antiepileptics, antibiotics, sulpha-drugs and non-steroidal anti-inflammatory drugs. In a limited number of case reports, ivermectin has been reported as a causative agent.

Materials & Methods:

We report a case of erythema multiforme-like DRESS secondary to ivermectin.

Case:

A 69-year old male presented to our emergency department with a seven day history of a progressive, widespread erythematous rash with associated fever and malaise. He was on holidays in Europe and had arrived in Ireland five days prior from France. He had no known drug allergies or regular medications. He denied taking any new medications.

On examination he had a widespread erythematous annular eruption involving approximately 80% body surface area with scattered targetoid lesions and confluent areas of dusky erythema on the buttocks and posterior thighs. His lower legs had tense bullae and oedema. There was no mucosal involvement, facial oedema or lymphadenopathy. He had a low grade fever but was otherwise vitally stable.

Laboratory investigations revealed marked eosinophilia ($4.93 \times 10^9/L$), a two-fold increase in serum transaminase levels, mildly elevated creatinine and inflammatory markers. Blood film showed reactive lymphocytes and eosinophilia. Viral serology including HIV, Hepatitis B/C, EBV and CMV were negative. Blood cultures and chest x-ray were normal. Liver ultrasound showed hepatic steatosis. Skin biopsies were taken for histopathology and demonstrated a superficial dermal perivascular lymphohistiocytic and eosinophilic infiltrate with mild spongiosis. No apoptotic keratinocytes or necrosis was seen. Direct immunofluorescence was negative.

His RegiSCAR score was 7 and he was admitted to hospital. He was commenced on high dose oral prednisolone (1mg/kg/day) and supportive topical care including betamethasone valerate and emollients. After a few days, on further questioning, he reported taking online-sourced oral ivermectin 12mg once daily for the previous two weeks. He had purchased ivermectin to take as prophylaxis due to concerns regarding the bed bug outbreak in France. At this point a diagnosis of DRESS secondary to ivermectin was made. Ivermectin was immediately discontinued and his rash improved with normalisation of serum eosinophils and transaminases within two weeks. Prednisolone was gradually weaned over a period of six weeks with complete resolution of the rash.

Conclusion:

Ivermectin is a rare cause of erythema-multiforme like DRESS. This case also highlights the importance of a thorough medication history, including non-prescription medications. Early identification, discontinuation of the offending drug and initiation of supportive care is essential in the management of DRESS.

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Abstract N°: 1371

Unmasking Neem's (*Azadirachta indica*) Influence on Facial Skin: An Institution-based Observational Cross-Sectional Study on TSDF-Like Characteristics.

Shahriar Ahmed Sekh^{*1}, Abhishek De¹

¹Calcutta National Medical College & Hospital, Kolkata, India

Introduction & Objectives: Topical Steroid Damaged/Dependent Face (TSDF) is characterized by a plethora of symptoms caused by the abuse of topical corticosteroids of any potency on the face over a certain period. Many patients disclosed the application of neem using cream, facewash, or soap over the face and presented to us with TSDF-like features. The study was conducted to explore the effects of neem over face

Materials & Methods: The study was an institution-based observational cross-sectional study. The targeted sample size was 44; considering a 95% confidence limit, 10% margin of error, 87.1% response rate. All patients aged 15 years or above attending Dermatology OPD presenting with clinical symptoms and signs suggestive of the topical steroid-damaged face and with a history of the application of neem by any form such as facewash, soap, leaves, etc on the face for a certain period were enrolled in the study. Patient with a history of rosacea, pre-existing comorbidities (e.g., Cushing's syndrome, polycystic ovaries, and thyroid disorders), or pre-existing facial dermatosis, pregnancy, and ongoing treatment with oral or topical corticosteroids, History of application of any product other than Neem were excluded.

Results: We have found Facial Erythema (38.6%), Acneform eruption (75%), Telangiectasia (6.8%), Hypertrichosis (18.2%), Itching (65.9%), Burning (63.6%), Photosensitivity (59.1%), Facial Dryness (79.5%), Photosensitivity (59.1%) occurring to patients who have been using neem at any form over face for a variable period. Most of the participants used it as a form of facewash (93.2%) or soap (6.8%). Most of the people used it under the influence of media advertisements (34.1%) or by recommendation of any pharmacist (29.5%).

Conclusion: This study reveals that neem may contain plant-based steroids and without knowing the Phytochemical analysis of any plant, using it blatantly over skin could be disastrous.

Table : Phytochemical and biopesticidal content of neem plant (*Azadirachta indica*).4

Components	Abundance
Alkaloids	+
Saponins	+++
Tannins	++
Steroid	+++
Terpenoid	+++
Glycoside	++
Flavonoid	+
Phenol	+
Oxalic acid	+

+++ : Most present; ++ : Moderately present; + : Least present

Table : Adverse effect over face seen during presentation

Adverse effect	Number of patients (%)
Facial redness	17 (38.6%)
Acneform eruption	33 (75%)
Telangiectesia	3 (6.8%)
Hypertrichosis	12 (18.2%)
Itching	29 (65.9%)
Burning sensation	28 (63.6%)
Photosensitivity	26(59.1%)
Dryness	35(79.5%)
Increased sensitivity to face	36(81.8%)
Hyper/hypopigmentation	22(50%)
Atrophy/striae	0(0)
Facial hypersensitivity	4(9.1%)
Tinea incognito	4(9.1%)

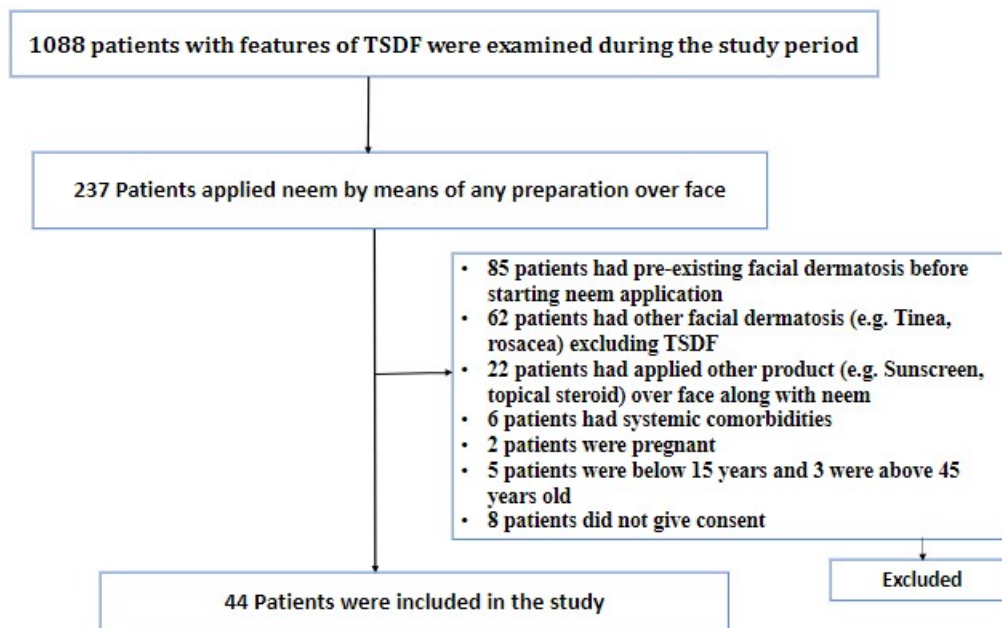


Figure : Flow chart of Inclusion and Exclusion of study participants



**Abstract N°: 1378****Single-cell RNA sequencing reveals atypical blood circulating and skin infiltrating monocyte-macrophages in patients with cutaneous adverse drug reactions**

Raphaël André^{*1}, Martins Filipe², Planet Evarist², Sébastien Menzinger¹, Laurence Toutous-Trellu¹, Docquier Mylene³, Wolf-Henning Boehncke¹, Lionel Fontao¹, Trono Didier², Gürkan Kaya¹

¹Hôpitaux Universitaires de Genève (HUG), Dermatology, Genève, Switzerland, ²EPFL, Lausanne, Switzerland,

³University of Geneva, Geneva, Switzerland

Introduction & Objectives: Cutaneous adverse drug reactions (CADR) encompass a wide spectrum of potentially dreadful disease entities. Pathophysiology remains unclear and treatments are rarely efficient.

Single-cell RNA sequencing (scRNA-seq) provides an opportunity to decipher potential cell-cell interactions and cell-type specific transcriptomic changes, amenable to therapeutic intervention, particularly in rare diseases with heterogeneous clinical presentations and lacking experimental animal models, such as CADR. We decided to perform a transcriptomic study associated to immunohistochemistry.

Materials & Methods: We performed scRNA-seq on the skin of four patients diagnosed with CADR syndromes including one toxic epidermal necrolysis (TEN), one Stevens-Johnson syndrome (SJS), one acute generalized exanthematous pustulosis (AGEP), and one extensive drug-related maculopapular rash (MPR). Also, we did scRNA-seq on 3 healthy gender-, age-, and phototype-matched volunteers as controls. Therefore, we performed immunohistochemistry to confirm our results.

Results: We found that skin-infiltrating mononuclear phagocytes (MNPs) presented the most similar gene expression signature across all patients, mainly due to a CD163-expressing MNP population marked by the upregulation of genes coding for pro-inflammatory cytokines and antigen processing/cross-presentation machinery. It appeared as the main source of TNF α expression, a central mediator of CADR pathogenesis. The detection of these MNPs during the acute phase of the disease and amongst circulating monocytes presenting similar gene expression profiles, along with their numerous cellular interactions, strongly invoke their pathogenic contribution. Furthermore, the numerous immune-immune and immune-stromal cell cross-talks detected, potentially contributing to T cell activation, neo-angiogenesis, and cell migration, point to new potential therapeutic targets and to a central role of MNPs in promoting CADR inflammation. The upregulation of STAT1 in those cells point to their potential sensitivity toward JAK-STAT inhibition. Immunohistochemistry studies confirmed the increase of CD163+ skin-infiltrating macrophages in these patients. We didn't perform CD163 blood test.

Conclusion: T lymphocytes have so far been considered as the main cellular mediators of CADR. Our results challenge this paradigm, by revealing that CD163+ monocyte-macrophages with mixed M1/M2 features are central to this pathology. This conclusion is based on i) the presence of these cells during the acute phase of disease in the skin and the blood of affected patients, ii) their apparent specialization in antigen processing and presentation, iii) their expression of pro-inflammatory cytokines, and iv) the detection of numerous connections between this subset of MNPs and immune and stromal cells.



**Abstract N°: 1501****Overlap between toxic epidermal necrolysis and generalized exanthematous pustulosis secondary to hydroxychloroquine**

Billel Merrouche^{*1}, Qaid Ali Kazman¹, Fella Laissaoui¹, Houria Sahel^{1, 2}

¹University Hospital Center Lamine Debaghine, Department of Dermatology, Algiers, Algeria, ²Faculty of Medicine, University of Algiers 1, Algiers, Algeria

Introduction:

Toxic epidermal necrolysis (TEN) and Acute generalized exanthematous pustulosis (AGEP) are two uncommon and severe toxidermias which may share certain features. We report the case of a patient who presented with an overlapping TEN-AGEP induced by hydroxychloroquine.

Case presentation:

A 53-year-old woman with a history of type 2 diabetes, chronic lithiasis nephropathy and pulmonary sarcoidosis presented with an acute erythematous pustular eruption that appeared 3 weeks after initiation of treatment with hydroxychloroquine 400 mg/day, prescribed for diffuse arthralgias. Examination revealed a generalised maculopapular rash dotted with non-follicular pustules with superficial skin detachment covering more than 30% of the body surface. Nikolsky's sign was positive. The mucous membranes were unaffected. There were no peripheral adenopathies. Laboratory tests showed hyperleukocytosis (19000/mm³) with neutrophil predominance, and a C-reactive protein of 315 mg/L. Blood cultures and viral serologies were negative. Urinary tests showed urinary infection with detection of Escherichia coli. The patient was treated with corticosteroids (1mg/kg/day) and antibiotics with discontinuation of hydroxychloroquine. Resolution of the clinical and laboratory abnormalities was achieved within 20 days.

Discussion:

TEN and AGEP are classified as severe drug reactions that can be life-threatening. Each has its own characteristic clinical manifestations, specific pathogenesis and histopathology. However, the distinction between these two entities can be challenging in certain situations, raising the hypothesis of an overlap syndrome.

In the case of our patient, the extensive detachment indicates TEN, while the pustular presentation is suggestive of AGEP. There was a relatively long delay (3 weeks) between the eruption and the initiation of hydroxychloroquine. This notion of late induction is often found in overlapping cases.

Several observations of toxidermia with a mixed phenotype TEN-AGEP have been described in the literature. Hydroxychloroquine was implicated in a few cases.

Conclusion:

Our observation describes an exceptional case of TEN-AGEP overlap attributed to hydroxychloroquine. It highlights the importance of recognising these forms, which are more severe than classic toxidermia.



**Abstract N°: 1533****Enfortumab vedotin induce rapidly progressive hypertrophic Lichen planus**

Efrat Bar-Ilan^{*1}, Ilan Shamir¹, Sharon Baum^{1, 2}, Aviv Barzilai^{1, 2}, Michal Sarfaty^{2, 3}

¹Sheba Medical Center, Department of Dermatology, Ramat Gan, Israel, ²Tel Aviv University, Sackler Faculty of Medicine, Tel-Aviv, Israel, ³Sheba Medical Center, Department of Oncology, Ramat Gan, Israel

Introduction & Objectives:

Enfortumab vedotin (EV) is an antibody drug conjugate (ADC) with a monomethyl auristatin E (MMAE) payload targeting Nectin-4. EV was approved in 2019 by the FDA for metastatic urothelial carcinoma (Muc) following progression on platinum-containing chemotherapy and immune checkpoint blockade. Several reports of cutaneous toxicity have emerged in recent years, however, to our knowledge, there were no reports of drug induced lichen planus (LP). We herein present the first reported case of a unique progressive drug induce hypertrophic LP in reaction to EV.

Materials & Methods:

Case report: 80-year-old male with a history of ischemic heart disease and non-muscle invasive bladder cancer was diagnosed in 2022 with mUC, involving the retroperitoneal lymph nodes. He was treated with 6 cycles of cisplatin and gemcitabine followed by avelumab (PD-L1 inhibitor) maintenance. Due to disease progression treatment was switched to EV at a standard dose of 1.25mg/kg D1,8,15 q28d. After completing the first cycle, the patient presented to the dermatology clinic with a rapidly progressive unique rash on the extensor surfaces of his extremities. Additional EV related toxicity included weakness, lethargy, loss of appetite and hair loss. Upon examination significant thick papules, plaques and nodules with purple-brown color were noticed. Some of the lesions were covered with scale, and especially on the anterior shin, the lesions merged to create a large thick plaque with a verrucous appearance. Skin biopsy from two sites revealed LP and hypertrophic LP. Due to the fast and continuous spread, EV was ceased, immediate stoppage in growth was noticed, the condition stabilized with a slight improvement without spontaneous remission.

Results:

EV has emerged in recent years as a promising therapy for refractory mUC and is well known to cause cutaneous toxicity, including self-resolving maculopapular rash, pruritus, erythema multiforme-like rash with interface dermatitis, and the potentially lethal Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis reaction. The exact mechanism has not been well-described, but is likely related both to the high Nectin-4 expression in the skin, effecting cell-cell adhesion, and the MMAE payload, as cutaneous toxicity is also seen in other MMAE-containing ADCs.

Conclusion:

We present the first case of drug induced hypertrophic LP related to Enfortumab vedotin. Due to frequent cutaneous side effects and the potential lethal reaction, we suggest that patients receiving EV should be monitored closely for cutaneous side effects by a dermatologist.



**Abstract N°: 1546****Lichenoid pigmented toxiderma due to insulin: a case report.**Zineb Loubaris¹, Kenza Khachani¹, Meriam Meziane¹¹chu avicenne rabat, dermatology, RABAT, Morocco**Introduction & Objectives:**

The prevalence and incidence of diabetes have steadily increased, and the indications for insulin therapy have expanded. Since its introduction, insulin-induced dermatitis has been rarely reported in the literature. We report a case of lichenoid pigmented dermatitis secondary to the use of intermediate-acting insulin.

Materials & Methods:

A 42-year-old woman, diagnosed with diabetes for 12 years, started on intermediate-acting insulin therapy for the past year, reports the onset of a hyperpigmented skin rash, moderately itchy, 2 months after starting insulin injections. Her general condition was otherwise well preserved. Dermatological examination revealed the presence of erythematous papular lesions, some of which were shiny with a lacy pattern on the limbs, as well as confluent hyperpigmented macular lesions located on the face, neck, hands, and feet. Mucous membrane examination revealed no abnormalities. Skin biopsy confirmed the diagnosis of lichenoid toxiderma.

Results:

Cutaneous side effects of insulin are common and occur in many patients in several reported series. The most commonly reported cutaneous side effects include allergic reactions at injection sites, lipodystrophy, lipoatrophy, and skin infections, with hyperpigmentation being less common. However, lichenoid toxiderma is exceptionally rare. To date, no cases of lichenoid pigmented toxiderma due to insulin have been reported in the literature. In our patient, this rash required a change in the type of insulin that induced this toxiderma, which, along with topical treatment, improved the clinical appearance and prevented complications.

Conclusion:

Lichenoid toxidermias due to insulin are exceptional. We describe the first case of lichenoid pigmented toxidermia induced by insulin, confirmed by skin biopsy.



**Abstract N°: 1577****Antiepileptic DRESS syndrome complicated by macrophagic activation syndrome**Himeur Zoulikha¹, Dahmani Boumediene¹¹Tlemcen Hospital, dermatology, tlemcen, Algeria**Introduction & Objectives:**

Drug hypersensitivity syndrome is a serious toxidermia with a mortality rate of 10 % which can rarely be complicated by a macrophagic activation syndrome. Antiepileptic drugs are often We report a case of DRESS induced by antiepileptic drugs and complicated by macrophagic activation syndrome.

Materials & Methods: Our observation concerns a young boy, 14 years old, admitted to the dermatology department for a picture erythroderma, edema of the face and extremities evolving for three days in a context of fever and alteration of the context of fever and altered general condition. On questioning, we noted the notion of taking medication for an epilepsy associating valproic acid (Depakine®) and carbamazepine (Tegretol®) instituted four weeks before the eruption. Clinically, the patient presented with a fever of 39°C, profound asthenia. The somatic examination revealed a generalized maculopapular rash with thick desquamation as well as facial edema and erosive-crusty lesions erosive-crusty lesions. There were also multiple adenopathies in the cervical, axillary and inguinal regions. inguinal areas. The general condition was altered. On the biological level, the blood count revealed a hyperleukocytosis with a mononucleosis syndrome anemia and thrombocytopenia. The hepatic assessment showed a cytolysis at 18 times the normal level: we noted an LDH was elevated, TP decreased and hypertriglyceridemia; hyperferritinemia; hyponatremia; MNI test came back positive. The rest of the serologies were negative. The diagnosis of DRESS syndrome associated with a macrophagic activation syndrome was retained. Oral corticosteroid therapy at a dose of 1mg/kg/d associated with immunoglobulins was instituted. The evolution was favorable in two weeks

Results: MAS is a multi-systemic disease related to an intense activation of the immune system. overlap between the diagnostic criteria of DRESS and MAS. Indeed, in these two pathologies, one can observe a fever, adenopathy, visceral and hematological involvement can be observed in both conditions. The apparent rarity of the occurrence of MAS during DRESS could be explained by the overlap between the diagnostic criteria of these two conditions, especially since the hemophagocytosis seen on sternal puncture may be absent early in the course.

Conclusion:

early in the course of the disease. It is necessary to think of MAS in the course of a DRESS syndrome in front of any deterioration of the clinical state. Indeed, it is a serious and potentially life-threatening com





Abstract N°: 1586

Symmetrical drug related intertriginous and flexural exanthema (SDRIFE) associated with oral metronidazole

Fikri Chaimaa¹, Bendaoud Layla¹, Maryem Aboudourib¹, Ouafa Hocar¹, Said Amal¹

¹Faculty of medicine and pharmacy Cadi Ayad Marrakech, dermatology departement, Hospital University Mohamed VI Marrakech, Marrakech, Morocco

Introduction & Objectives:

Symmetrical Drug-Related Intertriginous and Flexural Exanthema (SDRIFE), is a flexural toxidermia characterized by a symmetrical erythematous and intertriginous rash. The major drugs causing SDRIFE are betalactam antibiotics such as amoxicillin and ampicillin [1,2]. Herein We report a case of 21-year-old woman who was diagnosed as SDRIFE due to oral metronidazole.

Clinical case :

a 21-year-old girl, diabetic type 1 on insulin, had been suffering from perianal abscess for 4 days and was being treated with oral metronidazole, by self-medication. 12 hours after administration, she presented with sharply demarcated V-shaped macular erythematous patches on the axillary's region, elbows folds, gluteal area, thighs and groins (Figure 1). Systemic examination was normal, except the perianal abscess. Laboratory investigations showed normocytic anemia and slight C-reactive protein elevation with no eosinophilia. The diagnosis of drug-induced Baboon syndrome was therefore taken on the basis of the chronological and semiological data. Biopsy and Patch test was not performed because the patient did not give consent. The treatment was based on antihistamines and topical corticoids, with good clinical improvement and desquamation after one week

Discussion :

The term "baboon syndrome" (BS) (recently known as symmetrical drug related intertriginous and flexural exanthema, SDRIFE) was introduced in 1984 to describe a specific skin eruption (resembling the red gluteal area of baboons) that occurred after systemic exposure to contact allergens [3].

Drug-related Baboon Syndrome is a clinical diagnosis constituted by five criteria; exposure to a systemically administered drug either at the first or repeated dose (excluding contact allergens); sharply demarcated erythema of the gluteal/perianal area and/or V-shaped erythema of the inguinal/peri genital area; involvement of at least one other intertriginous/flexural localization; symmetry of affected areas; and absence of systemic symptoms and signs such as pyrexia, eosinophilia and cytopenia [4-5]. Our patient has met all of the listed criteria of SDRIFE due to oral metronidazole.

BS can be caused by either topically or systemically applied substances. Among the systemic offending agents most commonly responsible are: β -lactam antibiotics, especially amoxicillin [6]. Metronidazole is generally well tolerated, first case in the literature was described in Turkey by Aysun Sikar et al in 2014 [4]. To our knowledge, our patient is the second case who developed SDRIFE due to oral metronidazole in the literature.

Treatment is based on discontinuation of the drug, antihistamine, local corticosteroid therapy and, in some cases, systemic corticosteroid therapy. The prognosis is generally good; however, a new oral provocation is likely to recur

Conclusion:

The diagnosis of SDRIFE should therefore be suspected in the presence of any pruritic and symmetrical intertriginous eruption involving drugs, with no systemic involvement, whatever the molecule

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Abstract N°: 1587

Acute Localized Exanthematous Pustulosis induced by topical herbal medicine

Fikri Chaimaa¹, Bendaoud Layla¹, Maryem Aboudourib¹, Ouafa Hocar¹, Said Amal¹

¹Faculty of medicine and pharmacy Cadi Ayad Marrakech, dermatology departement, Hospital University Mohamed VI Marrakech, Marrakech, Morocco

Introduction & Objectives:

Acute Localized Exanthematous Pustulosis (ALEP) is a localized form of Acute generalized Exanthematous Pustulosis (AGEP). It is a sever skin reaction, often resulting from drug intake. However, other causes, such as topical plants, infections, food allergies, mercury exposure, and spider bites have been reported. Herein, we report a 42-years-old female who developed ALEP in the lower limb caused by herbal medicine, "Copparis Spinosa"

Case report:

A 42-year-old woman presented with an acute eruption of multiple non-follicular pustules on an erythematous base, localized to the leg and hip, with mild itching (figure1). There was no involvement of mucous membranes or nails; this appeared few hour after applying a medicinal plant "Copparis Spinosa" for sciatica. Initially in the leg, then one day after in a second site (the hip) with the same clinical features. Bacterial culture of the pustule was sterile. Skin biopsy showed acanthosis in the epidermis with slight spongiosis; sub corneal pustule composed of neutrophils and eosinophils, and a perivascular infiltrate of lymphocytes and neutrophils. The follow up showed spontaneous regression of the lesions, the pustules resolved within 5 days with desquamation (figure2). Based on the clinical, chronological and histological features, the diagnosis of ALEP was made in accordance with the recently proposed diagnostic criteria for ALEP.

Discussion:

Acute generalized exanthematous pustulosis (AGEP) was first described by Beylot et al. in 1980 [1]. In 2005, Prange et al attributed the name "acute localized exanthematous pustulosis" (ALEP), to all cases of AGEP where lesions are confined to limited areas.

ALEP has essentially been caused by systemic drug intake, antibiotics were the most frequent causative agent mainly Amoxicillin-clavulanic acid. In only 3 cases Non-drug- induced ALEP have been recently described. Due to topical or systemic exposure to herbal substances [1-3].

The diagnosis is based on Euro SCAR criteria for ALEP: Localized numerous small (1-3 mm) clustered non-follicular pustules.; background erythema; negative microbiology; acute onset (< 72 h) after medication and resolution (with post- pustular desquamation) within 14 days of discontinuing medication. [4].

ALEP is a self-limited disease with a favorable spontaneous course within several days. The treatment is based on immediate withdrawal of the triggering agent. Potent topical steroids can be used to reduce inflammation and pruritus [5]. Supportive therapy with oral corticosteroids may be appropriate in prolonged symptomatic cases.

Conclusion:

ALEP is an uncommon skin disease where drugs have, for long, been considered the only possible triggers. Nevertheless, contact with plants has also been incriminated.



**Abstract N°: 1745****Nivolumab associated DRESS syndrome: A case report.**Upama Paudel^{*1}, Sudip Parajuli¹¹Maharajgunj Medical Campus, Institute of Medicine, Dermatology and Venereology, Kathmandu, Nepal**Nivolumab associated DRESS syndrome: A case report.****Introduction & Objectives:**

A 55-year-old male presented with sudden onset of erythema involving more than 80% body surface area for 3 days. It started as erythema on trunk 1 week back which had gradually increased to involve trunk, neck and all the extremities and was associated with severe pruritus. There was no history of fever, facial swelling, arthritis, or history of allergies. He was diagnosed as a case carcinoma of lungs with metastasis to vertebra (L3, L5, S1) while investigating for chronic paresthesia of upper and lower limb two and half months back and had received multiple medicines namely intravenous immunoglobulins, paracetamol, gabapentin, pregabalin and duloxetine, linagliptin-Metformin, a blend of PEA, genistein and daidzein, melatonin tablets, pramipexole and Zolpidem tartrate for a period of two weeks. The patient was recently started on injection Nivolumab 40 mg a week before the onset of present illness. On examination, there was non-tender diffuse ill-defined infiltrative coalescing plaques involving trunk, extremities, and neck with mild erythema of face involving more than 80% body surface area. The folds on the abdomen were relatively spared. There was no lymphadenopathy or organomegaly. Mucosal examination, hair and nails were all normal. On investigation, his complete blood count, ANA profile, renal function test, liver function test, blood sugar, electrolytes, urine routine were normal except for raised alkaline phosphatase and raised CRP. A skin biopsy was done which showed focal spongiosis, exocytosis of lymphocytes, patchy basal layer degeneration, and interface inflammation. Superficial dermis showed moderate perivascular lymphocytic infiltration with eosinophils and neutrophils. A diagnosis of Drug rash with eosinophilia and systemic symptoms (DRESS) was made based on temporal association of injection Nivolumab and appearance of skin lesion, and presence of eosinophils in dermis. The patient was started on prednisolone 70 mg per day based on the body weight along with other supportive measures. Injection Nivolumab was advised to be discontinued. There was gradual improvement of skin lesion at last follow-up at one week. The case is being reported because of very few reports of DRESS induced by Nivolumab in the literature and is first case report from.....A literature review on DRESS induced by Nivolumab will also be done.

Materials & Methods: Not applicable**Results:** Not applicable**Conclusion:** Not applicable



Abstract N°: 1854

Navigating polypharmacy in DRESS: A Case Report

Emily Orr^{*1}, Richard Watchorn¹

¹Beaumont Hospital, Dublin, Ireland

Introduction & Objectives:

Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) is a form of severe cutaneous adverse reaction (SCAR) which is commonly triggered by recent drug administration. Identifying and withholding the culprit medication is a key step in managing this disease. To achieve this, a thorough drug timetable, including all medications administered in the preceding 8 weeks, must be created and reviewed carefully. This may be challenging in the context of polypharmacy where multiple drugs may have been commenced in recent weeks. Anti-epileptic medications such as carbamazepine and phenytoin are thought to be the most common triggers for DRESS(1). Other culprits include sulphonamide antibiotics, allopurinol and olanzapine.

Materials & Methods:

case report

A 45 year old female patient was admitted for the investigation and management of Neuromyelitis Optica in January 2024. Prior to admission she had no known medical issues and had no regular medications. Over the course of her admission, multiple (39) medications were introduced, including co-trimoxazole, carbamazepine, meropenem, nitrofurantoin, esomeprazole, cyclophosphamide, rituximab, prednisolone.

Results:

On week 12 of admission she developed a widespread erythematous morbilliform eruption. There was no mucous membrane or other end organ involvement. Topical steroids were commenced and the potential culprits such as co-trimoxazole and carbamazepine were stopped. However, on day four of the eruption the patient became erythrodermic, with eosinophils rising to 1.6 and evidence of renal impairment. The patients prednisolone dose was increased from 10mg (baseline) to 30mg. Her Erythema began to subside on the increased dose of Prednisolone but she remained oedematous, in view of this her prednisolone was further increased to 50mg. In the following days, the patient became less erythematous and her peripheral eosinophils reduced to 0.6

Conclusion:

The associated mortality of DRESS is up to 10%. This case represented a particular challenge, as 39 new medications had been initiated in the preceding weeks. The culprit drug may be further obfuscated by a delayed resolution of symptoms even after stopping the causative agent. For these reasons it is important to consider utilising tools which may aid in identifying the trigger, so it may be avoided in future. In this case HLA-A*31:01 was requested to identify a genetic predisposition for carbamazepine-induced DRESS(2). A further investigation which may be considered is lymphocyte transformation testing (LTT), which looks for an immune reaction in vitro. In this case, LTT was not possible due to concomitant prescription of immunosuppressants (particularly prednisolone). Their immediate utility is limited by the lead time for their results. In such cases where many medications have been introduced the availability of HLA testing may be beneficial for complex patients with chronic diseases who may require reintroduction of medication at some point in the future.

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**Abstract N°: 1883****Mystifying Coexistence: A Case of Toxic Epidermal Necrolysis in a Pediatric Patient with Systemic Lupus Erythematosus**Roice Angel Caguioa¹, Mary Grace Anne Calvarido², Camelia Faye Tuazon²¹Region 1 Medical Center (Main), Department of Dermatology, Dagupan, Philippines, ²Region 1 Medical Center (Main), Dermatology, Dagupan, Philippines**Introduction & Objectives:**

The coexistence of toxic epidermal necrolysis (TEN) and systemic lupus erythematosus (SLE) in children poses a diagnostic dilemma. Morphologic presentation of TEN and SLE (bullous type) can be similar with both conditions causing extensive bullae formation.

Materials & Methods: N/A**Results:**

A 14-year-old Filipino, female presented with generalized erythematous annular plaques and patches with dusky centers. This was accompanied by facial edema, oral ulcers and periungual erythema. Clinical history and laboratory work-ups (ANA of 640 (homogenous) and anti-dsDNA of 301.25 IU/ml (strong positive)) were consistent with SLE. On day four of admission, she developed bullae on previously erythematous lesions. This raised the clinical impression of Bullous SLE. However, skin biopsy showed extensive epidermal necrosis and basal vacuolar change consistent with epidermal necrolysis. Drug history revealed administration of intravenous antibiotics for a concomitant urinary tract infection. In agreement with the diagnosis of SLE, topical corticosteroids were initially given. Clobetasol propionate 0.05% ointment mixed with plain petroleum jelly and Mometasone furoate 1% cream mixed in moisturizing lotion were applied twice daily on the body and face, respectively. Patient was also advised to apply broad-spectrum sunscreen SPF 50 every 2-4 hours and perform oral hygiene with Chlorhexidine mouthwash. Upon the discovery of severe drug reaction, Prednisone 40mg/tab daily (1.0mg/kg/day) was then started. With the co-existence of SLE, the Pediatric service initiated Mycophenolate 500mg/tab twice a day and Hydroxychloroquine 100mg/tab, 2 tablets once day. Clinical and laboratory parameters improved upon discontinuation of drugs and initiation of treatment. The previous lesions had mostly resolved with minimal residual scarring, postinflammatory hyperpigmentation and hypopigmentation after 3 weeks.

Conclusion:

TEN in pediatric population with SLE is uncommon but possible occurrence. Thorough history including drug history, physical examination and proper work-up help differentiate these two or discover their coexistence. Early recognition leads to prompt treatment and less complications. This study adds to the limited studies available on the co-existence of these two challenging dermatologic diseases in pediatric patients.

Keywords: stevens-johnson syndrome, toxic epidermal necrolysis, systemic lupus erythematosus





Abstract N°: 2030

Hypohidrosis, alopecia, and nail changes following long-term hydroxyurea in a patient with primary myelofibrosis

Hagar El Sayed¹, Marwa Fawzi¹, Sara El Sayed²

¹Cairo University Kasralainy school of medicine, Dermatology, ²Cairo University Kasralainy school of medicine, Internal medicine and Hematology

Introduction & Objectives:

Hydroxyurea (HU) is an antimetabolite agent that is used in the treatment of many myeloproliferative disorders. Although safe and very well tolerated, there have been numerous reports of a broad palette of cutaneous side effects associated with prolonged intake of the medication. These may include classical symptoms such as xerosis, hyperpigmentation, stomatitis, and scaling of the face, hands, and feet or more serious side effects such as actinic keratosis lesions, leg ulcers, and multiple skin carcinomas.

Objective: To Describe some newly described cutaneous side effects of hydroxyurea

Materials & Methods:

We report a 55-year-old male patient of primary myelofibrosis with 11 years history of using hydroxyurea who developed hypohidrosis, body alopecia, terry's nails, and melanonychia 4 years ago.

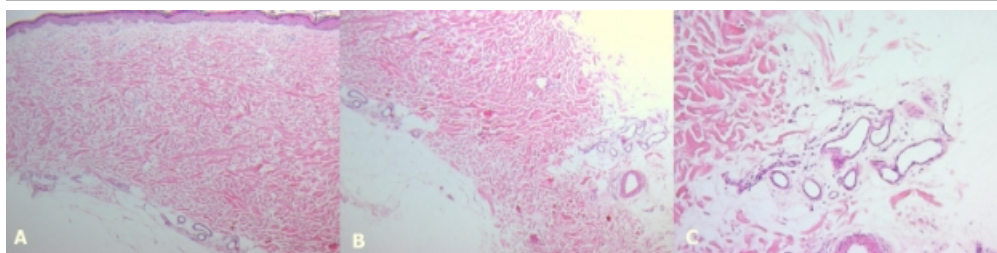
Results:

Figure 4: Photomicrograph showing:

- A. Absence of hair follicles with loss of dermal eccrine duct and acrosyringium
- (B) Some eccrine coil linings were atrophic and sunken in subcutaneous tissues
- (C) Atrophy of the epithelial lining and thickening of the basal lamina

Figure 4: Photomicrograph showing:

- (A) Absence of hair follicles with loss of dermal eccrine duct and acrosyringium
- (B) Some eccrine coil linings were atrophic and sunken in subcutaneous tissues
- (C) Atrophy of the epithelial lining and thickening of the basal lamina



Conclusion:

Further reporting of cutaneous adverse effects of hydroxyurea is essential together with the collaboration of

dermatologists to understand the mechanism of those adverse effects of the drug that may be attributed to the accumulation of the drug in hair follicles and sweat glands.

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**Abstract N°: 2031****The efficacy of topical anti-androgenic agents for the treatment of androgenic alopecia: a systematic review of clinical trials**Nastaran Namazi¹, Fahimeh Abdollahimajd¹¹Shahid Beheshti University of Medical Sciences

Introduction & Objectives: Several studies have assessed the effectiveness of various anti-androgenic drugs in treating androgenic alopecia (AGA). However, there is a lack of comprehensive evaluations on the efficiency of topical anti-androgenic agents for treating AGA. Thus, due to the high occurrence of AGA and the necessity to consolidate the impacts of topical anti-androgenic medications in relation to this condition, the current systematic review was formulated.

Materials & Methods: A systematic search was conducted across six electronic databases, namely Scopus, Web of Science, PubMed/MEDLINE, Embase, ProQuest, and CENTRAL via Cochrane from their inception until October 31, 2023. No language restrictions were applied during the search process. The objective of the search was to identify publications that evaluated the efficacy of topical antiandrogenic agents for the treatment of AGA. The primary outcome was trichoscopic parameters. The Cochrane Collaboration's tool was utilized to evaluate the risk of bias. Due to the methodological heterogeneity of the included studies, a meta-analysis could not be performed

Results: This systematic review comprised 10 studies encompassing a collective sample size of 877 AGA patients. The topical anti-androgenic drugs evaluated in these studies included finasteride, spironolactone, ketoconazole, alfatradiol, and fluridil. The treatment duration with these anti-androgens was six months in the majority of the studies. Topical finasteride and alfatradiol were not superior to minoxidil, but minoxidil was superior to these antiandrogens. However, topical finasteride led to better results compared to topical placebo and oral finasteride. Moreover, topical fluridil showed better results than placebo. On the other hand, topical spironolactone was similar to minoxidil. Ketoconazole shampoo showed better effects compared to an unmedicated shampoo. No serious side effects were reported for any of these topical antiandrogens. Quality assessment revealed that none of the trials had a low risk of bias.

Conclusion: Given the findings of the included studies and implausibility of a meta-analysis, no conclusive results could be achieved regarding the efficacy of topical antiandrogens in these clinical trials; nevertheless, topical spironolactone appears to be more similar to minoxidil, an approved drug for the treatment of AGA, compared to other antiandrogens.





Abstract N°: 2248

Pseudo-T Cell Lymphoma Induced by Carbamazepine: A Case Report

Shaikah Alaojan*¹, Hamad Aldhafiri²

¹Prince Sultan Military Medical City, Dermatology and dermatologic surgery, Riyadh, Saudi Arabia,²Majmaah university, college of medicine, Majmaah, Saudi Arabia

Introduction & Objectives:

Cutaneous pseudolymphomas are a group of benign skin diseases that resemble lymphoma in their morphological and microscopic characteristics. They are classified into T-cell and B-cell pseudolymphomas based on the predominant cell type. T-cell pseudolymphomas include idiopathic cases, chronic reactions to insect bites, and drug-induced reactions. Drug-induced pseudo-T lymphoma are most associated with antiepileptic medications especially, phenytoin and carbamazepine. The definitive diagnostic evidence of drug-induced pseudolymphoma is the remission of symptoms after discontinuation of treatment.

Materials & Methods:

A 53-year-old male presented to the emergency department with the complaint of generalized redness and itching for 7 days. Redness started gradually over the face and trunk then it involved the extremities within two days. The pruritus was significant enough to disrupt his sleep and affect his daily activity. He had no previous similar episode, and he is not known to have any skin disease prior to presentation. His medical history includes diabetes and hypertension. One month prior to presentation, he was admitted to the hospital as a case of stroke and started on carbamazepine for post stroke epilepsy.

On examination, he had generalized blanchable erythema affecting 90% of his body surface area, palmoplantar keratoderma over bilateral palms and soles but no palpable lymph nodes.

Histopathology reports from two specimens taken from the left thigh and left flank showed superficial perivascular lymphocytic infiltrates with atypia, paucicentric microabscess and predominance of CD4 T lymphocytes. Peripheral blood smear was negative for Sezary cells and CT scan showed no lymph node enlargement or organomegaly. Carbamazepine was discontinued with resolution of erythroderma within 6 weeks without recurrence.

Results:

The development of pseudo-T cell lymphoma is an uncommon but well-documented occasion, especially when linked to pharmacological substances such as carbamazepine. Carbamazepine is mainly used as an anticonvulsant and mood-stabilizing medication. The exact cause of drug-induced pseudo-T cell lymphoma is not fully understood. In vivo and vitro studies suggest it may be linked to immunological dysregulation and lymphocytic function Alterations. Pseudo-T cell lymphoma can manifest in various ways, such as single or multiple nodules, clustered or diffuse papules, patches and plaques, subcutaneous induration, and erythroderma. Cutaneous pseudolymphomas are especially challenging to distinguish from cutaneous lymphomas. Although the histology of this patient was suggestive of a cutaneous T-cell lymphoma with the presence of large, atypical cells, his skin lesions only appeared after using carbamazepine, resolved after stopping the medication and no other underlying cause or systemic involvement was identified, overall favouring a drug-induced reaction. Treating drug-induced pseudo-T cell lymphoma requires stopping the causative substance and closely observing the skin lesions for improvement.

Conclusion:

This case highlights the significance of identifying drugs as possible causative factors in the formation of pseudo-T cell lymphoma. Clinicians must be attentive when monitoring patients using medicines such as carbamazepine for skin reactions and should consider drug-induced pseudo-T cell lymphoma in their differential diagnosis of lymphoid skin lesions.

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Abstract N°: 2303

Superficial thrombophlebitis that develops suddenly after intravenous ciprofloxacin treatment

Müge Gündüz^{*1}, Meryem Balç²

¹Hakkari State Hospital, Dermatology and venerology, ²Hakkari State Hospital, Infectious diseases and clinical microbiology

Superficial thrombophlebitis that develops suddenly after intravenous ciprofloxacin treatment

Introduction & Objectives:

Ciprofloxacin injection is used to treat certain infections caused by bacteria such as pneumonia; and infections of the skin, bone, joint, abdomen (stomach area), urinary tract, and prostate (male reproductive gland. Thrombophlebitis has been reported in medically significant adverse reactions occurring in less than 1% of ciprofloxacin patients.

Superficial thrombophlebitis is an inflammatory disorder of superficial veins with coexistent venous thrombosis. It usually affects lower limbs, particularly the great saphenous vein (60% to 80%) or the small/short saphenous vein (10% to 20%). However, it can occur at other sites (10% to 20%) and may occur bilaterally (5% to 10%). Advanced age, exogenous estrogens, autoimmune or infectious diseases, obesity, recent trauma or surgery, active malignancy, history of venous thromboembolic disease, and respiratory or cardiac failure also increase the risk of superficial venous thrombophlebitis.

Although there is one case report of thrombophlebitis following ciprofloxacin treatment in the literature, ciprofloxacin-induced thrombophlebitis, including our case, should be observed carefully in terms of drug side effects.

Materials & Methods:

An 85-year-old male patient was admitted to the emergency department with complaints of poor general condition and oral intake disorder. Detailed examinations revealed leukocytosis, elevated CRP, and pyuria in the urinalysis. He was diagnosed with urinary tract infection and admitted to the infection ward. The patient's treatment was arranged as ampicillin-sulbactam 4x2 g intravenously and ciprofloxacin 2x400mg.

After the patient's ciprofloxacin treatment, a sudden red-purple erythematous rash was observed along the vascular trace on the arm where the vascular access was located. Then, the patient's ciprofloxacin treatment was stopped and intravenous ciprofloxacin was continued to be given from the other arm. Since a similar picture developed in the same arm within minutes, ciprofloxacin treatment was stopped and it was planned to switch to another antibiotic with follow-up. After the erythematous rash on the arm completely resolved a few hours later, trimethoprim-sulfamethoxazole treatment was started and no problems were observed.

Results:

When the literature was scanned, superficial venous thrombophlebitis has been described before with intravenous muscle relaxant and analgesia.

In one case in the literature, superficial thrombophlebitis due to ciprofloxacin was observed. In our case, the patient had underlying risk factors such as advanced age and previous pulmonary embolism, and with intravenous ciprofloxacin treatment, thrombophlebitis was observed during infusion from both arms within minutes.

Conclusion:

It is known that various dermatological rashes occur due to many drugs. Our case is presented because it is not widely reported in the literature and caution should be exercised in the use of ciprofloxacin in patients with risk factors for hypercoagulability and thrombosis.



**Abstract N°: 2344****A rare case of lichenoid drug eruption induced by an aromatase inhibitor anastrozole**

Jelena Nojner¹, Igor Kapetanović¹, Danilo Mićanović¹, Snežana Minić^{1, 2}

¹Clinic of Dermatovenereology, University Clinical Center of Serbia, Belgrade, Serbia, ²Faculty of Medicine, University of Belgrade, Belgrade, Serbia

Introduction: Anastrozole is an aromatase inhibitor, approved for adjuvant treatment of hormone receptor-positive breast cancer in postmenopausal women. Cutaneous adverse reactions to anastrozole have been rarely reported, and to our best knowledge, only one case of lichenoid drug eruption (LDE) has been described in the literature. LDE is characterized by the eruption of symmetrically arranged violaceous flattened papules on the extremities and trunk. In LDE mucosal involvement is rarely present. LDE is sometimes difficult to distinguish from idiopathic lichen planus. The latent period, between the initiation of the drug and the appearance of skin changes, can range from months to several years.

Case report: We present a case of a 50-year-old Caucasian female with a two-week history of erythematous papules localized on her hands. The patient's medical history included the diagnosis of invasive lobular breast cancer (HER2-, ER+), type 2 diabetes, and arterial hypertension. The patient had a radical mastectomy, combined with chemotherapy according to the AC protocol (doxorubicin, cyclophosphamide) followed by paclitaxel, radiotherapy, and tamoxifen. In October 2023, adjuvant hormone therapy with anastrozole 1 mg daily was administered and after 5 months the patient was referred to our dermatology department because of the skin lesions. A complete physical examination of the skin and mucous membranes revealed multiple violaceous polygonal flattened papules symmetrically distributed on the dorsal surface of the hands and the flexural surface of the wrists. On the buccal mucosa, discrete reticular lesions with slightly raised thin white lines were presented. Nails were not affected. Anti-HCV antibody was negative. A biopsy of the lichenoid papule was taken. Histopathologic examination was consistent with the diagnosis of LDE. Based on clinical and histopathological examination, the diagnosis of LDE was confirmed. Potent topical corticosteroids were prescribed. Discontinuation of anastrozole was not recommended, because the skin changes were not life-threatening, and hormone therapy has more benefits than discontinuing it.

Discussion: Breast cancer is the most common malignancy in women and a leading health concern with the global increase in incidence. The treatment depends on the stage of the disease and includes surgery, radiotherapy, chemotherapy, and hormonal therapy. Aromatase inhibitors, such as anastrozole, inhibit the aromatase enzyme that converts adrenal androgens into estrogens and are often prescribed as adjuvant therapy in postmenopausal women. Adverse cutaneous reactions to aromatase inhibitors are uncommon. Cases of erythema nodosum, subacute cutaneous lupus erythematosus, vasculitis, and erythema multiforme have been described in the literature. To our best knowledge, only one case of LDE caused by anastrozole has been reported so far, in the literature. We believe that this number is underestimated and that many lichenoid drug eruptions remain unrecognized, misdiagnosed as idiopathic lichen planus, or unreported.

Conclusion: For clinicians, both oncologists and dermatologists it is very important to recognize adverse cutaneous reactions. In cases of disseminated and life-threatening reactions, it is mandatory to stop or, if possible, replace the incriminating drug. In the case of our patient, we decided to treat skin changes symptomatically, without discontinuing a potentially life-saving medication.





Abstract N°: 2391

Photosensitivity dermatitis induced by nivolumab in a patient with lacrimal sac mucosal melanoma

Erika Zúñiga Ramírez^{*1}, Miguel Cepeda-Jimenez², Valerie Dafne Alcantara Ramirez¹, Salvador Gutierrez¹

¹ISSSTE General Hospital Tacuba, Dermatology, Ciudad de México, Mexico, ²ISSSTE General Hospital Tacuba, Oncology, Ciudad de México, Mexico

Introduction & Objectives:

Lacrimal sac melanoma (LSM) is a rare mucosal melanoma with high mortality and recurrence rates. It represents approximately 0.8% of all melanomas, with fewer than 31 reported cases worldwide. Immune checkpoint inhibitors (ICIs) like anti-CTLA4 and anti-PD1 represent a treatment option for metastatic mucosal melanoma, demonstrating a significant impact on patient survival. However, ICIs are associated with various adverse effects, most commonly cutaneous and typically presenting earlier during treatment than other adverse effects. We present the case of a patient with LSM and immunotherapy who developed photosensitivity induced by anti-PD1.

Materials & Methods:

A 73-year-old woman presented in 2023 with burning pain and epiphora in the left lacrimal region. Suspected dacryocystitis prompted lacrimal duct probing and biopsy. The biopsy revealed a malignant neoplasm of neural origin with epithelioid cells containing substantial melanin within the epicantal lacrimal sac glands. These glands exhibited significant distortion, enlargement, and hyperplasia. Immunohistochemistry confirmed positivity for S100 and HBM45, leading to the diagnosis of lentigo maligna melanoma in the remnant lacrimal sac. PET/CT scan identified tumor activity in the lung. Genetic testing excluded BRAF, NRAS, or KIT mutations. Treatment commenced with immunotherapy using anti-CTLA4 (ipilimumab) and anti-PD1 (nivolumab) monoclonal antibodies. Seven months later, the patient developed disseminated dermatosis on the face, neck, and upper trunk, characterized by irregular erythematous plaques (10 cm diameter) with diffuse borders and confluent pruritic papules. The diagnosis of photosensitivity associated with immunotherapy was established. Treatment with antihistamines, oral steroids, and photoprotective measures was initiated, resulting in clinical improvement of the cutaneous lesions.

Results:

Lacrimal sac mucosal melanoma is a poorly documented tumor with high mortality rates. The five-year survival rate stands at only 25.2%. Immunotherapy with ICIs, targeting CTLA-4, PD-1, and PD-L1, has become the mainstay treatment for metastatic LSM, demonstrating a positive impact on overall patient survival. Regardless of the many benefits that ICIs offer, they can trigger diverse adverse reactions across various organs. Cutaneous involvement is the most common, affecting 30-60% of patients. Photosensitivity, an uncommon adverse effect associated with anti-PD-1, is recognized as photoinduced dermatitis that arises through mechanisms of phototoxicity and photoallergy secondary to ultraviolet light A (UVA).

Conclusion:

Current treatment protocols for melanoma often involve ICIs, known to induce a range of immune-mediated adverse reactions. Cutaneous reactions are the most frequent, but fortunately, most are mild or moderate. Early identification of these adverse effects is crucial to ensure patient adherence to treatment and improve quality of life.



**Abstract N°: 2421****A case of terbinafine induced photoallergy**Madeleine Stark¹, Dédée Murrell²¹St George Hospital, Department of Dermatology, Kogarah, Australia, ²St George Hospital, Dermatology, Kogarah, Australia**Introduction & Objectives:**

Terbinafine is an allylamine antifungal commonly prescribed either topically or orally to treat dermatophyte infections. This case presents a photoallergic drug reaction secondary to oral terbinafine that may have been exacerbated by the accompanying topical terbinafine.

Materials & Methods:

We report a case of a 68-year-old who presented to our clinic with a photoallergic drug reaction to oral terbinafine.

Results:

A 68-year-old woman was prescribed oral terbinafine in addition to topical terbinafine for a widespread intensely pruritic tinea incognito infection which had been mistakenly treated with topical corticosteroids for a prolonged duration. She had been applying topical terbinafine to affected areas for two weeks. She had noted symptomatic improvement over her abdomen and groin but minimal improvement over her arms, legs and chest. Routine bloods were reviewed and oral terbinafine was prescribed additionally in light of widespread nature of infection. Over the next seven days she felt increasingly unwell, with fatigue and nausea. She also began to develop worsening erythema, oedema and eventually cutaneous pain over her arms, legs and upper chest. She did not report any fevers, any mucosal involvement or any blistering. She was reviewed and found to have a violaceous erythematous oedematous finely scaled rash over sun-exposed regions with a clear photo-exposed distribution. A full blood count, electrolyte/urea/creatinine, liver function tests, calcium/magnesium/phosphate and C-reactive protein were reviewed, and no issues were identified, with normal liver function tests and eosinophils. Two punch biopsies were sent for H&E and showed a subacute spongiotic dermatitis and was consistent with a photoallergic drug rash. She was advised to cease the topical and oral terbinafine, minimise her sun exposure and was commenced on oral prednisolone 0.5 mg/ kg, a topical corticosteroid twice daily and oral cetirizine. She noted marked symptomatic improvement with these measures and her rash began to resolve over the following weeks.

Conclusion:

There have been isolated case reports of terbinafine precipitating photosensitive skin rashes, including systemic lupus erythematosus, cutaneous lupus erythematosus, photoallergic, phototoxic and photo-distributed acute generalised exanthematous pustulosis. This case reiterates the importance of awareness of this rare complication. This case also raises the possibility that the topically applied terbinafine may have exacerbated the photosensitive rash as this patient noted significant improvement in areas not exposed to the sun with application of topical terbinafine but had no symptomatic improvement in the rash in areas exposed to the sun, even prior to the commencement of the oral terbinafine.

**Abstract N°: 2431****Guselkumab-associated bullous pemphigoid in a psoriasis patient: A case report.**

Wagner Jan Nicolai¹, Hatice Birkner¹, Matthias Augustin¹

¹University Clinic Hamburg-Eppendorf, Institute for Health Services Research in Dermatology and Nursing (IVDP), Hamburg

Introduction & Objectives:

Drug-induced bullous pemphigoid (DPB) linked to biologics used to treat psoriasis is a rare occurrence. DPB has been primarily associated with anti-TNF- α drugs, anti-IL 12, and anti-IL23, and has been reported once in relation to guselkumab (anti-IL23) before. In this case, a 53-year-old male patient with severe psoriasis (PASI 22.3) and psoriatic arthritis developed generalized tense bullae and erosion 8 weeks after the initiation of guselkumab therapy.

Materials & Methods:

Bullous pemphigoid (BP) was confirmed through histology and direct immunofluorescence. Guselkumab administration was temporarily halted and low-dose oral corticosteroid therapy was initiated, along with topical corticosteroid and calcipotriol therapy. Despite the initial improvement in skin and joint symptoms, tense bullae reappeared after the third dose of Guselkumab. The patient was switched to risankizumab and has not experienced any skin abnormalities thus far. DBP typically occurs when a patient on polypharmacy starts taking a new medication, as illustrated in the case study. Furthermore, DBP responds quickly to steroid therapy and may relapse spontaneously if the medication is discontinued.

Results:

Up to date, DBP has been described after biological therapy for psoriasis in 17 patients, following administration of ustekinumab, efalizumab, etanercept, secukinumab, adalimumab, risankizumab and guselkumab. There are also some cases of recurrence of BP under therapy of psoriasis with IL-17A inhibitors, but not for IL-23 inhibitors

Conclusion:

This case shows the rare side effect of the development of DBP in a patient being treated with guselkumab.





Abstract N°: 2659

Autoimmune thyroid disorder after DRESS/SCAR in chinese patients, a retrospective study

Sze-Man Christina Wong¹, Yuk Ming Lau², Henry HI Chan³

¹Queen Mary Hospital, Dermatology, Hong Kong, ²Queen Mary Hospital, Medicine, Hong Kong, ³The University of Hong Kong (HKU), Medicine, Hong Kong

Autoimmune thyroid disorder after SCAR/DRESS in Chinese patients , a retrospective study

Introduction & Objectives:

Either Drug reaction with eosinophilia and systemic symptoms (DRESS) or AGEP (acute generalized exanthematous pustulosis) is one of the severe cutaneous adverse reactions (SCAR), with mortality up to 10%. Autoimmune thyroid disorder has been described as one of the commonest long-term sequelae after DRESS. We aimed to investigate the incidence of autoimmune thyroid disorder in Asian patients after recovery of DRESS or AGEP and its association and characteristics.

Materials & Methods:

It was a retrospective study in a single academic acute hospital. All attending Asian patients who have been admitted between 2018 and 2023 with a diagnosis of SCAR, DRESS or AGEP were identified. The medical records were reviewed by independent dermatologists. Patients' demographics, disease onset, duration of follow up, culprit drugs, medical history and newly diagnosed diseases including thyroid disorders after DRESS /AGEP were analyzed

Results:

Twenty-two cases were identified with SCAR: 11 AGEP, 10 DRESS, 1 severe drug induced urticaria; with a mean age of disease onset =59 years (15-92), 15 (68.2%) female, 21 (95.4%) of Chinese ethnicity. The drug reaction occurs 12.8+/-9.2 days after new drug initiated. The most common culprits were antibiotics (12, 54.5%), allopurinol/febuxostat (5, 22.7%), and antifungal /antiviral 1(3,13.6%).

Skin biopsies were performed in 10 cases (4 interface dermatitis with eosinophils, 6 subcorneal pustulosis). Follow up allergy test was performed in 3 cases (13.6%)

Corticosteroid, Cs (prednisolone or equivalent) was prescribed in all 10 cases of DRESS. Duration of prednisolone prescription was 8 weeks after diagnosis (median, range 1-5 weeks). Three had acute kidney injury (AKI), 6 deranged Liver function and 1 had HHV6 reactivation. Steroid sparing systemic treatment such as Acitretin, methotrexate, cyclosporine has been prescribed in these cases.

Out of 22 cases, 1 (4.5%) had newly developed Hashimoto's thyroiditis. She presented with fever, urticaria and facial puffiness, lethargy, constipation and weight gain which occurred 5 months post DRESS (triggered by allopurinol). Blood investigation showed very high TSH, low white cell count, markedly raised anti TPO and TG antibodies, but negative TSR Ab. She was treated with thyroxine and recovered well. Two patients have hypothyroidism on T4 replacement before onset of DRESS (F/87, triggered by sulphasalazine, known Hashimoto's thyroiditis) and AGEP (F/60, triggered by amoxicillin/augmentin, known non specific hypothyroidism) respectively.

Conclusion:

Autoimmune thyroid disorder could develop after severe drug reaction particularly, DRESS in Chinese. Close monitoring of this potential disorder is important in patients received from DRESS. Larger prospective study or DRESS registry is warranted.

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**Abstract N°: 2702****Lamotrigine induced toxidermia, about 5 cases**

Dali Osmane Rima^{*1}, Sahel Houria²

¹Chu Maillot, Dermatology , Bab El Oued, Algeria, ²Chu Maillot, Bab El Oued, Algeria

Introduction & Objectives:

Lamotrigine is an antiepileptic and mood stabilizer commonly prescribed for epilepsy and bipolar disorders. This medicine could induce multiples skin reactions, some of which are serious, such as epidermal necrolysis (Stevens Johnson and Lyell syndromes) and the Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS).

To decrease this risk, prescription rules were well defined before its marketing authorization, which must be respected by any prescriber.

The objective of our study is to better describe lamotrigine induced skin reactions.

Materials & Methods:

This is a retrospective descriptive study of patients hospitalized in our department for lamotrigine induced toxidermia between March 2021 and December 2023.

Results:

We collected five patients with sex-ratio M/F 1.5 (M 60%, F 40%); average age of 37 years with extremes (23-64), 80% of whom are under 50 years old.

No patient had a history of drug allergy,

Polypharmacy and the association with sodium valproate have been reported in 40% of patients.

The onset of skin reactions was within 21 days after starting lamotrigine in all our patients, with a median of 14 days (7 – 21).

Toxidermia was represented by DRESS in 40% of cases, LYELL in 20% of cases, maculopapular exanthema in 20% and vasculitis in 20% of cases.

Mucosal injury was present in 60% of patients

Although complications were observed in 40% of patients in the form of liver damage and deterioration of general condition, no death was recorded in our series.

Discussion:

Lamotrigine could sometimes induce very severe adverse skin effects which generally occur within the first 8 weeks after initiation of treatment; such as our study, all skin reactions appeared within first 21 days.

If the majority of eruptions are benign in the form of maculopapular exanthema, serious life-threatening skin rashes such as Lyell syndrome, Stevens-Johnson syndrome (SJS), and drug hypersensitivity syndrome with eosinophilia and systemic symptoms (DRESS), have also been reported.

The risk of serious skin reactions would be explained by high initial doses exceeding the recommended dose escalation schedule, this was the case of one of our patients (LYELL).

The risk is also increased when lamotrigine is combined with sodium valproate; this latter one reduces the metabolism of lamotrigine by inhibiting its glucuronidation and increases its half-life.

A retrospective study on the international Pharmacovigilance database suggests that the association with valproate increases the risk of SJS/LYELL; this was observed in two of our patients (1 DRESS and 1 LYELL).

The risk of lamotrigine induced skin reactions is also increased in patients with a history of allergy or rashes with other antiepileptic drugs; in our populations none of patients had a drug allergy.

This risk is also high in the pediatric population unlike our series which only included adults.

Conclusion:

In light of our results and according to the incidence's increasing of serious cases of skin reactions related to lamotrigine, the prescription of the latter must respect the following recommendations: dose escalation, evaluate all patients presenting a skin rash related to lamotrigine, definitively stop the medicine as early as possible and never reintroduce when it is suspected being the cause of rash.

The association between lamotrigine and valproate is not recommended.

It would be necessary and certainly beneficial to raise awareness among psychiatrists and neurologists colleagues.

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**Abstract N°: 2852****Fluconazole induced fixed drug eruption: An exceedingly rare presentation**Tasleem Arif¹¹Dar As Sihha Medical center., Department of Dermatology, STDs, Leprosy and Aesthetics., Dammam, Saudi Arabia

Introduction & Objectives: Fixed drug eruption (FDE) is a type of cutaneous drug eruption in which single or multiple skin lesions occur at the same site each time a drug is taken. Pathogenetically, FDE is thought to be a delayed hypersensitivity reaction mediated by T-lymphocyte CD8-cells, where the culprit drug induces local reactivation of memory T-cell lymphocytes in epidermal and dermal tissues. The most common drugs causing FDE are antibiotics and nonsteroidal anti-inflammatory drugs (NSAIDs). The lesions recur at the same site/s, usually within half hour to 12 hours post-drug exposure. Burning and pruritis may precede the appearance of the cutaneous lesions. Resolution of lesions is usually followed by post-inflammatory pigmentation. The most commonly affected sites include hands, feet, genitalia, and perineal area. Fluconazole is one of the common antifungal drugs used in dermatology practice with only a handful of cases of FDE reported from it till date. FDE due to fluconazole has rarely been described in literature, hence obliged to report this case.

Materials & Methods: A 31-year-old male presented to our dermatology clinic with a history of rash involving right foot and genitals of two days duration. The skin lesions were associated with burning and itching. There was history of drug intake (2 doses of tab fluconazole 50 mg together) prescribed by a non-health care worker for some dermatosis and next day started with skin lesions. There was a history of similar lesions in the past (1 month back) when the lesions developed after 3 days of taking same medication. However, the previous episode was less severe than the present one. There was no history of fever or any medications. On cutaneous examination, there were well-defined erythematous as well as dusky violaceous plaques of variable size present over dorsal and plantar aspects of right foot, scrotum and glans and adjacent area of penile shaft. At some places, bullous lesions were noted. Based on history and clinical examination, a diagnosis of FDE due to fluconazole was made and the patient was advised to stop the offending drug.

Results: He was treated with prednisolone 30 mg/day (which was tapered after one week), combination of fusidic acid and hydrocortisone ointment to be applied twice a day, and oral fexofenadine 180mg. At 10 days follow up, there was near complete recovery leaving behind post-inflammatory hyperpigmentation.

Conclusion: FDE to fluconazole has rarely been reported. Caution needs to be exercised as cross-reaction may occur with structurally related drug (itraconazole). This case emphasizes to create awareness among dermatologists about the various adverse effects due to commonly prescribed medications like fluconazole.



**Abstract N°: 3020****Doxycycline induced generalized morbilliform rash simulating viral exanthem.**Tasleem Arif¹¹Dar As Sihha Medical Center., Department of Dermatology, STDs, Leprosy and Aesthetics., Dammam, Saudi Arabia

Introduction & Objectives: Morbilliform rash (Syn: maculopapular eruption, exanthematous rash) is considered the most common type of skin rash following drug therapy. More than 80% of drug rashes are known to be morbilliform in nature. Since, the cutaneous eruption resembles that of a viral exanthem (e.g., measles), hence the term “morbilliform” has been used to describe such type of drug rash. 1-5 % of patients exposed to a drug for the first time develop morbilliform drug rash. Most common drugs which cause morbilliform drug rash include antibiotics, [non-steroidal antiinflammatory drugs](#), antivira, etc. The cutaneous rash usually occurs within 7-10 days (can vary from 5-21 days) after intake of offending drug. However, it can develop after one week of stopping it. In case of re-exposure to the causative drug or chemically-alike drug, cutaneous eruption usually occurs earlier (within one to three days). In this article, a rare case of doxycycline induced generalised morbilliform rash has been described.

Materials & Methods: A 16-year-old male presented with generalised erythematous rash over neck, trunk and limbs of two weeks duration associated with mild pruritis. An elaborated history was taken from the patient which revealed that patient has been taking doxycycline and applying some topical medications prescribed for acne vulgaris. He denied any medical history. There was no history of fever. On clinical examination, there was generalized erythematous macular and papular rash present over neck, trunk, upper and lower limbs including palms and sparsely soles, sparing face and scalp. At some places macules and papules were discrete while at other places they have coalesced to form plaques.

Results: His laboratory tests revealed mild peripheral eosinophilia of 7% (normal range 1-6%) and urine examination showed microscopic hematuria (8-10 RBCs/high power field). Internal medicine consultation for hematuria revealed no abnormality in renal function test and abdominal ultrasonography. Skin biopsy showed epidermis with mild acanthosis, mild focal spongiosis, and lymphocytic exocytosis. There was superficial and mid dermal perivascular, peri-appendageal and interstitial infiltration of lymphocytes, plasma cells and eosinophils. Vascular congestion and purpuric lesions were also noted. Based on drug history, clinical examination and histopathological findings, doxycycline induced generalised morbilliform rash was made. He was treated with oral prednisolone 30mg/day (which was tapered after 1 week and continued for further 2 weeks), fexofenadine 180mg and mid-potent steroids mixed with emollients (in 1:1 ratio) to be applied twice a day. At 3 weeks follow up, he showed excellent response to treatment with near complete resolution of rash.

Conclusion: Generalized morbilliform rash is a commonly encountered presentation in routine

dermatological practice. To differentiate between its two most common causes (drug-induced and viral), most often remains a diagnostic challenge. History, clinical, and histopathological findings may help to arrive at the correct diagnosis but are usually inadequate in distinguishing between these two. Additionally, this case illustrates a rare adverse drug reaction due to doxycycline, a commonly prescribed antibiotic in dermatological practice. Thus, a caution should be exercised while prescribing doxycycline

**Abstract N°: 3086****Drug induced Fuchs Syndrome - A novel case report**Tasleem Arif¹

¹Dar As Sihha Medical Center., Department of Dermatology, STDs, Leprosy and Aesthetics., Dammam, Saudi Arabia

Introduction & Objectives: Fuchs syndrome {Syn: mucositis associated with *Mycoplasma pneumoniae*, incomplete Steven-Johnson syndrome (SJS), atypical SJS, erythema multiforme (EM) major} is defined as SJS affecting only mucosae without skin lesions and has been considered to be a variant of EM major. Although, it is not an uncommon condition; but it is either under-recognized or under-reported in the medical literature. It primarily affects the oral mucosa which is characterised by erythematous, erosive and ulcerative lesions which are sometimes accompanied by a yellowish coating. In case skin is involved, mucosal lesions tend to predominate. Though, oral mucosal involvement is a rule, genital and ocular lesions occur respectively in two-thirds and three-fourths of the cases. Infections (herpes simplex and *M. pneumoniae*) are believed to be the* major triggering agents. However, some drugs, especially non-steroidal anti-inflammatory drugs (NSAIDs) and penicillin, have been incriminated as doubtful causative agents. Since, several drugs have been established to be the cause for SJS and EM major; thus considering FS as a variant of these two implies that FS can also be caused by such drugs. Here in, the author describes a case of FS due to NSAIDs.

Materials & Methods: A 35-year-old male was referred from Otolaryngology clinic to our dermatology clinic due to worsening of oral mucosal ulcerations despite treatment. Chronologically, after tracking his medical history, the patient revealed that he had left flank pain before nine days for which he was empirically treated by a general physician on the lines of ureteric calculi with parenteral Lornoxicam (an NSAID), buscopan and IV fluids as his urine examination had revealed hematuria. After 5 days, he reported to otolaryngology clinic, with history of fever and severe painful oral ulcerations associated with odynophagia and was managed with parenteral lornoxicam and ceftriaxone. After 3 days of treatment, patient reported worsening of lesions and hence was referred to dermatology clinic. On examination, there were multiple ulcers of variable size and shape present over mucosal aspect of upper and lower lips; and gingival, buccal, palatal and pharyngeal mucosae. Most of the ulcers were studded with whitish to creamy-white slough. There were superficial ulcerations over the junction of glans and penile shaft. There was a single bulla over left thumb; however, patient was not aware of it and couldn't give history of its onset. Whether it was related to mucosal lesions or it was work related, couldn't be established.

Results: His laboratory work up was normal except for raised ESR (43 mm/1st hour) and positive C-reactive protein besides hematuria. Based on history and clinical examination, FS/EM major due to lornoxicam was made. He was treated with injection dexamethasone (8mg) stat, oral prednisolone 30mg/day, fluconazole 150mg and miconazole oral gel (to prevent/treat oral candidiasis); fusidic acid ointment and chlorhexidine mouthwash. At 2 weeks follow up, there was almost complete resolution of the lesions without any complications.

Conclusion: The author believes that FS being a variant of EM major or SJS, can also be induced by those drugs which are known to cause EM major or SJS especially NSAIDs as in the present case. This condition is under-diagnosed as well as under-reported probably due to multiple terminologies involved and thus causing diagnostic confusion. Considering it to be EM major can avoid such controversy.



**Abstract N°: 3138**

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Yumei Liu¹, Manqi Xia¹, Xin Tian¹¹Guangzhou Dermatology Hospital, dermatology, Guangzhou**Lichenoid drug eruption caused by ustekinumab: a case report****Introduction & Objectives:**

Ustekinumab (UST) is a fully human monoclonal antibody against the common p40 subunit of interleukin IL-12 and IL-23, with exact efficacy for psoriasis by inhibiting Th1 and Th17/Th22 responses. With its increased use, an awareness and understanding of adverse events is critical in guiding treatment and further management. This is the first report of LDE caused by ustekinumab and the case was successfully treated by upadacitinib, a selective jak inhibitor.

Materials & Methods:

A 69-year-old man was diagnosed with plaque psoriasis and completely controlled by ustekinumab for 4 dose. 1 year later, recurrence of psoriasis was observed and ustekinumab was restarted. However, intense pruritic rash occurred since five days after the first injection. Physical examination revealed multiple, polygonal, erythematous papules on the trunk and extremities. A skin biopsy revealed liquefaction of basal cell with superficial dermis perivascular lymphocytic infiltrate. We diagnosed the patient with a LDE caused by ustekinumab.

Results:

Ustekinumab was discontinued, both psoriasis and LDE rashes were largely resolved after the administration of oral upadacitinib at 15mg daily for 1 month.

Conclusion:

In light of our case, clinicians should be aware of the potential risk of LDE when using ustekinumab. Jak inhibitors may provide new treatment options in cases where LDE and psoriasis coexist.



**Abstract N°: 3260****A Case Report: Multidisciplinary approach for treating a patient with toxic epidermal necrolysis in an inpatient clinic at the Department of Dermatovenereology.**

Mirjana Sekulovski¹, Maja Pavić¹, Bepa Pavlić¹, Mara Drnas¹, Adela Markota Čagalj¹, Iva Bojčić¹, Lina Mirić Kovačević¹

¹University Hospital Split, Dermatovenereology, Split, Croatia

Introduction:

Stevens-Johnson syndrome, overlap syndrome, and toxic epidermal necrolysis (TEN) are potentially fatal mucocutaneous reactions of hypersensitivity to drugs. They are characterized by the separation of the epidermis from the dermis with the formation of bullae and erosions on the skin. TEN is the most severe form, which affects more than 30% of the skin's surface. Given its severity, patients diagnosed with TEN are most commonly hospitalized in the intensive care unit (ICU), where a multidisciplinary approach is key in successfully treating this life-threatening condition.

Case presentation:

A 34-year-old male presented to the emergency room with a generalized rash, fever, and a sore throat. It is important to note that he was diagnosed with prostatitis 15 days earlier and was treated with ciprofloxacin. A physical exam revealed diffuse erythematous macular exanthems with localized formation of atypical "target-shaped" lesions, erosions on his lips and oral mucosa, and conjunctival injection. After being diagnosed with TEN, the patient was admitted to the ICU, where he received intravenous immunoglobulins and systemic corticosteroids. On the second day of treatment, he was transferred to the dermatovenereology inpatient department. Despite optimal dermatological therapy, daily care, consultations with urologists, immunologists, psychiatrists, and daily ophthalmologic consultations, the patient developed only ophthalmological complications, which were inevitable due to the nature and transgression of the disease.

Conclusion:

Dermatovenereology is usually considered an outpatient discipline with a low mortality rate. However, some conditions, like TEN, although rare in clinical practice, demand intensive, multidisciplinary care for successful clinical outcomes. Early diagnosis and interdisciplinary collaboration among specialists are pivotal in enhancing patient survival rates and minimizing complications in TEN management.

Keywords: TEN, toxic epidermal necrolysis





Abstract N°: 3264

Post SARS-CoV-2 vaccination Erythema multiforme (EM) - like lesions in a psoriatic patient undergoing IL-17 inhibitor treatment.

Katerina Grafanaki^{*1}, Eleni Tsopanidou¹, Eleni Valyri - Valyraki¹, Nikolitsa Darioti¹

¹University Hospital of Patras, School of Medicine, Department of Dermatology - Venereology, Patras, Greece

Post SARS-CoV-2 vaccination Erythema multiforme (EM) - like lesions in a psoriatic patient undergoing IL-17 inhibitor treatment.

Introduction & Objectives: The most common reported reactions to COVID-19 vaccination include local injection site reaction, delayed injection site reaction, urticaria, and morbilliform eruptions. Psoriasis is an immune-mediated disorder with an underlying genetic predisposition. T cell mediated immunity through Th1, Th17 and CD8+ immune response is protective against viruses and is elicited by vaccination. However, TNF- α and pro-inflammatory IL-23 upregulation induce Th17 cell activation and subsequent IL-17 production, which are implicated in psoriasis, a chronic inflammatory skin disease. Herein we present following SARS-CoV-2 vaccination, a psoriatic patient undergoing IL-17 inhibitor treatment who developed erythema multiforme (EM)-like lesions.

Materials & Methods: A 55-year-old Caucasian male with psoriasis, was referred to our Dermatology Department due to erythema multiforme (EM) - like lesions, following vaccination against SARS-CoV2.

The lesions appeared 9 days post-vaccination and were targetoid, edematous papules distributed mainly at the back of the patient but also acraly, without palm, sole or mucosal involvement. The patient had no previous pharmacological or other allergies and the medication for his comorbidities were the same for more than a few years.

Results: Skin biopsy revealed spongiotic type dermatitis, with vacuolar degeneration of basal keratinocytes and moderate dermal perivascular and along the dermo-epidermal junction lymphocytic infiltrate, and few eosinophils. Treatment of these eruptions with corticosteroids led to a mean resolution of lesions within approximately 3 weeks.

Conclusion: The pathogenic mechanism underlying the coexistence of psoriasis, EM-like lesions in combination with vaccination and anti-IL-17 inhibitor therapy need to be further elucidated. Importantly however, the potential adverse effects of vaccinations, which can be predicted and controlled, should not preclude the benefits of vaccination.





Abstract N°: 3281

Functional outcomes in patients with epidermal necrolysis

Hui Kai Koh^{*1}, Zi Teng Chai¹, Haur Yueh Lee¹

¹Singapore General Hospital, Singapore, Singapore

Introduction & Objectives:

Epidermal necrolysis is a rare severe cutaneous adverse reaction associated with significant mortality and morbidity. It is increasingly recognized that survivors develop long term sequelae such as mucocutaneous and ophthalmologic scarring and post-traumatic stress disorder. Little is known, however, about their functional recovery and resumption of baseline activities. The present study, therefore, aims to evaluate the impact of epidermal necrolysis on the functional outcomes of survivors including their mobility, independence in activities of daily living (ADL), swallowing, speech and nutrition and identify risk factors for their impairment.

Materials & Methods:

This was a retrospective cohort study conducted over a 7-year period from 2017 – 2023 at a national referral center. Referrals to physiotherapists, occupational therapists, speech therapists and dietitians were based on clinician discretion. Outcomes relating to mobility, ADL independence, swallowing, speech and nutrition were extracted from reviews by the allied health professionals.

Results:

Between 2017 and 2023, 43 patients were recruited. Thirty (69.8%) patients were referred to the physiotherapist. Among the 28 patients who were pre-morbidly ambulant in this group, there was improvement from only 4 (14.3%) patients who could achieve their pre-morbid mobility on first physiotherapist session to 10 (35.7%) patients on the last physiotherapy session prior to discharge. Nevertheless, 18 (64.3%) patients still required assistance with mobility on hospital discharge. Nineteen (44.2%) patients were referred to the occupational therapist. Among the 18 patients who were pre-morbidly ADL independent in this group, there was improvement from only 3 (16.7%) patients who could achieve their baseline functional status on first occupational therapist session to 6 (33.3%) patients on the last occupational therapist session prior to discharge. However, 12 (66.7%) patients still needed ADL assistance on hospital discharge. Twenty-seven (96.4%) out of 28 patients who saw the speech therapist on admission were assessed to have dysphagia. On discharge, 16 (57.1%) patients still had dysphagia. Seven (26.9%) out of 26 patients who had initial speech assessment had residual speech impairment on discharge. The majority of patients [18/22 (81.8%)] who had weight measurements before and after hospitalisation lost weight. Older age ($p=0.02$) and higher SCORTEN ($p=0.04$) were associated with swallowing impairment on discharge. Older age ($p=0.004$), higher SCORTEN ($p=0.03$), hypertension ($p=0.01$), diabetes mellitus ($p=0.05$) and higher Charlson Comorbidity Index ($p=0.001$) were associated with speech impairment on discharge. There were no significant variables identified that were associated with loss of baseline mobility, ADL independence or weight loss on discharge.

Conclusion:

Survivors of epidermal necrolysis experience significant functional decline. Early rehabilitation through physiotherapy and occupational therapy interventions demonstrates potential in mitigating the physical and functional deficits observed. Given the high incidence of dysphagia, early and routine screening should be advocated for patients with epidermal necrolysis, especially those who are older with higher SCORTEN. Nutritional

supplementation should be considered to reduce the risks of malnutrition.

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Abstract N°: 3349

Immune checkpoint inhibitor-induced severe epidermal necrolysis mediated by macrophage-derived CXCL10 and abated by TNF- α blockade

Chun-Bing Chen¹

¹Linkou Chang Gung Memorial Hospital, Department of Dermatology, Drug Hypersensitivity Clinical and Research Center, Taoyuan, Taiwan

Introduction & Objectives:

Immune checkpoint inhibitors (ICI), such as antibodies against cytotoxic T lymphocyte-associated molecule 4 (CTLA-4), programmed cell death protein 1 (PD-1), and programmed death-ligand 1 (PD-L1), represent a new class of anticancer agents and have been approved to treat various advanced cancers. Although ICI are effective across several cancer types, they can still induce autoimmune-like toxicities referred as immune-related adverse events (irAEs) classified by different clinical features, including life-threatening severe cutaneous adverse reaction (SCAR), such as Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN). To date, there is no consensus for the management of ICI-induced SCAR. Although systemic corticosteroids remain the recommended first-line treatment for irAEs, the use of systemic corticosteroids to treat SJS/TEN remains controversial. Moreover, patients who suffer from ICI-induced SJS/TEN are often forced to interrupt ICI therapy. Currently, no strategy has been developed to prevent SCAR induced by ICI. In this study, we investigated the immune mechanism of patients with ICI-induced severe epidermal necrolysis. Our results led to the discovery of potential therapeutic targets and method as well as prevention strategies for this important adverse event associated with promising cancer immunotherapy.

Materials & Methods:

In this study, we performed scRNA-seq for comprehensive analysis of immune cell populations obtained from patients undergoing ICI therapy who experienced irAEs, with a specific focus on SJS/TEN. The scRNA-seq results were confirmed by flow cytometry, cytokine array/enzyme-linked immunosorbent assay (ELISA), immunofluorescence, and *ex vivo* lymphocyte activation studies. A total of 148 participants were enrolled in this study, including 25 patients with ICI-induced SJS/TEN, 41 patients with mild ICI-induced cADR, 46 ICI-tolerant patients; 15 burn subjects, 18 healthy donors.

Results:

We examined 6 cohorts within 25 ICI-induced SJS/TEN patients and conducted single-cell RNA sequencing (scRNA-seq) analysis, which revealed overexpression of macrophage-derived CXCL10 that recruited CXCR3+ cytotoxic T lymphocytes (CTL) in blister cells from ICI-SJS/TEN skin lesions. ScRNA expression profiles and *ex vivo* blocking studies further identified TNF- α signaling as the key pathway responsible for macrophage-derived CXCL10 and CTL activation. Compared with systemic corticosteroids treatment, ICI-induced SJS/TEN patients treated with biologic TNF- α blockade showed a significantly rapid recovery and no recurrence of SCAR with continuous ICI therapy.

Conclusion:

Our findings identified that macrophage-eliciting CTL contribute the pathogenesis of ICI-induced epidermal necrolysis and provide the therapeutic targets for the management and prevention of SCAR induced by ICI therapy.



**Abstract N°: 3431****A Case Report of Acute generalised exanthematous pustulosis**Miglė Jarašūnienė¹, Jonas Lauraitis¹, Raimundas Meskauskas², Tadas Raudonis¹¹Vilnius University, Centre of Dermatovenereology, ²National Centre of Pathology

Introduction & Objectives: BACKGROUND: Acute generalized exanthematous pustulosis (AGEP) is a severe, usually drug-related reaction, characterized by an acute onset of mainly small non-follicular pustules on an erythematous base and spontaneous resolution usually within two weeks. Systemic involvement occurs in about 20% of cases. The prevalence reportedly is one to five cases per million per year. AGEP has been reported more frequently in females, with a mean age of 56 years. In approximately 90% of cases, AGEP is caused by medications, most often antibiotics (aminopenicillins and macrolides), antifungals, calcium channel blocker diltiazem, and antimalarials; however, bacteria, viruses, parasites (parvovirus B19, mycoplasma, CMV, coxsackie B4, chlamydia pneumoniae, E. coli etc.) have been associated with this condition as well. Typically, within 48 hours of ingesting the causative medication, there is acute onset of fever and pustulosis with leukocytosis. Clinically, it may appear as edema and erythema followed by the eruption of multiple punctate, non-follicular, sterile pustules and subsequent desquamation. Histologic findings include intracorneal, subcorneal, and intraepidermal pustules with papillary dermal edema containing neutrophils and eosinophils. Treatment focuses on removal of the causative drug, supportive care, infection prevention, and the often-beneficial use of a potent topical steroid.

Here, we report a case of AGEP that developed as a side effect of drugs.

Materials & Methods:

CASE REPORT: A 37-year-old woman presented with pruritic lesions on the face, back and trunk, swelling of the face and tongue. The patient had a history of spinal radiculopathy. Therefore, she had been treated with diazepam, diclofenac, aminophylline, amitriptyline, carbamazepine. About 24 hours later she experienced an onset of fever with acute eruptions that appeared on her face and trunk. There was no history of psoriasis, previous medication allergy. She had not used any new soaps, shampoos, or laundry detergents before the skin reaction appeared. Histology showed papillary dermal edema containing neutrophils and eosinophils. Physical examination revealed yellow non-follicular pustules about 1-2 mm in diameter on her face, isolated pustules on the back and around the ears, diffuse macules on the trunk, exanthema spreading into erythrodermal areas. The examination of other systems was unremarkable. Her axillary temperature was 37.6°C. The laboratory results showed leukocytosis ($17 \times 10^9/L$, 84 % neutrophils) eosinophilia ($0,8 \times 10^9/L$) and an increased C-reactive protein level. The diagnosis of acute generalised exanthematous pustulosis was made. Treatment with dexamethasone 4 mg/day was administered for 5 days. In addition, topical therapy of fucidic acid, oral antihistaminic were used.

Results: Within 4 days of the treatment, there were no new pustules, and the healing was complete within 10 days with exfoliation.

Conclusion: AGEP is a rare dermatosis. Medical history and clinical findings are sufficient to establish the diagnosis. The most common cause of AGEP is medication reaction (β -lactam antibiotics, macrolides, quinolones, diltiazem, antimalarials). Removal of the provoking factor leads to a successful and effective treatment.



**Abstract N°: 3475****Flagellate dermatitis following intravesical immunotherapy of Bacillus Calmette Guérin**Rajaa Bousmara*¹, Mohamed Dridba², Annie Vermersch Langlin¹¹HC Jean Eric Techer , Dermatology and Venereology , Calais, France,²HC Jean Eric Techer , Anatomical Pathology, Calais, France**Introduction & Objectives:**

Intravesical Bacille Calmette-Guérin (BCG) immunotherapy stands as a cornerstone in the management of early-stage bladder cancer, renowned for its efficacy and generally favorable safety profile. However, despite its established benefits, BCG therapy is not devoid of adverse effects, which can manifest locally or systemically. We present herein a unique case of flagellate dermatitis, a novel cutaneous complication following intravesical BCG administration. To our knowledge, this represents the first documented instance of such a reaction in the context of BCG therapy.

Results:

A 56-year-old male with no significant past medical history except for 17-year smoking history was evaluated for hematuria. Ultrasound revealed a polyps in the bladder. The patient underwent transurethral resection of the bladder tumor. Histological examination revealed urothelial cell carcinoma (grade 2), without vascular or muscle invasion.

The patient started adjuvant immunotherapy with intravesical instillation of BCG every week to minimize the risk of disease recurrence. Unfortunately, four days after the second BCG instillation, he presented with asymptomatic linear cutaneous eruption on his right buttock and abdomen which spread to the right leg. The patient had no history of dermatological disease and denied consuming Shiitake mushrooms or using topical medication.

Physical examination revealed erythematous papules that were linear in shape with a flagellate arrangement on the right leg, most prominent on posterior aspect of the right leg and linear hyperpigmentation following the initial erythema in the right buttock.

Histopathological evaluation of skin punch biopsy revealed a parakeratotic epidermis, the underlying dermis is infiltrated by a few small clusters of inflammatory elements of the lymphocytic type with a predominant perivascular arrangement. The eruption resolved after discontinuation of BCG therapy and treatment with topical corticosteroids.

Conclusion:

Flagellate dermatitis is a rare skin rash. Chemotherapy-induced flagellate dermatitis predominantly occurs following the administration of bleomycin, docetaxel, doxorubicin, trastuzumab, bendamustine and cisplatin. This case highlights a new culprit drug of flagellate dermatitis. Dermatologists should be aware of this potential cutaneous complication of BCG therapy.





Abstract N°: 3487

Decoding Beta-Lactam cross reactivity - Longitudinal Patch Testing updated from 2000-2022

João Soares^{1, 2}, André Aparício Martins¹, Carolina Figueiredo¹, André Pinho^{1, 2}, Margarida Gonçalo^{1, 2}

¹Unidade Local de Saúde de Coimbra - Hospitais da Universidade, Coimbra, Portugal, ²Faculty of Medicine of the University of Coimbra, Coimbra, Portugal

Introduction & Objectives:

Patients with hypersensitivity to Beta-lactam antibiotics (β L) often avoid all β L, with limitations for future therapy. We sought to assess cross-reactivity between β L in non-immediate cutaneous adverse drug reactions (ni-CADR).

Materials & Methods:

Retrospective analysis (2000-2022) of patients with suspected ni-CADR to β L who underwent patch testing (PT) with an extended antibiotic series (10%pet., Chemotechnique diagnostics® and in-house preparation) according to ESCD recommendations. Fisher exact test was used with a significance of 0.05; positive associations were quantified with Odds Ratio (OR) with 95% confidence interval (CI).

Results:

414 patients (270F/144M; mean age 52.1;SD19.3) were included, mostly with maculopapular exanthema (367;88.6%), DRESS (22;5.3%) and AGEP (12;2.9%).

59 patients (14.3%) had 110 positive results: Penicillin G (13), Dicloxacillin (17), Amoxicillin (AMX) (33), Clavulanic Acid (1), Ampicillin (AMP) (19), Piperacillin-Tazobactam (3), Cefalexin (1), Cefradine (3), Cefaclor (1), Cefazoline (1), Cefoxitin (2), Cefuroxime (1), Ceftriaxone (6), Cefotaxime (1), Ceftazidime (1), Ertapenem (1), Meropenem (5) and Imipenem (1).

Co-reactivity within penicillins was almost universal, including between aminopenicillins (AMX-AMP) and Piperacillin-Tazobactam ($p=0.022$, OR:21 CI:3-57).

Aminopenicillin reactivity was associated with Aminocephalosporins ($p=0.001$, OR:33 CI:4-74), Dicloxacillin with Cefalexin ($p=0.041$, OR:24 CI:7-100), Cefuroxime and Cefotaxime ($p=0.041$, OR:12 CI:2-46, both). No reactivity between Piperacillin-Tazobactam and Cephalosporins, neither between Penicillins and Carbapenems.

Co-reactivity within the Cephalosporin subclass was frequent, including Aminocephalosporins and Nonaminocephalosporins, namely Cefradine and Ceftriaxone ($p=0.043$ OR:40 CI:13-409), and exclusively with ceftriaxone and meropenem ($p=0.004$, OR:38 CI:7-272).

Within carbapenems, 1 patient reacted to meropenem and ertapenem, with no extension to Imipenem, as confirmed with a provocation test.

Conclusion:

Co-reactivity, assumed as cross-reactivity, occurred within Penicillin and Cephalosporin subclasses, including between Piperacillin-Tazobactam and remaining Penicillins, which was seldom described.

There was no association between Penicillins and Cephalosporins as a whole, except for Aminopenicillins and Aminocephalosporins, attributable to a similar lateral amino group. We found an unexpected association between

Meropenem and Ceftriaxone, probably a concomitant sensitization.

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Abstract N°: 3512

Paradoxical reaction: Infliximab-induced neutrophilic eccrine hidradenitis

Helena Moreira*¹, Barbara Bozzoli Destro¹, Clarice Kobata¹

¹Irmandade da Santa Casa de Misericórdia de São Paulo, Dermatology, São Paulo, Brazil

Introduction & Objectives:

Neutrophilic Eccrine Hidradenitis (NEH) is a benign, self-limiting neutrophilic dermatosis of unknown etiology. Initially described in association with the administration of systemic chemotherapy, such as cytarabine and bleomycin, in patients undergoing treatment for acute myelogenous leukemia. A paraneoplastic etiology has also been proposed. Over the last two decades, other drugs have been identified as inducers of NEH. Examples include BRAF inhibitors, imatinib, azathioprine, carbamazepine, and ticagrelor. Recently, cases of NEH induced by tumor necrosis factor (TNF)-alpha inhibitor was published; to date, there are two reports induced by adalimumab and only a single report induced by infliximab. NEH is a dermatologic condition characterized by erythematous and edematous papules and plaques on the trunk and/or extremities, which are self-limiting. Histopathology typically demonstrates the presence of an aseptic infiltrate of neutrophils around and within the eccrine secretory coils with epithelial necrosis.

Biologic therapies targeting tumor necrosis factor (TNF)-alpha are mainstay in the treatment of many autoimmune disorders, with increased use of the biologic therapies, a number of authors have reported a variety of cutaneous eruptions with more detail in response to this therapy.

This study aims to discuss a rare case of NEH induced by infliximab in a rheumatoid arthritis patient.

Materials & Methods:

After obtaining consent, the patient's medical records and a skin biopsy were analyzed. Research included a comprehensive literature search on PubMed focusing on drug-induced NEH.

Results:

A 65-year-old Caucasian male diagnosed with erosive rheumatoid arthritis and undergoing treatment with Infliximab developed cutaneous lesions six months after the initiation of therapy. He presented with lesions primarily located on the lower limbs, associated with pruritus. The patient denied the use of any other medications or topical applications prior to the onset of symptoms and reported no systemic symptoms.

Skin examination revealed erythematous papules, nodules and pustules with a perifollicular distribution on the distal aspects of both legs. A skin biopsy revealed findings consistent with NEH, demonstrating an intense neutrophilic exudate, areas of necrosis, and cellular debris disrupting the dermal duct and extending into the deep dermis and hypodermis. Additionally, numerous eosinophils were noted interspersed both interstitially and periadnexal.

The patient experienced intermittent lesion flare-ups and received treatment with topical corticosteroids during exacerbations. As the underlying disease went into remission and despite the persistence of the skin lesions, Infliximab therapy was discontinued. Subsequent follow-up examinations revealed a decrease in the severity of the lesions.

Conclusion:

Although neutrophilic eccrine hidradenitis is a self-limited disease, understanding its diagnosis and its relationships, especially regarding medications, is of utmost importance for the proper management and patient's awareness.

The mechanism underlying this adverse reaction caused by biologic therapies remains unclear, a better understanding of the underlying pathogenesis is needed.

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**Abstract N°: 3579****A rare case of Bullous Baboon Syndrome (SDRIFE) induced by Celecoxib.**

Asmaa Lahrougui¹, Bendaoud Layla¹, Maryem Aboudourib¹, Said Amal¹, Ouafa Hocar¹

¹CHU Marrakech, Dermatology-venerology, Marrakech , Morocco

Introduction & Objectives:

Drug-induced Baboon syndrome, recently renamed Symmetrical Drug-Related Intertriginous and Flexural Exanthema (SDRIFE), is a flexural toxidermia characterized by a symmetrical, intertriginous erythematous rash, the bullous form of which remains exceptional.

We describe a rare case of bullous SDRIFE caused by the use of Celecoxib.

Materials & Methods :

Patient aged 50, with no known drug allergies, followed for inflammatory polyarthralgias treated for the first time with Celecoxib at a dose of 200mg/day.

One day after the first dose of Celecoxib, the patient presented with a pruritic symmetrical erythematous rash, topped by multiple post-bullous erosions, located under the axillary, submammary, inguinal folds, left popliteal fossa and umbilicus.

No mucosal involvement, visceral manifestations or biological disturbances were reported in our patient.

A skin biopsy revealed subcorneal pustules, a superficial perivascular infiltrate of neutrophils and eosinophils, focal basal vacuolar changes and rare keratinocyte apoptosis.

Skin patch tests could not be performed due to self-medication with antihistamines prior to our patient's admission.

The diagnosis of Baboon bullous syndrome induced by the use of Celecoxib was therefore made on the basis of chronological and semiological data, and in the absence of other etiologies explaining the clinical symptomatology.

The patient was treated with antihistamines and dermocorticoids, with good clinical improvement.

Results:

SDRIFE is a T-cell-mediated delayed hypersensitivity drug reaction, the diagnosis of which is based on 5 semiological and chronological criteria: erythema delimited in the gluteal/inguinal region, involvement of at least one large skin fold, symmetrical distribution, onset after initial or repeated exposure to a systemic drug and, finally, absence of signs of systemic involvement.

The most frequently incriminated drugs are beta-lactam antibiotics, chemotherapeutic agents and non-steroidal anti-inflammatory drugs, with an estimated onset time of a few hours to 8 days.

Nevertheless, the bullous form of SDRIFE remains very rare, with the main differential diagnosis being fixed bullous erythema pigmentosa, which is not symmetrically distributed.

Treatment is based on drug discontinuation, antihistamines, local corticosteroids and, in some cases, systemic

corticosteroids.

The prognosis is generally good, although further oral provocation may lead to recurrence.

Conclusion:

Despite its rarity, the diagnosis of SDRIFE should be made in the presence of any pruritic, symmetrical, intertriginous eruption involving drugs of any kind.

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**Abstract N°: 3585****Venous ectasia following the intake of growth hormone : Coincidence or causality?**

Asmaa Lahrougui¹, Bendaoud Layla¹, Maryem Aboudourib¹, Said Amal¹, Ouafa Hocar¹

¹CHU Marrakech, Dermatology-venerology, Marrakech , Morocco

Introduction & Objectives:

Stunting is a frequent reason for consultation in pediatrics, necessitating the use of growth hormone in severe cases.

However, recourse to this therapeutic revolution is not without risk, and may give rise to certain side-effects that remain little-known.

We describe a case of venous ectasia probably secondary to the use of growth hormone in a 9-year-old patient.

Materials & Methods :

This is a 9-year-old patient, followed in pediatrics for 3 years for severe harmonious growth retardation (- 2DS) with Somatomedine C (IGF1) deficiency.

The patient was treated with growth hormone, including daily nocturnal subcutaneous injections of 0.56mg Genotropin (16IU), and is currently 18 months into treatment with good clinical and biological improvement.

He also presented with two painless flesh-coloured swellings on the anterior surface of both legs, which appeared 2 months after treatment.

On examination, the lesions were found to be reducible, non-inflammatory and non-pulsatile, with the particularity that they appeared in the standing position and disappeared completely when the patient was supine.

A soft-tissue ultrasound was performed, with no abnormalities, and a complementary superficial and deep venous Doppler showed dilatation of the perforating veins, associated with discrete venous reflux when pressure was applied to the lower limb.

Given the patient's age, clinical and radiological presentation, and the temporal relationship with growth hormone intake, we concluded that vascular ectasia was probably secondary to growth hormone intake.

Results:

Although the spectrum of indications for growth hormone treatment is expanding, data in the literature on its long-term tolerability remains very limited, and can be divided into three main areas:

- Neurovascular risk due to fragility of the vascular wall, explaining the increased risk of stroke, and more particularly of subarachnoid haemorrhage.
- Risk of diabetes, due to increased insulin secretion and reduced insulin sensitivity during treatment with growth hormone.
- Neoplastic risk : the risk of developing a bone tumor is 3.5 times higher in subjects exposed to growth hormone in childhood.

The particularity of our observation lies in the vascular ectasia probably secondary to the intake of growth hormone, which is not included in the various side effects described above.

Nevertheless, are we entitled to regard this finding as causal, or is it merely coincidental? To answer this question, we need more studies and a wider scope of research into the main side effects of long-term treatment with growth hormone.

Conclusion:

No medication is without risk, and every indication for treatment must depend on the risk/benefit ratio for the patient.

However, close monitoring remains necessary to detect known side-effects, as well as to highlight new findings not yet described in the literature.

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**Abstract N°: 3613****Oral ketoconazole induced cheilitis: A rare adverse effect**Diksha Agrawal¹¹Venkateshwara Institute of Medical Science, Dermatology, Venereology and Leprosy, Amroha, India

Introduction & Objectives: Ketoconazole, an imidazole antifungal, is now used as a second line drug for fungal infections. It was developed as a first line agent for dermatophytosis, but was soon found to have various side effects, such as hepatotoxicity, leading to it being replaced by safer and effective drugs like terbinafine and itraconazole.

Materials & Methods: A 37 year-old-female presented to dermatology OPD with the complaints of itching, redness and scaling over groins and medial aspect of thigh since 3 months. It was diagnosed as dermatophytosis infection clinically, as well as on microscopic examination using potassium hydroxide 10%. After normal biochemical tests, she was started on capsule itraconazole 100 mg twice a day. However, after 3 weeks of treatment, she developed newer lesions while on treatment. She was started on ketoconazole 200 mg twice a day after which she noticed improvement in lesions. However, she reported increased facial dryness after a week. After further treatment of two weeks, she developed marked facial erythema, as well as cheilitis.

Results: Oral ketoconazole was stopped and treatment in the form of desonide 0.05% and petroleum jelly was given to be applied. She noticed marked improvement in cheilitis within a week. Her dermatophytosis condition was managed with oral terbinafine and topical ciclopirox cream with significant improvement.

Conclusion: Oral ketoconazole can be added to the list of causes of drug-induced cheilitis is, a hitherto unreported cause. Oral ketoconazole, though has varied other side-effects, such as hepatotoxicity and anti-androgenic side effects like gynaecomastia, cheilitis has never been reported with the use of this drug. Hence, it begins imperative to screen for cheilitis, along with other side effects, while using this drug.




Abstract N°: 3719
Asteatotic dermatitis induced by Pazopanib followed by Nivolumab in a patient with renal cancer

Preslav Vasilev¹, Sibel Ramadan², Klimentina Gospodinova¹, Veronica Gincheva¹, Ivelina Yordanova¹, Dimitar Gospodinov¹

¹Medical University - Pleven, Bulgaria, Department of Dermatology, Venereology and Allergology, Pleven, Bulgaria, ²Medical University - Pleven, Bulgaria, Department of Propedeutics of Internal diseases, Pleven, Bulgaria

Introduction & Objectives:

Asteatotic dermatitis, also called Exsikkationsekszematid, is a pre-dermatitis condition characterized by severe xerosis, erythema, desquamation and sometimes fissures. The most affected sites are scalp, face and distant surfaces of the limbs.

Target therapy and immunotherapy have marked significant success in cancer treatment, but they are associated with multiple skin reactions. Pazopanib is a multikinase inhibitor targeted against VEGFR 1-3, PDGFR, FGFR 1 and 3, Kit, Lck and c – FMS. Skin toxicities are reported in up to 90% of the patients. Nivolumab is a monoclonal antibody which binds with the programmed death receptor of T-lymphocytes and induces anti-tumor immune response. Skin reactions are found in up to 49% of the patients.

Materials & Methods:

We present a 54-year old male patient diagnosed with renal cancer, who started therapy with Pazopanib in January 2023. A few weeks after the therapy initiation a mild erythematous rash on the scalp and chest without subjective complains appeared. The rash wasn't treated with any medications. In September 2023 a disease progression was registered with new metastatic lesions in peritoneum, liver and lungs. The therapy was switched to Nivolumab. A week after the start of the immunotherapy the rash worsened with appearance of multiple erosions and hypopigmented macules on the scalp and an extensive erosive crusted lesion on the skin of the chest.

Results:

There weren't any pathological changes in the somatic status. The pathological skin changes affected the skin of the scalp, ears, face, trunk and upper limbs. They were presented by multiple erosions and hypopigmented macules of scalp and face. There were multiple erosions and excoriations on the skin of the trunk and upper limbs which coalescent in the chest area in a large erosive lesion covered with crusts with dimensions of 40/25 cm. The patient had subjective complaints of itching and pain in the affected areas. Paraclinical examinations were within the reference ranges. Microbiology found Staph. Aureus infection. The mycological examination was negative and there was no fluorescence under Wood's light. The histopathological examination revealed acanthosis and mild spongiosis of the epidermis, perivascular mixed inflammatory infiltrate in the dermis. On the basis of the anamnesis, dermatological status and histopathological examination the patient was diagnosed with Asteatotic dermatitis. We conducted treatment with Ceftriaxon, Methylprednisolone, Chloropyramine hydrochloride, Gentamycin cream, Flumetasone pivalate/Clioquinol ung., Potassium permanganate baths and emollients. The condition of the patient improved in the course of 10 days and he continued the immunotherapy with Nivolumab. The patient is being followed up.

Conclusion:

The algorithm for management of patients with skin toxicity includes stop of the oncological therapy, treatment of the toxicity and then restart of the therapy. If the toxicity reappears the oncological therapy must be stopped, again treatment of the toxicity and the therapy must be switched to the next therapeutic line according to the guideline for the oncological disease.

Our case is an example of a patient with Asteatotic dermatitis induced by Pazopanib followed by Nivolumab for treatment of renal cancer. The role of the dermatologist is important to diagnose and treat the skin toxicity. The oncologist makes the decision for stopping and switching the anti-tumor therapy.

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**Abstract N°: 3774****Dapsone hypersensitivity syndrome in Filipino leprosy patients: A rare complication unraveled through a case series**

Majarael Del Villar^{*1}, Krystel Angela Olano¹, Nagatoshi Ebisawa¹, Erwin John Aquino¹, Emmerson Gale Vista¹, Luella Joy Escueta-Alcos¹

¹Research Institute for Tropical Medicine, Dermatology, Muntinlupa, Philippines

Introduction & Objectives: Dapsone has been the mainstay of treatment in various dermatologic diseases such as leprosy, as part of the World Health Organization's (WHO) recommended multidrug therapy (MDT). The management of this disease remains challenging with the occurrence of adverse drug reactions such as Dapsone Hypersensitivity Syndrome (DHS). It is a rare yet severe and distinct idiosyncratic adverse reaction with potentially fatal multi-organ involvement predominantly, hepatitis. This syndrome emerges as a notable concern, often rarely recognized, presenting a paradoxical hurdle in the treatment intended to address the disease.

Materials & Methods: In this case series, four Filipino patients presented with sudden onset of erythematous maculopapular lesions rapidly progressing to exfoliative dermatitis, accompanied by fever, malaise, and followed by jaundice and signs of liver damage after 4-8 weeks of MDT (rifampicin, clofazimine and dapsone) for multibacillary leprosy. Consistent laboratory findings among all patients revealed elevated liver enzymes, hyperbilirubinemia, hemolytic anemia, hypoalbuminemia, and electrolyte abnormalities. Two patients had skin punch biopsy and sections showed spongiosis with necrotic keratinocytes, vacuolar alteration of the basal layer with hyperpigmentation and dermal inflammatory infiltrate of lymphocytes, histiocytes and eosinophils consistent with drug hypersensitivity reaction.

Results: The patients were admitted to a tertiary hospital in the Philippines. Treatment involved immediate withdrawal of the MDT and initiation of a systemic corticosteroid and multidisciplinary evaluation. Slow tapering of corticosteroid with close monitoring of organ functions was done. The patients' conditions then improved gradually and were discharged in stable disposition. Clearance was obtained for re-administration of MDT without dapsone or WHO recommended alternative drugs, which is a crucial step in continuing leprosy treatment to prevent any recurrence of adverse reactions and multi-organ involvement.

Conclusion: The management of the rare yet life-threatening complication of DHS in leprosy patients requires a high level of suspicion and a multidisciplinary approach among dermatologists and internists. By utilizing diverse expertise, we can implement early recognition strategies to rule out other drug culprits and lepra reactions, comprehensive laboratory monitoring protocols, and tailored therapeutic interventions to optimize patient care and improve the prognosis of leprosy patients affected by dapsone hypersensitivity syndrome.



**Abstract N°: 3813****Dermatological side effects of dipeptidylPeptidase-4 inhibitors in diabetes management:a comprehensive review**Shirin Zaresharifi*¹, Sahar Dadkhahfar¹, Mahtab Niroomand¹, Sarina Borran¹¹Shahid Beheshti University of Medical Sciences , Dermatology, Tehran, Iran**Introduction & Objectives:**

Diabetes mellitus is a growing global health concern, prompting continuous research for effective therapeutic options. Dipeptidyl peptidase-4 (DPP-4) inhibitors, a newer class of antidiabetic medications, have gained popularity due to their ability to enhance the incretin-insulin pathway, offering glycemic control with relatively fewer side effects. However, dermatological adverse reactions associated with these agents have emerged as significant concerns. This review aims to comprehensively analyze the literature on dermatological side effects induced by DPP-4 inhibitors, elucidating the mechanisms, risk factors, diagnosis, and management strategies. The objective is to enhance healthcare provider awareness and vigilance regarding these adverse effects, emphasizing the necessity for further research to optimize patient safety in diabetes management.

Materials & Methods:

A systematic literature search was conducted to identify relevant studies reporting dermatological adverse reactions associated with DPP-4 inhibitors. Various databases were utilized, including PubMed, Embase, and Cochrane Library. Studies reporting adverse reactions such as bullous pemphigoid (BP), severe cutaneous adverse drug reactions (SCARs), fixed drug eruptions (FDEs), and other mucocutaneous reactions were included. Data regarding the prevalence, characteristics, risk factors, and management of these adverse reactions were extracted and synthesized.

Results:

DPP-4 inhibitors have been associated with a spectrum of dermatological adverse reactions, ranging from mild pruritus to severe conditions like BP, SCARs, and FDEs. Bullous pemphigoid emerged as a notable adverse effect, with vildagliptin showing the strongest association. Other adverse reactions, such as pruritus, FDEs, and photosensitivity reactions, were also reported, albeit less frequently. Severe cutaneous adverse drug reactions, including Stevens-Johnson syndrome (SJS), toxic epidermal necrolysis (TEN), and drug reaction with eosinophilia and systemic symptoms (DRESS), although rare, pose significant risks. Management strategies typically involve discontinuation of the offending drug and administration of corticosteroids or immunosuppressive agents, depending on the severity of the reaction.

Conclusion:

This review underscores the importance of recognizing and managing dermatological side effects associated with DPP-4 inhibitors in diabetes management. Healthcare providers need to be vigilant in identifying these adverse reactions early to optimize patient safety. Further research is warranted to better understand the mechanisms underlying these reactions and develop targeted management strategies. Overall, enhancing awareness and surveillance of dermatological side effects is crucial for optimizing diabetes care and ensuring patient well-being.

**Abstract N°: 3862****Ustekinumab-induced ichthyosiform drug eruption: insights into acquired ichthyosis**

Ouissal Essadeq^{*1}, Narjess Er-Rachdy¹, Karima Senoussi¹, Syrine Hamada¹

¹Dermatology Department, University Hospital Center Ibn Sina, Mohammed V University, , Rabat, Morocco

Introduction & Objectives:

Ustekinumab is a monoclonal antibody targeting the p40 subunit of interleukin-12 and interleukin-23. It has received approval for treating psoriasis, psoriatic arthritis, Crohn's disease, and ulcerative colitis.

However, further clinical trial data is necessary to thoroughly evaluate its safety and efficacy.

Here, we present a case of ichthyosiform drug eruption localized in a 64-year-old male undergoing ustekinumab treatment.

Materials & Methods:

A 64-year-old man with a severe form of ulcerative colitis, diagnosed 7 years ago, presented at our department.

Over the past years, he had been treated with various conventional disease-modifying anti-inflammatory drugs, including non-steroidal anti-inflammatory drugs, mesalazine, corticosteroids, azathioprine and infliximab. Due to corticosteroid dependency and insufficient disease control, ustekinumab was administered. Three months after starting ustekinumab treatment, the patient developed acquired ichthyosis on his legs.

Results:

Skin examination revealed thickened, plate-like shiny patches with diffuse scaling on the extremities bilaterally. The patient also exhibited severe xerosis throughout his body and complained of intense pruritus, occurring both during the day and at night following injections. The remainder of the examination was unremarkable, with no evidence of organomegaly or superficial lymphadenopathy.

The clinical presentation suggested either ichthyosiform mycosis fungoides or acquired ichthyosis as adverse effects of ustekinumab.

Biopsy of the lesions revealed histologic features resembling lamellar ichthyosis, and a band-like lymphohistiocytic infiltrate. The response from the pharmacovigilance center strongly implicates ustekinumab.

The patient experienced moderate improvement with petrolatum/lanolin ointment and was able to continue his treatment.

Conclusion:

Drug-induced acquired ichthyosis can be caused by various medications and pose challenges in management due to their symptoms, visibility, and may necessitate dose reduction or discontinuation of treatment.

No cases of ichthyosis secondary to ustekinumab had been reported. To our knowledge, this is the first case of acquired ichthyosis as a side effect of the biologic therapy ustekinumab.



**Abstract N°: 3882****Drug-induced Lupus secondary to celecoxib: an unusual presentation as a papular rash.**

Alberto Soto-Moreno¹, Carmen García Moronta¹, Clara-Amanda Ureña-Paniego¹, Salvador Arias-Santiago¹

¹Hospital Universitario Virgen de las Nieves , Dermatology, Granada

Introduction & Objectives:

Drug-induced lupus is an autoimmune disorder characterized by the development of systemic lupus erythematosus-like clinical features following drug exposure. The management consists of recognizing systemic lupus erythematosus-like features, identifying an appropriate causative agent, observing elevations of characteristic autoantibodies, and obtaining a positive response with drug discontinuation. Despite the large number of associated drugs, celecoxib is a rare culprit of drug-induced lupus, with one case described to date.

Materials & Methods:

We present the case of a 46-year-old woman who developed drug-induced lupus secondary to celecoxib. Additionally, we conducted a literature review to evaluate the available evidence on the subject.

Results:

A 46-year-old female patient presented to the dermatology department with a pruritic eruption lasting for 10 days, which recurred after receiving intravenous methylprednisolone in the emergency department. The only notable medical history was an episode of odynophagia in treatment with celecoxib two weeks prior to the onset of symptoms. Examination revealed a rash consisting of flat, shiny erythematous papules with some pseudovesicles, distributed over the nasal dorsum, bimalar area, and both dorsum of the hands. Based on clinical judgment of drug-induced lupus versus lichenoid rash, celecoxib was discontinued, and mometasone cream was prescribed. An autoimmune study was conducted, revealing hypocomplementemia, positive antinuclear antibodies (speckled nuclear pattern 1/>1280), and anti-SSA/Ro-60 antibodies. No clinical or analytical findings suggested systemic involvement. At the one-month follow-up visit, the skin lesions had completely disappeared, and complement titers had normalized.

Conclusion: Celecoxib is an uncommon cause of drug-induced lupus, with only one case of similar clinical presentation in the literature.



**Abstract N°: 3889****Mogamulizumab and the Mask of Mycosis: A Rare Case of Granulomatous Rash in Sézary Syndrome**

Corrado Zengarini^{1, 2}, Stephano Cedirian^{1, 2}, Martina Mussi^{1, 2}, Luca Rapparini^{1, 2}, Francesca Pampaloni^{1, 2},
Francesca Bruni^{1, 2}, Michela Starace^{1, 2}, Bianca Maria Piraccini^{1, 2}, Alessandro Pileri^{1, 2}

¹IRCCS Azienda Ospedaliero-Universitaria di Bologna, Dermatology Unit, Bologna, Italy, ²University of Bologna, Department of Medical and Surgical Sciences, Bologna, Italy

Introduction & Objectives:

Mogamulizumab, an anti-CCR4 monoclonal antibody, is primarily used to treat mycosis fungoides (MF) and Sézary syndrome (SS). Known side effects of this treatment include Mogamulizumab-associated rash (MAR), which can present with varied clinical and histopathological appearances. This case study aims to highlight a unique instance of MAR resembling Folliculotropic MF with a granulomatous histopathological pattern, emphasising the importance of timely diagnosis and management to prevent drug discontinuation.

Materials & Methods:

A female patient with SS undergoing Mogamulizumab therapy since 2022 reported a one-month history of suitable temporal erythema accompanied by alopecia. She also exhibited erythematous lesions on her back, suggestive of a Mogamulizumab-associated rash. An incisional biopsy of the lesion was performed for detailed clinical-diagnostic evaluation.

Results:

Histological examination revealed immunomorphological findings indicative of a chronic inflammatory process with a granulomatous imprint. Clinically, the patient showed significant remission of the symptoms at the 30-day follow-up after treatment included applying clobetasol propionate 0.05% ointment once daily until further assessment..

Conclusion:

This case exemplifies a rare histopathological presentation of MAR with a granulomatous pattern, the most common clinical form of MAR yet one of the rarest histologically. The findings underscore the necessity of prompt diagnosis and treatment of such conditions to avoid the need for discontinuation of the therapeutic agent, Mogamulizumab.





Abstract N°: 3928

Abatacept-Induced Lupus Erythematosus Tumidus

María Olivares Guerrero¹, Ana Jiménez Sánchez¹, Aurora Fernández Galván¹, Clara Buendía Martínez¹, Sonsoles Berenguer Ruiz¹, Mario Aparicio¹, Maria del Mar Llamas Velasco¹

¹Hospital de La Princesa, Dermatología, Madrid, Spain

Introduction & Objectives:

Drug-induced cutaneous lupus erythematosus (CLE) is a condition with clinical, histological, and immunological characteristics similar to cutaneous lupus erythematosus, but it is temporally associated with the intake of certain drugs and resolves upon discontinuation. While all variants of CLE have been described as potentially drug-inducible, cases reported in the literature on drug-induced lupus erythematosus *tumidus* (DILET) are very scarce. Abatacept is a fully human fusion protein approved for the treatment of moderate to severe rheumatoid arthritis (RA) with an inadequate response to disease-modifying drugs. Herein, we present a case of tumid lupus erythematosus following the initiation of abatacept, a drug not previously described as a potential inducer of lupus erythematosus *tumidus* to the best of our knowledge.

Materials & Methods:

A 67-year-old male under rheumatology follow-up for a long history of seropositive RA was referred to our dermatology department. One week after the fourth dose of abatacept, initiated following the failure of methotrexate, leflunomide, and oral corticosteroids (CE), erythematous and edematous, 1-2cm papules and plaques, appeared distributed on the upper trunk and proximal region of the upper limbs, with no other associated systemic symptoms.

Results:

Blood tests revealed an ANA titer of 1/320, with the remaining autoimmunity and analytical parameters negative or within normal limits, including complement levels, anti-dsDNA, anti-SSA/Ro, anti-SSB/La, anti-Sm, and anti-histone antibodies. The biopsy showed a perivascular and perianexial lymphocytic infiltrate, with no changes in the epidermis, and prominent mucin deposition in the deep dermis. Abatacept was discontinued, and systemic CE were initiated with resolution of the lesions within one month. Rituximab was started for RA control, and after 6 months, no further skin lesions have been observed. The correlation between these findings, the temporal sequence, and the absence of other suspicious drugs led to the diagnosis of abatacept-induced tumid lupus.

Only 6 cases of DILET have been described in the literature, three due to TNF-alpha inhibitors, two due to bortezomib, and one due to chlorothiazide. The time from drug introduction to lesion appearance varies from a few weeks to several years. In 4 out of 6 cases, patients showed elevated ANA levels, while the remainder did not mention it. In all cases, similar to ours, the lesions were controlled by discontinuing the drug and systemic treatment with corticosteroids or hydroxychloroquine. Three other cases of abatacept-induced CLE have been described, but all of them were of the subacute variant.

Conclusion:

We describe a case of [lupus erythematosus tumidus](#) following the initiation of abatacept, a drug not previously associated with DILET. Discontinuation of the drug and treatment with oral CE led to complete remission of the lesions.

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**Abstract N°: 3929****Lichenoid Drug Eruption Induced by Apalutamide**Beatriz F. Vilela¹, Ivânia Furtado², Filipa Verdasca², Lúcia Gil², Inês Guerreiro², Alexandre João¹, Nelía Cunha¹¹ULS S. José, Dermatology, Lisbon, Portugal, ²ULS S. José, Oncology, Lisbon, Portugal**Introduction & Objectives:**

Apalutamide, an oral selective androgen receptor inhibitor, is commonly used in the treatment of metastatic castration-sensitive prostate carcinoma. Despite its efficacy, cutaneous adverse events have been reported. However, reports of lichenoid reactions induced by apalutamide are scarce in the literature. Herein, we present a case of lichenoid drug eruption associated with apalutamide therapy in a patient with metastatic prostate carcinoma.

Materials & Methods:

This retrospective case study involved an analysis of the patient's medical records, clinical photographs and interviews conducted during clinical visits. A thorough review of the existing literature was conducted to compare and contrast the clinical features and prevalence of lichenoid drug eruptions associated with apalutamide therapy. The patient's medical history, presenting symptoms, duration of the condition, and associated factors were carefully documented and analyzed to provide a comprehensive understanding of the case.

Results:

We describe the case of a 67-year-old man with metastatic prostate carcinoma treated with apalutamide in combination with triptorelin. Upon treatment initiation the patient achieved biochemical response. However, after 4 months, he developed an extensive, grade 3 (G3), bilateral and grossly symmetric rash across the trunk and members, consisting of numerous oval-shaped macules with well-defined borders and irregular contours. These lesions appeared brown-gray in color and were confluent into a patch on the lower back, exhibiting a reticulated appearance. The clinical diagnosis of a lichenoid drug reaction (lichen planus pigmentosus – like) was made and the skin biopsy showed an epidermis with hydropic basal degeneration, apoptotic keratinocytes and lymphocyte exocytosis, with numerous melanophages in the superficial dermis, confirming the diagnosis of lichenoid drug eruption, lichen planus pigmentosus -like.

Treatment with apalutamide was temporarily suspended, resulting in partial resolution of the dermatosis. Upon resumption of apalutamide at reduced dosage the lesions recurred, prompting complete discontinuation of the drug.

Conclusion:

Lichenoid drug eruption is a rare adverse event associated with apalutamide therapy in patients with metastatic prostate carcinoma. The clinical and histological characteristics presented are useful for better understanding the associated mechanisms in future studies, contributing to the approach to this adverse event, improving patients' quality of life and mitigating therapeutic interruptions. Awareness of this potential side effect is crucial for early recognition and appropriate management.



Abstract N°: 3933

APOA4 as a novel predictor of prognosis in Stevens-Johnson syndrome/toxic epidermal necrolysis: a proteomics analysis from two prospective cohorts

Shi-Fan Ruan¹, Chao Ji¹

¹First Affiliated Hospital of Fujian Medical University, Department of Dermatology, Fuzhou, China

Introduction & Objectives: Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN) are rare but life-threatening adverse drug reactions. Conventional systemic therapies are often limited in effectiveness and exhibit strong side effects. Here, we aimed to assess the efficacy and safety of combination treatment with a tumor necrosis factor (TNF) - α antagonist and delineate the underlying mechanisms.

Materials & Methods: We evaluated the clinical efficacy and safety of combination therapy with adalimumab in a cohort of 83 patients with SJS/TEN (enrolled from March 2016 to May 2022). Patient plasma samples were collected during the acute phase (AP) and the resolution phase (RP) for proteomics profiling and cytokine analysis.

Results: The combination therapy with adalimumab significantly shortened the time to mucocutaneous reepithelization and healing, with reduced side effects caused by corticosteroids. Plasma proteomic profiling showed that apolipoprotein A-IV (APOA4) was one of the most significant differentially expressed proteins. Multivariate regression analysis revealed that APOA4 level was significantly associated with prognosis parameter of SJS/TEN ($P=0.004$), but not with disease severity score (SCORTEN) ($P=0.118$). Thus further research will be helpful to effectively incorporate APOA4 into current SCORTEN-driven protocols.

Conclusion: Adalimumab in combination with corticosteroids has demonstrated significant clinical benefit over corticosteroids alone and APOA4 may serve as a novel prognostic marker in SJS/TEN.



**Abstract N°: 3961****New-onset Carcinoma with atopic dermatitis in an Asian women occurred Acute Generalized Exanthematous Pustulosis after Dupilumab**Yuan Zhou¹, Yan-Hong Shou²¹The Second Affiliated Hospital, Zhejiang University School of Medicine , Dermatology, Hang Zhou , China,²Second Affiliated Hospital, Zhejiang University School of Medicine, Dermatology**Introduction & Objectives:**

An 83-year-old woman presented with papules and pruritus on the limbs for 7 months. Based on Williams criteria, she was diagnosed with moderate AD uncontrolled by topical therapies. During in-patient, she was found new-onset carcinoma of urinary bladder without any symptom. Therefore, based on her age and new-onset carcinoma, she started on dupilumab 600 mg subcutaneously injection. Unfortunately, half a day later, she had the sudden onset of diffuse erythematous and pinpoint pustules on the trunk and limbs. Four days later, her rash spread to cover most of her skin. She did not use any other ongoing medications.

Materials & Methods:

Her baseline laboratory examination was significant for leukocytosis ($15.7 \times 10^9/L$) with neutrophilia ($12.53 \times 10^9/L$, 79.8%), eosinophils ($0.99 \times 10^9/L$, 12.4%), C-reactive protein (12.2 mg/dL), and IL-6 (15.2 pg/mL).

Results:

Based on the clinical, laboratory, and biopsy findings, acute generalized exanthematous pustulosis (AGEP) induced by Dupilumab was diagnosed.

Conclusion:

To our knowledge, there is little correlation between biological medications and AGEP. Drug responses to dupilumab are rare but possible, thus dermatologists should be aware of the various presentations to prevent therapeutic delays.



**Abstract N°: 4160****Pembrolizumab-induced lichen planus-like reaction with a very late onset**Karolina Zarańska^{*1}, Tomasz Werner², Grażyna Wąsik¹, Ewa Skrzypczyńska²¹Provincial Hospital in Opole, Clinical Department of Dermatology, Opole, Poland, ²Provincial Hospital in Opole, Clinical Department of Pulmonology, Opole, Poland

Introduction & Objectives: Pembrolizumab belongs to the group of immune checkpoint inhibitors (ICIs), characterized by being a highly selective humanized monoclonal IgG4 antibody directed against the PD-1 receptor. Among the most common immune-related adverse side effects (IRAEs) associated with ICIs therapy are cutaneous toxicities, with their occurrence estimated at approximately 40% of cases in the context of anti-PD-1 immunotherapy. During pembrolizumab treatment, common cutaneous adverse events encompass pruritus, patchy skin discoloration and erythematous eruptions. Onset of the cutaneous toxicity can vary, occurring from three days to up to a year after immunotherapy initiation.

Materials & Methods: We present a case of pembrolizumab-induced lichen planus-like reaction with a very late onset which is unique in the context of cutaneous toxicity during anti-PD-1 immunotherapy.

Results: A 70-year-old woman was admitted to the pulmonology department for the continuation of pembrolizumab immunotherapy for advanced left lung adenocarcinoma with metastases to both lungs and mediastinal lymphadenopathy with a coexisting metastatic, sclerotic foci in the body of sternum. During the diagnostic process, high expression of PD-L1 $\geq 50\%$ was noted with the absence of EGFR gene mutation and negative results for ALK and ROS1 gene rearrangements. According to American Joint Committee on Cancer (AJCC) stage T4N2M1 was diagnosed. After 21st dose of pembrolizumab (60th week of immunotherapy), the patient presented with immune-related pneumonia, resulting in temporary treatment suspension. After two months, the patient was re-qualified for pembrolizumab therapy upon confirmation of significant regression of interstitial pneumonitis, during systemic corticosteroid therapy with oral prednisone at a dosage of 1mg per kg of body weight. Prior to the administration of the 44th dose (129th week of immunotherapy), the physical examination revealed the presence of numerous, erythematous, flat-topped papules, accompanied by excoriations secondary to scratching, predominantly localized on the chest, back, and flexural surfaces of the limbs. These cutaneous manifestations were associated with intense pruritus, rated 9/10 on the Numerical Rating Scale (NRS). Mucous membranes of the oral cavity and genital organs were unaffected. No nail changes or signs of alopecia were observed. Polarized light dermoscopy revealed the presence of Wickham's striae, highly indicative of lichen planus. The lichen planus-like reaction corresponded to grade 2 toxicity based on the Common Terminology Criteria for Adverse Events (CTCAE). In accordance with CTCAE v6.0 recommendations, the treatment included twice-daily application of clobetasol propionate cream while continuing immunotherapy.

Conclusion: The incidence of lichen planus-like reactions overall is less than 17 percent of all IRAEs and is primarily observed with anti-PD-1/PD-L1 monoclonal antibodies. In the presented case, after total of 129 weeks of pembrolizumab immunotherapy, the very late onset of lichenoid skin reaction was observed and it was not associated with tumor progression. Recognizing toxicities from ICIs therapies becomes increasingly important in the context of ongoing immunotherapy. Various types of cutaneous toxicities may accompany the pembrolizumab immunotherapy, but their prognostic significance requires further investigations.



**Abstract N°: 4172****Covid 19 vaccine-induced bullous pemphigoid: a case report study**

Edison Jahaj^{*1}, Nikolaos Athanasiou¹, Despoina Paraskevopoulou¹, Panagiota Theofilogiannakou¹, Christos Koutsoukos¹, Vasiliki Karathanasi¹, Stefanos Bonas¹, Kalliopi Tomai¹, Aikaterini Malouchou¹

¹Evangelismos General Hospital of Athens, Department of Dermatology and Venereology, ATHENS, Greece

Introduction: Bullous pemphigoid (BP) is considered the most common autoimmune bullous skin disease. It is mainly characterized by autoantibodies against the transmembrane proteins BP180 and BP230. The spectrum of clinical presentations varies widely, including pruritic erythematous eruption with extensive blister formation. BP is triggered by various stimuli, such as old age, neurologic diseases, and medications. A 56 year old female patient visited our outpatient dermatology clinic with 10 days history of pruritic, tense bullae on her trunk and back, and limbs. Patient reported receiving her second dose of COVID-19 (Comirnaty) vaccine two weeks before the appearance of skin lesions. She has not any medical-dermatological history. A skin biopsy was performed which revealed IgG (+2), IgM (+1), and C3 (+1) staining of the basement membrane. Lab tests, U/S of upper and lower abdomen, chest CT, and immunological examinations (antibodies against BP) were performed. The imaging examination of the patient did not show any underlying neoplastic disorder, the antibody titer against BP was 1/320, while the ELISA detected the BP180 antigen. During hospitalization of the patient, initial treatment include prednisone (1mg/kg/day) and mycophenolate mofetil 500mg twice daily. Due to persistent of disease and development of new lesions on day 8 off label intravenous Immunoglobulin was administered at a dose of 10g on the 1st day, and afterwards 20g/daily up to a total administration of 130g (2g/kg). Over the following weeks, patient continued to develop new bullae. Finally, patient received 4 doses of rituximab 650mg weekly with no adverse events and with gradually improvement of lesions. After a month of hospitalization and with various treatment approaches patient discharged from hospital in excellent condition.

Conclusion: Bullous Pemphigoid is a rare autoimmune disease that could be triggered by mRNA COVID-19 vaccines. It seems that rituximab can be an efficient therapy with an excellent safety profile.



**Abstract N°: 4236****Evaluation of severe adverse cutaneous drug reactions in patients admitted to tertiary care center: A cross-sectional study**Mohammad Amin Moshayedi¹, Ali Asilian¹, Fatemeh Mokhtari*¹¹Isfahan University of Medical Sciences, Isfahan, Iran, Department of Dermatology, Iran**Introduction & Objectives:**

Adverse cutaneous drug reactions (ACDRs) are common and potentially life-threatening, while also hindering patient compliance to medications. Given the regional differences in patterns and prevalence of ACDRs, it is important to study the epidemiology, as well as the clinical and outcome patterns of patients with ACDRs in Iran.

Materials & Methods:

This cross-sectional study on ACDRs was conducted among hospitalized patients in a referral university hospital in the city of Isfahan, Iran. The patients' demographics, clinical information, and outcomes, including age, gender, past medical history, medication history, drug reaction with eosinophilia and systemic symptoms (DRESS) diagnosis, Steven-Johnson Syndrome (SJS) diagnosis, toxic epidermal necrosis (TEN) diagnosis, treatment regimen (steroids or intravenous immunoglobulin [IVIG]) and outcome information, including intensive care requirements, severe medical complications, or death, were obtained from medical records

Results:

A total of 195 patients with a mean age of 40 years and consisting of 61% females were included. Carbamazepine, lamotrigine, sodium valproate, and phenytoin are the most commonly reported medications. Rate of complications was

45% with DRESS, SJS, and TEN diagnosed in 26%, 47%, and 19%, respectively. Treatment was carried out with steroids and IVIG in 81% and 19%, respectively. Among patients, 15% required intensive care and 5% died. Diagnosis of TEN, older age, and baseline heart disease were predictors of mortality. Patients with SJS were younger and more likely to be males, and they were more likely to have eye complications. On the other hand, patients with the diagnosis of TEN were more likely to receive IVIG and intensive care, and had a higher mortality rate.

Conclusion:

Our study provides insight into the demographics and clinical patterns of Iranian patients with ACDRs. This will help in predicting rates of complications, treatments, and outcomes in patients and therefore make proper management decisions.



**Abstract N°: 4315****Erythema Multiforme associated with Phenytoin and Cranial Radiation (EMPACT) Syndrome: A Pustular Variant**Cheryl MA¹, Choon Chiat Oh¹, Hiu Yeung Lau¹¹Singapore General Hospital, Singapore, Singapore**Introduction & Objectives:**

Erythema Multiforme-like Presentation with Phenytoin And Cranial Irradiation Therapy (EMPACT) syndrome is a rare condition characterized by erythema multiforme (EM)-like skin reactions in patients receiving cranial irradiation and phenytoin. Here, we report the first pustular variant of EMPACT syndrome in a patient with metastatic breast cancer. She was undergoing whole-brain radiotherapy (WBRT) and taking phenytoin, levetiracetam, sodium valproate, and dexamethasone simultaneously. 15 days after starting WBRT and 14 days after introducing phenytoin, the patient developed a pustular eruption on her scalp and a mild exanthem over her trunk. The rash rapidly progressed and involved mucocutaneous areas. It resolved within a week of stopping phenytoin.

Materials & Methods:

A case presentation of a woman with recurrent metastatic breast cancer presented with a sudden onset of a pustular rash for 2 days. The initial working differential diagnoses were Erythema Multiforme associated with Phenytoin and Cranial Radiation (EMPACT) syndrome, Eosinophilic, Polymorphic, and Pruritic Eruption associated with Radiotherapy (EPPER) syndrome, Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) syndrome, Acute Generalized/ Localized Erythematous Pustulosis (AGEP/ ALEP), and acute radiation dermatitis.

Skin biopsy from the back revealed vacuolar interface dermatitis with focal areas of epidermal necrosis. Rare eosinophils were present within the inflammatory infiltrate and the epidermis showed scattered apoptotic keratinocytes. Direct immunofluorescence showed 1+ C3 at the dermal-epidermal junction.

Considering the clinical history and histopathological findings consistent with erythema multiforme (EM)/ Stevens-Johnson syndrome (SJS), EMPACT was deemed to be the most likely diagnosis. The patient was resumed on levetiracetam 250 mg BD with no recurrence of rash to date.

Results:

The primary treatment for EMPACT is discontinuation of phenytoin. In some cases, a short course of steroids was initiated. Alternatives such as gabapentin have been suggested for seizure prophylaxis. In our patient's case, levetiracetam was reintroduced after consultation with a neurologist. ~ ~

Conclusion:

In summary, we present a case of EMPACT syndrome with an initial presentation of a pustular eruption on the scalp. This is the first reported case of EMPACT presenting with a pustular eruption. We also propose radiotherapy may enhance T cell hypersensitivity via the abscopal effect resulting in EMPACT syndrome. Increased awareness of this condition, particularly in its early stages, is crucial for promptly discontinuing the suspected causative drug and selecting an alternative anticonvulsant.



**Abstract N°: 4329****An Eczematous Eruption Mimicking Drug-induced Dermatitis Due to Immunoglobulin Infusion**Kmar Turki¹, Fatma Hammemi¹, Abderrahmen Masmoudi¹, Khadija Sellami¹, Hamida Turki¹¹CHU Hedi Chaker, Dermatology department, Sfax**Introduction & Objectives:**

Human immunoglobulins are used to treat several inflammatory and autoimmune diseases. However, they can cause both immediate and delayed adverse effects.

Materials & Methods:

We report the case of a 42-year-old man who developed an eczematous reaction a few days after receiving a course of intravenous immunoglobulins (IVIG).

Results:

The patient was a 42-year-old man followed for 18 months for chronic polyradiculoneuropathy. He had been prescribed monthly courses of IVIG for the past 4 months, along with low-dose corticosteroid therapy.

He presented to dermatology with a maculopapular and pruritic rash evolving over two weeks. Clinical examination revealed violaceous purpuric erythematous papules at the extremities, and vesiculobullous lesions on the wrists. Additionally, there was edema and erythematous, scaly skin on the face, with crusty lesions around the perioral region and earlobes. Erosions were observed on the inner cheeks, and bilateral conjunctival hyperemia was noted. The patient was afebrile, and there were no palpable peripheral lymph nodes. Laboratory tests showed neutrophil-predominant leukocytosis, a slight increase in eosinophil count to 670/mm³, and an elevated reactive C protein of 41 mg/L. Upon history taking, he reported receiving the 4th IVIG infusion two weeks prior. A drug reaction with eosinophilia and systemic symptoms (DRESS) syndrome was suspected, with a RegiSCAR score of 3. Histology showed epidermal spongiosis on the arms and inflammatory dermal infiltrate with necrotizing vasculitis on the legs. Initiation of corticosteroids at a dose of 0.5 mg/kg/day with rapid tapering led to clinical improvement and normalization of laboratory tests. Pharmacovigilance investigation concluded a probable causality of IVIG in the development of this presentation.

Conclusion:

Delayed eczematous reactions to IVIG are a rare adverse effect. These reactions occur after the first 5 IVIG courses, with a delay of 7 to 16 days post-infusion. Clinically, they present as an eczematous rash and dyshidrotic lesions on the limbs, sometimes associated with a trunk rash. Histology is nonspecific, but spongiosis is often observed. These findings are consistent with our patient, supporting the diagnosis of delayed reaction to IVIG. However, an associated DRESS syndrome remains possible. Delayed reactions to IVIG are potentially serious, with frequent relapses occurring sooner, indicating an immunologic mechanism. Switching to a different molecule may be considered.



**Abstract N°: 4421****Factors influencing the treatment response of tetracyclines for papulopustular rash induced by epidermal growth factor receptor-tyrosine kinase inhibitors: A retrospective study**

Tae Min Kim^{1, 2}, Namkyu Kim², Jimin Woo², Bhumsuk Kim^{3, 4}, Ji Su Lee^{1, 5}, Seong Jin Jo^{1, 2, 5}

¹Department of Dermatology, Seoul National University Hospital, Seoul, Korea, ²Seoul National University College of Medicine, Seoul, Korea, ³Department of Internal Medicine, Seoul National University Hospital, Seoul, Korea, ⁴Cancer Research Institute, Seoul National University, Seoul, Republic of Korea, ⁵Skin Cancer/ Chemotherapy Skin Care Center, Seoul National University Cancer Hospital, Seoul, Korea

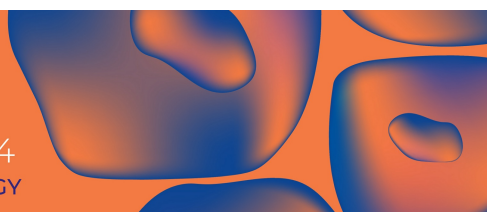
Introduction & Objectives: Papulopustular rash, the most common cutaneous side effect of epidermal growth factor receptor (EGFR) tyrosine kinase inhibitors (TKIs), is commonly treated with tetracyclines. Nevertheless, the factors affecting tetracycline response and the differences in treatment response among different tetracyclines remain unclear. This study aims to elucidate the factors influencing the response to tetracyclines in treating EGFR-TKI-induced papulopustular rash and to compare the treatment responses of different tetracyclines.

Materials & Methods: It enrolled 307 patients with non-small cell lung cancer patients who received tetracycline treatment for papulopustular rash following the administration of first-, or second-generation EGFR-TKI at the single tertiary hospital from November 2007 to November 2022.

Results: Papulopustular rash induced by second-generation EGFR-TKI showed a slower response to tetracyclines compared to those induced by first-generation EGFR-TKIs at 4 ($P < 0.01$) and 8 weeks ($P = 0.016$) following tetracycline treatment. Although minocycline showed a faster response at 4 weeks ($P = 0.012$) compared to doxycycline, both minocycline and doxycycline exhibited comparable efficacy over time ($P = 0.091$). The combination of tetracyclines with topical agents yielded an improved treatment response at 4 weeks ($P = 0.018$).

Conclusion: First-generation EGFR-TKI-induced papulopustular rash responds faster to tetracycline treatment compared to second-generation. Despite minocycline's slightly faster efficacy, both minocycline and doxycycline are effective for papulopustular rash. Combining tetracycline with topical agents can improve the treatment response.





Abstract N°: 4597

Generalized bullous lichen planus secondary to pembrolizumab for advanced melanoma: A case report

Maria Alexandra Timofte^{*1}, Mara Miha², Beatrice Balaceanu-Gurau³, Raluca Ileana Patru⁴, Irina Margaritescu⁵, Andra Copilau³, Calin Giurcaneanu²

¹Elias Emergency University Hospital, Dermatology and Allergology Clinic, Bucharest, Romania, ²Carol Davila University of Medicine and Pharmacy, Department of Oncologic Dermatology - „Elias” Emergency University Hospital, Bucharest, Romania, ³Elias Emergency University Hospital, Oncologic dermatology, Bucharest, Romania, ⁴Coltea Clinical Hospital, Department of Medical Oncology, Bucharest, Romania, ⁵Onco Team Diagnostic, Department of Pathology, Bucharest, Romania

Introduction & Objectives:

As immune-checkpoint inhibitors (ICIs) have become more widely used in cancer treatment, related adverse effects have also increased. Pembrolizumab, an anti-PD-1 (programmed cell death protein-1) agent, is among these groundbreaking treatments of advanced oncologic diseases such as non-small-cell lung cancers, melanoma, head and neck squamous cell cancer. Among the most frequent adverse events are cutaneous reactions, affecting approximately 30–40% of patients treated with PD-1 inhibitors, in particular pembrolizumab. The most commonly documented adverse effect is a maculopapular rash, but lichenoid reactions, vitiligo and psoriasiform eruptions are also encountered.

Materials & Methods:

We present the case of a 73-year-old male patient with a history of metastatic melanoma, with cervical lymphadenopathy, in treatment with pembrolizumab, 200 mg every 3 weeks. The patient presented to our clinic with complaints of an itchy, polymorphous rash, disseminated on the trunk, upper and lower limbs and palms, consisting of multiple well-defined purpuric papules, the most recent ones being exudative, with vesicles and erosions on the surface, while the older ones being hyperkeratotic. The patient additionally reported erosions on his right inner cheek, associated with burning sensation and pain.

Results:

Histopathological exam revealed superficial lichenoid perivascular dermatitis of the subepidermal vesicular interface, with a moderate inflammatory infiltrate located in the lichenoid band under an epidermis with irregular acanthosis, hypergranulosis, with changes of variable interface, from the formation of necrotic keratinocytes to the appearance of dermo-epidermal cleavages, some filled with serum and lymphocytes (subepidermal vesicles). Immunohistochemistry showed that the infiltrate is stained mainly with the T lymphocyte marker CD3, rare lymphocytes staining with CD20. No systemic viral infections were detected. No other drugs that could possibly induce the lichenoid rash were identified. Therefore, the final diagnosis was generalized bullous lichen planus secondary to pembrolizumab. With the oncologist's approval, we initiated treatment with low-dose systemic corticosteroids, as well as topical high potency corticosteroids. At 1 month and 3 months follow-up, the patient showed clinical improvement, with good therapeutic tolerance.

Conclusion:

The widespread use of immune-checkpoint inhibitors like pembrolizumab in cancer treatment has led to an increase in immune-related adverse effects, including dermatological reactions such as bullous lichen planus. Our case highlights the importance of recognizing and managing these rare complications during ICI therapy in a

multidisciplinary team of dermatologists specialized in cutaneous adverse reactions to oncologic therapy, dermatopathologists and oncologists.

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Abstract N°: 4658
A Case of Successful Treatment of Bullous Purpuric Drug Eruption with Systemic Glucocorticoids Combined with Wound Care

 Zhilin Sun^{*1}, Chunlei Zhang¹
¹Peking University Third Hospital, Dermatology, Beijing, China

Introduction & Objectives:

A 77-year-old man was admitted to the hospital with a primary complaint of “progressively worsening hemorrhagic rash and pain on both legs for 15 days.” Twenty days prior to the rash onset, he had taken oral Shuanghuanglian liquid and cefixime for an upper respiratory infection. The initial symptoms were punctate red hemorrhagic rashes on both lower legs, accompanied by swelling, which later spread to the extremities, with blisters and bullae appearing on the red rashes. The laboratory test showed abnormal renal function (serum creatinine 117 $\mu\text{mol/L}$), hematuria 2+ and proteinuria 1+. The patient comes to the emergency department five days ago. After four days of intravenous methylprednisolone sodium succinate at 40 mg/day, the rash partially improved, and he was admitted for further treatment. The medical history of the patient included hypertension and rheumatoid arthritis.

Dermatological Examination: Multiple hemorrhagic bullae and blisters ranging from pea-sized to ping-pong-ball-sized were observed on both lower legs, with some skin necrosis and black crusts. Multiple red maculopapular rashes were noted on the extremities and abdomen.

Supplementary examination: bacterial culture from leg erosion secretion: staphylococcus aureus 3+; pathological examinations from the red rashes and blisters on the lower legs: leukocytoclastic vasculitis; immunofluorescence: IgA(potential dermal papillae capillary walls+).

Materials & Methods:

Treatment and Follow-up:

- \1. Discontinue suspected allergenic drugs.
- \2. Systemic treatment: intravenous methylprednisolone at 40 mg/day for 7 days, along with oral sodium bicarbonate to alkalinize the urine and protect the kidneys.
- \3. Local treatment: The bullae and erosions on both lower legs were treated with a long-lasting antimicrobial membrane (mainly consisting of quaternary ammonium salt polymers) to protect the wound. The patient later developed infection on both lower legs. Subsequently, debridement and covering with silver sulfadiazine-based lipid hydrocolloid dressings and polyhexamethylene biguanide (PHMB) dressings were performed every other day. After 2 weeks, the bullae dried up and formed scabs, which eventually fell off.

Results:

Following treatment, the rash on the torso and upper limbs almost disappeared, and renal function improved. The steroid dosage was then gradually tapered.

Conclusion:

This complicated case involved a patient with a bullous purpuric drug eruption, with extensive rashes, bulla, and

epidermal necrosis, along with renal involvement. The treatment with adequate systemic glucocorticoids resulted in improved rashes and renal function, yet subsequent complications arose from slow healing of the rash and secondary bacterial infection.

Immediate debridement and the application of new antimicrobial dressings successfully controlled the infection and promoted rapid wound healing. This case highlights the significance of new dressings for the treatment of large skin lesions. Given the relative scarcity of international reports and studies on the wound care of bullous purpuric drug eruptions, the successful treatment approach in this case offers valuable insights and serves as a reference for similar cases.

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Abstract N°: 4707

DRESS syndrome in a Chinese induced by Chinese herbal medicine.

El Fekih Ines¹, Loraine Combemale¹, Frederic Caux¹, G r me Bohelay¹

¹Department of Dermatology, Avicenne University Hospital, AP-HP, Bobigny, France, France

Introduction & Objectives:

Drug reaction with eosinophilia and systemic symptoms (DRESS) syndrome is a serious adverse drug reaction whose severity is linked to visceral manifestations potentially leading to multiple organ failure. Rapid cessation of the culprit drug is essential for treatment. Identification of the causative agent relies on assessing its imputability using scores that consider extrinsic compatibility (bibliographic score). Reporting drugs responsible for DRESS is therefore essential. Some antibiotics, anti-epileptics, and allopurinol are the main culprits in Western medicine. Chinese herbal medicine (CHM) has been suggested by some authors as the second most prevalent culprit in China, although the published literature is sparse, notably regarding the culprit molecule, as CHM usually contains multiple components. Herein, we report a Chinese with a severe DRESS syndrome due to CHM.

Materials & Methods:

A 34-year-old Chinese with stage 5 chronic kidney disease due to IgA nephropathy and hypertension presented with a skin eruption. In December 2023, the patient used CHM prescribed by a traditional Chinese medicine practitioner (TCMP) for knee pain. His regular medications included nebivolol, atorvastatin, irbesartan and cholecalciferol. He used CHM simultaneously in the form of an infusion to drink, a cataplasm applied under occlusion (12 hours) and a bath preparation. CHM were used twice, 7 days apart. On day 8, the patient developed a maculopapular rash of the trunk and was prescribed an intramuscular injection of sage by the TCMP. On day 10, he was admitted in the emergency unit for an extensive skin rash with oedema of the face and extremities, fever, hypotension and polyadenopathy. Laboratory tests revealed major eosinophilia up to 6.7G/L, leucocytosis up to 23G/L, atypical lymphocytes, acute renal failure with creatinine levels up to 775  mol/L, and hepatic cytolysis and anicteric cholestasis up to 4.5N. Due to hypovolemic shock, the patient was admitted in the intensive care unit before being later admitted in our dermatological department, once stabilized.

Results:

DRESS syndrome was diagnosed (REGISCAR score: 6) confirmed by a skin biopsy showing superficial eosinophilic dermatitis with atypical lymphocytes and oedema. CHM were considered the most likely culprit drug, considering the B gaud and Naranjo imputability scores. Systemic corticosteroids (1mg/kg/day) and daily application of clobetasol propionate led to rapid improvement with a complete resolution of cutaneous and systemic involvement at 15 days; the renal function returned to baseline level. The patient did not relapse during a 3-month follow-up after corticosteroids tapering and cessation of CHM, despite viral reactivation (CMV, EBV and HHV6) observed at one-month follow-up. All CHM were prohibited since, awaiting for allergology testing of the CHM components scheduled 6 months after the onset of symptoms.

Conclusion:

Toxicity of CHM is well known, such as liver and renal toxicity, but DRESS syndrome is rare and mainly reported in China and few other Asian countries. In Western countries, to our knowledge, there are no data concerning DRESS induced by CHM. As identifying the culprit drug in DRESS is crucial, physicians should be aware of its possibility to specifically investigate CHM exposure during the culprit drug investigation.



**Abstract N°: 4735****Violation of synthetase activity in patients with toxic epidermal necrolysis depends on the area of skin infection.**

Nataly Ivanyushko-Nasarko¹, Tetyana Rudnyk¹, Solomiya Turkevich¹, Svitlana Volbyn¹, Yurii Nazarko¹

¹Danylo Halytsky Lviv National Medical University, Department of Dermatology, Venereology, Lviv

Introduction & Objectives: Toxic epidermal necrolysis (TEN) is one of the most severe reactions of the body to the action of various xenobiotics with necrosis of the epidermis, mucous membranes and damage to internal organs, which is accompanied by profound disorders of hemodynamics and homeostasis, often leading to death. A wide range of bioregulatory effects of nitric oxide, in particular, participation in the development and course of allergic inflammation (cytotoxic, immunocomplex reactions), suggest the participation of nitric oxide in the pathogenesis of TEN.

Materials & Methods: Under our observation, there were 9 patients on TEN with different areas of skin damage. The study of the nitrogen oxide system was carried out spectrophotometrically. The area of the affected skin surface was determined according to the "nine" rule. In patients who recovered (6 cases), it was $39.85 \pm 4.23\%$ of the body surface, and in fatal cases (3) - $77.37 \pm 1.20\%$, that is, almost twice as much (in 1.9 r.) is greater.

Results: The indicators of the nitric oxide system in patients with TEN changed depending on the area of skin damage. In patients with involvement of more than 50% of the surface during the flare-up period, there was a 1.95-fold decrease in nitrate anion content, a 2.62-fold increase in nitrite anion, and a 4.19-fold increase in constitutive synthetase compared to similar patients in the initial period of the disease, activity of inducible synthetase increased, especially, sharply in the midst of TEN - by 21.7 times.

Conclusion: The obtained results indicate the need to correct increased iNOS activity and hyperproduction of NO in patients with TEN with corticosteroids.



**Abstract N°: 4820****purpura associated with paracetamol - a case report**Artizana Dushi¹, Fatime Kokollari¹¹University Clinical Center of Kosovo, Dermatology, Prishtine, Kosovo**Introduction & Objectives:**

The patient was admitted to the clinic presenting noticeable purpuric changes on the lower extremities and the central region of the abdomen. These symptoms are characterized by reddish-purple spots that do not blanch on applying pressure, indicating possible underlying vascular issues. The patient reported using paracetamol excessively and without medical supervision due to persistent headaches. This overuse raised concerns about its potential contribution to the patient's current symptoms. The primary objectives of this case study were to assess the extent and possible causes of the purpuric changes observed in the patient, evaluate the impact of uncontrolled paracetamol use on the patient's overall health, implement a treatment strategy that addresses both the dermatological manifestations and any systemic effects of medication overuse and monitor and manage any emergent complications through interdisciplinary consultation.

Materials & Methods:

The diagnostic approach included a comprehensive set of laboratory tests: A complete blood count, which returned within normal ranges except for a moderately decreased hemoglobin concentration suggesting mild anemia. Biochemical tests revealed renal insufficiency and elevated blood sugar levels, both newly diagnosed conditions likely contributing to the patient's clinical presentation. Follow-up assessments involved consultations with an endocrinologist and nephrologist to address the metabolic and renal findings.

Results:

Treatment with systemic and topical corticosteroids led to a significant improvement in the purpuric lesions. The coordinated care approach, including endocrinological and nephrological expertise, resulted in the normalization of blood sugar, urea, and creatinine levels, which are critical markers of metabolic and renal function. These outcomes highlight the effectiveness of the treatment regimen and the importance of a multidisciplinary team in managing complex cases.

Conclusion:

The successful resolution of both the skin changes and the systemic abnormalities in this patient underscores the importance of a holistic treatment approach in clinical practice. It also highlights the potential systemic impacts of unregulated over-the-counter medication use, such as paracetamol, which necessitates vigilance and patient education on proper usage.



**Abstract N°: 4839****Voriconazole and Lentigines: a Little-Known Side Effect**

Leticia Cioni Barbosa¹, Marcela Saddi Menezes Costa¹, Marselle Codeço Barreto¹, Marcia Ramos-e-Silva¹, Simone Saintive²

¹Federal University of Rio de Janeiro HUCFF-UFRJ, Department of Dermatology, Rio de Janeiro, Brazil, ²Federal University of Rio de Janeiro IPPMG-UFRJ, Department of Dermatology, Rio de Janeiro, Brazil

Introduction

Prolonged use of voriconazole has been associated with a variety of cutaneous effects, ranging from mild, such as rashes, photosensitivity reactions, and hypersensitivity, to severe, such as Stevens-Johnson syndrome and toxic epidermal necrolysis. However, one of the less described side effects to date is the development of pigmented lesions in sun-exposed areas, presenting as multiple brownish macules, known as lentigines. Transplanted patients are particularly susceptible to fungal infections due to their immunocompromised state, and voriconazole, being a broad-spectrum antifungal, is commonly used for prophylaxis and treatment. The exact pathophysiology by which voriconazole triggers the development of lentigines is not fully elucidated yet, but some mechanisms have been proposed. Firstly, voriconazole is metabolized by the liver, mainly by the cytochrome P450 (CYP450) enzyme, resulting in an active metabolite, N-oxide. Additionally, the medication causes photosensitivity, leading to accumulation in the skin and release of free radicals when exposed to sunlight. These free radicals can cause oxidative damage and inflammation in the skin, contributing to the development of pigmented lesions such as lentigines. It is also believed that voriconazole-induced photosensitivity may lead to abnormal regulation of melanin production, influencing the appearance of the lesions. Prolonged sun exposure in patients under chronic therapy with voriconazole may further increase this risk.

Case Report

A 10-year-old boy, previously diagnosed with Acute Myeloid Leukemia two years ago, presented with multiple brownish macules on his face and upper limbs, which suddenly appeared at the end of an 8-month prolonged therapy with voriconazole for prophylaxis after autologous bone marrow transplantation. He denied itching and associated symptoms and reported low sun exposure. There was no family history of photosensitivity. Currently, he is in the maintenance phase, using imatinib mesylate, prophylaxis with trimethoprim-sulfamethoxazole, fluconazole, and azithromycin, as well as salmeterol and fluticasone for asthma triggered by chronic graft-versus-host disease. Dermatoscopy examination revealed a lentigo pattern in the lesions, with no suspicion of malignancy. Regular follow-up of the lesions and sun protection were advised.

Discussion

Although these lesions are initially benign, it is important to note that there are reports in the medical literature of cases where voriconazole-induced lentigines may undergo malignant transformation, increasing the risk of developing squamous cell carcinoma and malignant melanoma, especially in transplantation patients. It is important for patients on voriconazole therapy to be regularly monitored for the appearance of new skin lesions and to be advised to avoid excessive sun exposure and to use adequate sun protection.



**Abstract N°: 4842****A rare case of Sweet's syndrome induced by tetravalent vaccine against influenza**

Paulina Rutecka¹, Dawid Wolak¹, Aleksandra Frątczak², Karina Polak², Bartosz Miziołek², Beata Bergler-Czop²

¹Students Scientific Association at the Department of Dermatology, Medical University of Silesia, Katowice, Poland,

²Chair and Department of Dermatology, Medical University of Silesia, Katowice, Poland

Introduction & Objectives:

The etiopathogenesis of Sweet's syndrome still remains unclear. An abrupt onset of this condition soon after vaccination was included in minor diagnostic criteria for the Sweet's syndrome. Recently, there has been an abundance of reports on acute febrile neutrophilic dermatosis following after receiving a vaccine against SARS-CoV2 of different types. Sweet's syndrome was earlier shown to be triggered by BCG, anti-pneumococcal and MMRV vaccination. Although the vaccine against influenza belongs to the most commonly chosen prophylactic intervention against viral infections, there are only three case reports of Sweet's syndrome/acute febrile neutrophilic dermatosis after the vaccine against the influenza available written in English and one published in French. The authors present the fifth worldwide reported case of this condition.

Materials & Methods:

A 72-year-old woman was admitted to the dermatology department due to multiple papules and infiltrating erythematous (red to violaceous) skin lesions spread over the trunk, face and limbs with a concomitant fever (max. 38.7°C). The patient complained of an intense itch and tenderness of the skin as well as joint pain in the shoulders, wrists, and knees region. Symptoms started to appear four days earlier, preceded by receiving tetravalent vaccination against the influenza one week before. Previously, the patient had received vaccine against the influenza several times within recent 10 years, with the last one administered a year before. Patient denied infection of upper respiratory tract or urinary tract or modification of pharmacological treatment. No allergies were reported. Physical examination revealed no abnormalities except of the skin involvement. Laboratory tests showed leukocytosis (14.3 x 103/ul) with a predominance of neutrophils (86.9%), elevated serum level of C-reactive protein (22.76 mg/L) and erythrocyte sedimentation rate (30 mm/h). Both viral tests (HBV, HCV, HIC) and assays of antinuclear antibodies were negative. Neither X-ray of the chest nor abdominal ultrasound showed abnormalities. A skin biopsy was performed and the diagnosis of acute neutrophilic dermatosis (Sweet's syndrome) induced by vaccine against the influenza was established. Pharmacological treatment included systemic and topical steroid therapy with good results and the symptoms relieving completely after few days.

Results:

Skin clearance was achieved after 10 days of treatment. Significant reduction in itching with subsequent complete resolution in the first days of drug treatment.

Conclusion:

The authors present the fifth worldwide reported case of Sweet's syndrome after induced by tetravalent vaccine against influenza with successful treatment. The reaction may occur even though previous receive of the vaccine was not associated with any adverse events.



Abstract N°: 5046

Association of Human Leukocyte Antigen Alleles with Carbamazepine- or Lamotrigine-Induced Stevens-Johnson Syndrome and Toxic Epidermal Necrolysis in an Iranian PopulationLadan Dastgheib¹, Behrooz Gharesifard², Maryam Hadibarhaghtalab¹¹Molecular Dermatology Research Center, Shiraz university of medical sciences, ²Department of Anatomical Sciences, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran

Introduction & Objectives: Genetic diversity in human leukocyte antigen (HLA) alleles across populations is a significant risk factor for drug-induced severe cutaneous adverse reactions (SCARs), e.g., carbamazepine (CBZ)- and lamotrigine (LTG)-induced Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN). The present study aimed to investigate the frequency of different HLA alleles in Iranian patients with CBZ- and LTG-induced SJS/TEN

Materials & Methods:

A case-control study was conducted from 2011 to 2018 at various hospitals affiliated to Shiraz University of Medical Sciences (Shiraz, Iran). A total of 31 patients receiving anticonvulsant drugs (CBZ or LTG) were recruited and divided into two groups. The drug-induced group (n=14) included hospitalized patients due to CBZ- or LTG-induced SJS/TEN. The drug-tolerant group (n=17) included individuals receiving CBZ or LTG for at least 3 months with no adverse effects. In addition, 46 healthy individuals (control group) were recruited. The frequency of HLA-A, -B, and -DRB1 alleles in patients with CBZ- or LTG-induced SJS/TEN was investigated. HLA typing was performed using the allele-specific polymerase chain reaction method. Chi-square test and Fisher's exact test were used to determine a potential association between SJS/TEN and HLA alleles. $P < 0.05$ was considered statistically significant

Results: CBZ- or LTG-induced SJS/TEN was not significantly associated with HLA alleles. However, HLA-DRB1*01 showed a significantly higher frequency in patients with CBZ-induced SJS/TEN compared to CBZ tolerant patients (30% vs. 9%, $P = 0.07$).

Conclusion: Overall, no significant association was found between CBZ- or LTG- induced SJS/TEN and HLA alleles. Further large-scale studies are required to substantiate our findings.

Keywords: Stevens-Johnson syndrome, Anticonvulsants, Histocompatibility testing





Abstract N°: 5061

Fluoxetine induced pseudolymphoma

Mohamed Amine Ennaciri¹, Abdelhamid Amina², Youssef Zemmez¹, Rachid Frikh¹

¹Military Teaching Hospital Mohammed V, Dermatology, Rabat, Morocco, ²Arrazi Mental Health Hospital, Psychiatry, Salé

Introduction & Objectives:

Cutaneous pseudolymphomas represent a heterogeneous group of conditions clinically or histologically simulating cutaneous lymphoma but with a benign course. They can be classified based on the predominant lymphocytic subtype, which can provide insight into the etiology. The objective of this case-report is to show how a mixed lymphocytic infiltrate helped with the diagnosis and how stopping the culprit drug is key to treatment

Materials & Methods:

This is a case-report about a drug induced pseudolymphoma by fluoxetine

Results:

A 34-year-old man presented for consultation with a discreetly pruritic subcutaneous plaque located on the trunk, adherent to the superficial and deep planes, topped with violaceous papules without associated lymphadenopathy, it was evolving for 2 months. The patient denies insect bites, tattoos, trauma, or piercing history. However, he has been taking fluoxetine for depression for 5 months.

Dermoscopy revealed white and pinkish-white structureless areas separated by a network-like pigmentation. Biopsy showed nodular polymorphic B and T lymphocytic infiltrates in the dermis and subcutaneous tissue, surrounding the vessels and adnexa, with CD3+, CD20+, and some CD30+ staining consistent with lymphocytic hyperplasia.

HIV and syphilis serologies were negative.

A diagnosis of cutaneous lymphocytoma associated with fluoxetine was suspected. Fluoxetine was discontinued and replaced with venlafaxine. One month later, clinical lesions began to regress centripetally, with smaller and more spaced areas without structures observed on dermoscopy

Conclusion:

Pseudolymphomas can be secondary or idiopathic. Investigating etiological factors, especially medications, is essential as correcting them can lead to regression of the pseudolymphoma. Histopathologically, a mixed B and T infiltrate suggests a drug-induced pseudolymphoma.

The average age of onset for drug-induced pseudolymphoma is 54.4 years with a slight male predominance. The average onset time is 120 days, with antidepressants having the shortest onset time (60 days). The most frequently implicated drugs include antihypertensives, anticonvulsants, monoclonal antibodies, and antidepressants.

Medications responsible for drug-induced pseudolymphoma have different effects on lymphocyte function; for example, antidepressants block H1c receptors by histamine, while ACE inhibitors block the immunosuppressive effect of norepinephrine on lymphocyte adrenoreceptors.

Fluoxetine is responsible for 5.6% of cases. Although a mixed infiltrate may be found, it most often consists of T lymphocytes. Clinically, it presents as pruritic papules, nodules, or plaques on the head, neck, or upper trunk.

Knowing this entity and stopping the culprit are the key factors for management

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**Abstract N°: 5316****Evaluation of the adverse effects of rituximab in the management of pemphigus**

Meryem El Omari Alaoui^{1, 2}, Amani Fliti², Karima Senouci²

¹Departement of Dermatology and venerology, University Hospital Center Ibn Sina, University Mohamed V, , Rabat, Morocco, ²Departement of Dermatology and venerology, University Hospital Center Ibn Sina, University Mohamed V, , Departement of Dermatology and venerology, University Hospital Center Ibn Sina, University Mohamed V, , rabat, Morocco

Introduction & Objectives:

Pemphigus is an autoimmune disease. Its therapeutic management depends on the severity and extent of the lesions. The recent use of rituximab has significantly improved the therapeutic arsenal, offering a clear advantage in first-line treatment.

The aim of the study is to evaluate the tolerance of RTX and to identify risk factors associated with the drug's adverse effects.

Materials & Methods:

This is a retrospective analytical descriptive single-center study conducted in the Dermatology Department of CHU Ibn Sina Rabat from 2020 to 2023.

Results:

A total of 130 patients were included in our study, of whom 27 presented adverse effects following treatment with Rituximab. Among these patients, 55.5% were in the "naïf" group and 44.4% were in the "non-naïf" group. In the non-naïf group, 33.3% (5) were under corticosteroid therapy alone, while 66.6% (10) were under corticosteroid therapy and immunosuppressants.

More than 60% of patients experienced side effects related to perfusion, while just 18.5% had severe reactions requiring the discontinuation of the perfusion and the contraindication of any subsequent reuse. 66% of patients who experienced adverse effects received more than three infusions, while 22.2% received only one infusion. And for the cumulative dose of rituximab, the majority of patients, 59.2%, received more than 1.5g. No statistical correlation ($p > 0.05$) was found between the adverse effects reported in our study and the data of our patients

Conclusion:

RTX has become a standard treatment for pemphigus. National multicenter and prospective studies have evaluated its efficacy, but no studies have evaluated its long-term tolerance. Therefore, there is a need to conduct larger prospective studies to evaluate its long-term tolerance in the treatment of pemphigus





Abstract N°: 5407

An uncommon dermatologic reaction induced by Apalutamide in a patient with non-metastatic pancreatic cancer

Ilaria Proietti^{*1}, Diana Dirzu², Elisabetta Pastorelli¹, Giulia Azzella¹, Alexandra Starica²

¹Dermatology Unit Daniele Innocenzi, A. Fiorini Hospital, Terracina, Italy, ²Department of Dermatology, Railway Clinical Hospital, Iasi, Romania

Introduction & Objectives:

Apalutamide, an oral selective androgen receptor inhibitor, has received FDA approval for the treatment of metastatic and non-metastatic hormone sensitive prostate carcinoma, resistant to castration. While Apalutamide has demonstrated efficacy in clinical trials, its use has been associated with various adverse reactions, including dermatological side effects (DSE).

Materials & Methods:

We present the case of a 73-year-old male patient that came to our dermatology clinic due to the appearance of a skin eruption consisting of intensely pruritic erythematous-violaceous maculopapular lesions, localised on the thorax, upper limbs and abdomen. The onset of the eruption was 1 month prior to the presentation, with the first maculopapular lesions localized on the thorax and subsequently expanding to form plaques involving the upper mentioned regions. The patient has not had similar episodes in the past. He is known with a 14-year history of prostate cancer, for which is currently under hormone therapy (HT). The HT with Apalutamide, was initiated 7 months prior, the daily dose being 240 mg/day.

An incisional biopsy was performed and the result was lichenoid reaction (LR). In light of the histopathological outcome, we opted for the treatment of the DSE by using antihistamines and corticosteroids, maintaining the HT at its current dose. The patient's progress hasn't improved after the first month of treatment. Due to the patient's declining clinical picture, we made the decision, in collaboration with the oncologist, to discontinue the HT and manage the DSE.

Results:

The patient's condition progressively improved during the next month of weekly examinations. Afterwards, HT was restarted, using the same dose and thus far (one month after the resumption of HT), no recurrences have been recorded.

Conclusion:

Up to this moment, several cases of DSE induced by Apalutamide have been reported, among which LR represents a rare but noteworthy complication that warrants attention; 5 cases have been reported so far. The mechanism by which Apalutamide causes these DSE is not fully known, but it is suspected that its molecular structure causes the formation of haptens which may trigger an immune response. Additionally, the finding that in certain instances, merely reducing the dosage of Apalutamide was sufficient to induce remission of the lesions implies that the likelihood of DSE rises in direct proportion to the amount of Apalutamide administered.

Considering the aforementioned data, we can state that we have 3 therapeutic options: treating the DSE in all cases and either discontinuing the HT or lower the dose of the incriminated drug (studies have not revealed significant changes in the effectiveness of HT if the dosage of Apalutamide is decreased) or continue HT at its

current dose. These options can be considered solely after weighing the risks and benefits of each individual case.

In some cases, the resumption of HT resulted in recurrences after varying times (1-14 months). As a result, some specialists opted to reduce the administered dose and others to change the medication; both strategies yielded favorable outcomes. In our case, we will continue to follow up the patient monthly in order to intervene in case of a relapse.

Prompt recognition and appropriate management are essential to minimize morbidity and ensure optimal patient outcomes. Further research is warranted to elucidate the underlying mechanisms and risk factors predisposing individuals to this DSE.

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**Abstract N°: 5576****Iatrogenic Kaposi's Disease in a Patient Treated for Polyarteritis Nodosa: A Case Report**

Islem Jabrouni¹, Rekik Sonia¹, Dhifallah Malek¹, Abbes Maissa¹, Zouaoui Khaoula¹, Rahmouni Safa¹, Boussaid Soumaya¹, Sahli Hela¹

¹Ila rabta, rheumatology, Tunis, Tunisia

Introduction & Objectives:

Kaposi's syndrome, a vascular tumor driven by human herpesvirus 8-induced endothelial inflammation, predominantly afflicts immunocompromised individuals. Herein, we report a case of iatrogenic Kaposi's disease triggered by cyclophosphamide and corticosteroids in a patient undergoing treatment for polyarteritis nodosa.

Case presentation:

A 64-year-old patient presented with a medical history of non-insulin-dependent diabetes, severe persistent corticosteroid-dependent asthma, chronic venous insufficiency, and corticosteroid-induced fractures.

Four months prior to admission, the patient was diagnosed with polyarteritis nodosa based on clinical findings, including axonal sensory-motor polyneuropathy, dermo-hypodermic nodules along the vascular pathways of the left leg detected by ultrasound, and leukocytoclastic vasculitis lesions on skin biopsy.

The patient was treated with cyclophosphamide (1,000 mg/month) and methylprednisolone boluses at a dose of 1g per day for 3 consecutive days, followed by maintenance prednisone at a dose of 20 mg per day between cycles. After the fourth cycle, the patient developed cutaneous lesions, manifested as maculopapular eruptions and erythematous-violaceous nodular plaques on the left foot, accompanied by lower limb edema.

Cardiovascular, pulmonary, and gastrointestinal examinations were normal. A skin biopsy demonstrated tumor proliferation comprising spindle cells arranged in short bundles mixed with small vascular cavities and red blood cells, consistent with Kaposi's disease.

Investigations for associated neoplasia in the context of paraneoplastic Kaposi's syndrome, including thoraco-abdomino-pelvic computed tomography and tumor markers (PSA, ACE, and CA19-9), were negative.

Given the patient's prolonged corticosteroid and cyclophosphamide treatment, the diagnosis of iatrogenic Kaposi's disease was established. The patient was maintained under clinical surveillance with a gradual tapering of corticosteroid dosage but was subsequently lost to follow-up.

Conclusion:

Various factors have been associated with Kaposi's disease, including HIV infection, immunosuppressive treatments such as cyclophosphamide, and prolonged use of high-dose corticosteroids, as in the case of our patient. Several other cases have been reported in the literature of iatrogenic Kaposi's disease induced by prolonged corticosteroid therapy combined with cyclophosphamide in patients with vasculitis. The causality of either molecule, the combination of the two, or the underlying pathology remains difficult to determine.



**Abstract N°: 5662****Clinicoepidemiological evaluation of Cutaneous adverse drug reactions secondary to Anti tubercular therapy (ATT)**

Kirti Jangid^{*1}, Shraddha Mahobia¹, Swagata Tambe²

¹Seth V.C. Gandhi & M.A Vora Municipal General Hospital, Rajawadi, Dermatology, Venereology, Leprology, Mumbai, India, ²SETH V.C. GANDHI & M.A. VORA MUNICIPAL HOSPITAL, RAJAWADI HOSPITAL, Dermatology, Venereology, Leprology, Mumbai, India

Introduction & Objectives:

The prevalence of cutaneous adverse drug reactions (CADRs) secondary to ATT ranges from 8% - 85% and it can vary from mild pruritus to life threatening toxic epidermal necrolysis (TEN).

It presents a significant clinical challenge, impacting patient management and treatment adherence.

This study aims to understand the epidemiology and morphological spectrum of CADRs secondary to ATT.

Materials & Methods:

This was a retrospective study with inclusion of the indoor and outdoor patients with CADR secondary to ATT. Record was maintained in the form of demographic characteristics, type of tuberculosis (TB), ATT regimen, past history of drug reaction, interval between ATT initiation and development of CADR and pattern of drug rash.

Results:

All the cases (13 patients) were reported in adults with female to male ratio of 1:1.16 and mean age of 47 years.

Pulmonary TB was the most common type of TB observed in 10 (77%) patients followed by extra-pulmonary in 03 (23%) patients.

02 patients (15 %) had extensively drug-resistant TB (XDR TB).

None of the patients had a previous history of drug rash.

02 patients (15%) had concurrent oral mucosal involvement.

Urticarial morphology had latency in a few days whereas lichenoid morphology had latency of about 3 months.

Table 1 indicating the different patterns of drug reactions in the study and the management

Pattern of drug reaction	Percentage of involvement	Management
Lichenoid drug rash	46.15% (6)	Continuing ATT with topical steroids, emollients and oral antihistamines
Urticarial rash	15.3% (2)	Continuing ATT with oral antihistamines
Maculopapular	15.3% (2)	Continuing ATT with emollients and oral antihistamines
Bullous fixed drug eruption	7.7 % (1)	Withholding ATT, sequential introduction at low dosage and withdrawal of the culprit drug
PMLE like	7.7 % (1)	Continuing ATT with topical steroids, emollients, sunscreen and oral antihistamines
drug induced lupus erythematosus (DILE)	7.7 % (1)	Withholding ATT, sequential introduction at low dosage along with topical steroids, emollients, sunscreen and oral antihistamines

Table 2 showing comparison of current study with other studies**

	Thong et al. (2014)	Tan WC et al. (2007)	Lehloenya et al. (2011)	Current Study
Maculopapular	8 (72%)	34 (72.3%)	2	2 (15%)
Urticarial	1	4 (8.5%)	-	2 (15%)
Acute Generalised Exanthematous Pustulosis	-	-	-	-
Erythema multiforme	-	2 (4.2%)	-	-
SJS/TEN	-	-	13/17 (20/26%)	-
DRESS	2	-	25 (38%)	-
Erythroderma	-	1	-	-
Lichenoid Rash	-	1	3	6 (46%)
Other	-	1 (Generalized pruritus)	5	3 (24%)
Total	11	47	65	13

Conclusion: In conclusion, this clinico-epidemiological evaluation contributes valuable insights into the intricate relationship between ATT and CADR. Many patients with CADR to ATT can be managed conservatively without discontinuation while certain types of CADR require withdrawal of the offending drug. Hence knowledge about the patterns and management is important.



**Abstract N°: 5779****Clinical relevance of screening for dapsone-induced methaemoglobinaemia in a dermatology outpatient clinic: A retrospective cohort study.**

Jerene Mathews^{*1}, Anju Thomas², Pooja S Lekshmi²

¹AIIMS Bhopal, India, ²Believers Church Medical College, India

Title: Clinical relevance of screening for dapsone-induced methaemoglobinaemia in a dermatology outpatient clinic: A retrospective cohort study.

Introduction & Objectives: There is limited data on the incidence and risk factors of dapsone-induced methaemoglobinaemia. Aims: To determine:

- \1. The incidence of clinically significant methaemoglobinaemia induced by dapsone in a dermatology outpatient clinic.
- \2. The risk factors and clinical presentation of the same.

Materials & Methods: Over 18 months, 41 patients were prescribed dapsone, out of whom 28 patients had at least one follow-up on dapsone. Methaemoglobinaemia was considered clinically significant if the patient had one of the following features, not explained by any comorbid condition:

- \1. New-onset symptoms: headache, fatigue, exertional dyspnoea or postural syncope.
- \2. Signs: tachycardia, tachypnoea, cyanosis
- \3. Fall in SpO₂ to \leq 94%, not responding to supplemental oxygen.

Results: Among the 28 patients, the median age was 55.5 years (range: 2-87 years). 19 were female. The median dose of dapsone 1.51mg/kg/day.

Clinically significant methaemoglobinaemia was found in 12 patients (43%). 7 patients presented with symptoms alone, 2 with symptoms and a low SpO₂, and 3 with low SpO₂ alone. None of the patients had cyanosis, tachycardia or tachypnoea.

Normal Glucose-6-phosphate dehydrogenase (G6PD) levels did not prevent methaemoglobinaemia. Mean haemoglobin (Hb) fall, intake of antioxidants and intake of other oxidising drugs were similar among patients with and without significant methaemoglobinaemia.

Conclusion: Clinically significant methaemoglobinaemia is not uncommon in patients receiving dapsone. History of new-onset symptoms and pulse oximetry are suitable methods to screen for methaemoglobinaemia. Clinical signs (cyanosis, tachycardia, tachypnoea) may be absent. G-6-PD levels do not predict methaemoglobinaemia. The retrospective nature of the study and the small size of the cohort are the major limitations of this study.



**Abstract N°: 5882****Linear IgA bullous dermatosis induced by topical application of Diclofenac sodium: A case report**Zebbar Abdelkader Amir^{*1}¹Tindouf Mixed Hospital, Dermatology, Tindouf, Algeria**Introduction & Objectives:**

Linear IgA bullous dermatosis (LABD) is a rare autoimmune bullous dermatosis that may be of idiopathic or drug origin. We report a case of linear IgA bullous dermatosis induced by topical application of Diclofenac sodium.

Materials & Methods:

56-year-old female presenting with an extensive bullous dermatosis that had been evolving for 2 months. Clinically, the patient presented with painful post-bullous erosive lesions with inflammatory or even hemorrhagic surfaces and sharp edges surrounded by an epidermal collar, arciform in shape and located on the thighs, trunk and upper limbs. Nikolski's sign was negative, and examination of the oral mucosa revealed two erosions on the tongue. The patient claimed to have had the same episode 6 years ago that was treated and cured with dermocorticoids. Histological examination revealed a dermal-epidermal cleavage, creating a cavity, filled with red blood cells, where a neutrophil microabscess formed. Direct immunofluorescence showed type A immunoglobulin deposits along the basement membrane.

Results:

The patient reported that she had been taking non-steroidal anti-inflammatory drugs (NSAIDs) such as Diclofenac per os and suppositories before the lesions appeared, and that she continued to take them for the pain caused by the skin erosions. Discontinuation of NSAIDs and treatment with a highly potent dermocorticoid (clobetasol propionate) improved the condition for a few days before a relapse with the appearance of more extensive lesions. Treatment with Dapsone 100mg/day was decided upon, with little improvement. The lesions were highly inflammatory despite several weeks of dermocorticoid application. After persistent questioning, the patient confessed that, thinking she was doing the right thing for the pain, she applied a suppository preparation of diclofenac sodium diluted in warm water to the lesions. Discontinuation of the inducing drug and treatment with systemic corticosteroids (Prednisone 0.5 mg daily) led to a good evolution.

Conclusion:

Treatment of drug-induced LABD is based on immediate discontinuation of the inducing drug. In this case, the inducing drug was systemic Diclofenac sodium. Local administration of the latter led to worsening and persistence of lesions, as well as therapeutic resistance.





Abstract N°: 5954

Tamoxifen-induced cutaneous pseudolymphoma simulating mycosis fungoides: case reportMarko Demenj¹, Olga Pantovic¹, Snezana Minic^{1, 2}¹Clinic of Dermatology and Venereology, University Clinical Center of Serbia, Belgrade, Serbia, ²University of Belgrade, Faculty of Medicine

Introduction & Objectives: Cutaneous pseudolymphomas can be defined as a group of lymphocyte infiltrates in the skin that histologically and/or clinically resemble lymphomas. Recently, they were classified into four groups: 1. Nodular pseudolymphomas, 2. Pseudolymphomas as simulators of Mycosis fungoides, 3. Intravascular, and 4. other pseudolymphomas. The second category could be due to various drugs. Tamoxifen is a selective estrogen receptor modulator used for the treatment of breast cancer, for which one reported case of tamoxifen-induced pseudolymphoma is reported. We present the second case of this rare occurrence and describe clinical and pathological findings, treatment choice, and rationale behind patient management.

Materials & Methods: A female patient, aged 71 years, presented to the clinic in December 2023 with a history of rapidly developing skin changes from November 2023. Earlier that year, she underwent surgical treatment for breast carcinoma, followed by radiotherapy and chemotherapy-Tamoxifen, which was started in April. On examination, she had symmetric, slightly scaly erythematous patches with relatively distinctive borders and atrophy on the upper thighs, inguinal and cubital areas. A biopsy showed the presence of lymphocyte exocytosis with mild atypia and spongiosis in the epidermis, as well as superficial interstitial lymphocytic infiltrate, mildly atypical, in the dermis. Immunostaining showed CD2+, CD3+, CD4+, CD5+ and CD8- in the epidermis with CD8 +/- in the dermis, as well as CD30-, PD1+/-, and CD20+ focally in dermis with Ki-67+ in 15%. T-cell receptor rearrangement of the affected skin showed presence of polyclonal T-cells. Pathological and immunohistochemical findings proposed a diagnosis of early Mycosis fungoides. However, incorporating clinical and T-cell receptor rearrangement findings, a more probable diagnosis of Drug-induced cutaneous pseudolymphoma simulating Mycosis fungoides was made. She started topical clobetasol propionate together with narrow-band UVB therapy. On the follow-up in April 2024, a complete resolution of lesions ensued.

Results: Identical histopathological and immunohistochemical findings can be found in both cutaneous pseudolymphomas and mycosis fungoides, so the diagnosis relied primarily on clinical features: Abrupt onset, duration of fewer than six months, and symmetry of the skin lesions. Another criterion favoring a diagnosis of pseudolymphoma was the involvement of photoexposed areas, which was partially fulfilled. Lack of monoclonality and no recurrence after the treatment supported the diagnosis. The temporal association between exposure to the drug and the development of skin lesions is often complex to determine. It is postulated that the cumulative effect of drugs alters the lymphocyte function, which may be a crucial event in the development of drug-induced pseudolymphomas. In the setting of breast carcinoma and continuous therapy with Tamoxifen, which needs to be conducted for several years, drug-induced lymphocyte alteration can be long-term.

Conclusion: The presented case is the second report of Tamoxifen-induced pseudolymphoma, which should be considered a possible complication in some patients. Regular follow-ups are needed because of the long-term treatment with Tamoxifen and its chronic altering effect on leukocyte function, which may be the underlying mechanism in this entity.



**Abstract N°: 6151****Acute localised exanthematous pustulosis (ALEP) : About 5 cases**

Maissa Abid¹, Rim Chaabouni¹, Mohamed Ksentini², Khadija Sellami¹, Emna Bahloul¹, Sonia Boudaya¹, Abderrahmen Masmoudi¹, Hamida Turki¹

¹Hedi Chaker hospital, dermatology, Sfax, Tunisia, ²Sfax medical school - Pharmacology laboratory, Sfax, Tunisia

Introduction & Objectives:

Acute localised exanthematous pustulosis (ALEP) is a rare entity described by Prange et al. in 2005 as a localised form of acute generalised exanthematous pustulosis (AGEP). Since then, more than 30 cases have been reported in the literature. The aim of our work is to specify the epidemioclinical characteristics of this new entity and to discuss the aetiology.

Materials & Methods:

Our study was retrospective assessing all cases of ALEP observed at our departement over a period of 16 years (2008-2023). We adopted the EuroSCAR diagnostic criteria.

Results:

We observed 5 cases of ALEP. The mean age was 37 years. The sex ratio (H/F) was 0.4. The clinical presentation was erythematous and oedematous plaques interspersed with millimetric non-follicular pustules in all cases in a context of apyrexia. Lesions were located on the face in 80% of cases and on the neck in 20% of cases. Concurrent involvement of the external genitalia was found in one patient. Biologically, there was neutrophilia in one case, with normal level of C-reactive protein. Bacteriological and mycological samples from a pustule were negative in 2 cases. The diagnosis of ALEP was confirmed histologically in 2 cases, with the presence of an intra- and sub-corneal pustule containing neutrophils, associated with discrete spongiosis, a perivascular and peri-annexal dermal infiltrate and a few eosinophils, without leukocytoclasia or vasculitis. Careful investigation ruled out any systemic drug-induced origin. These lesions were triggered by an insect bite (spider) in one case, by the local application of a vegetable oil-based cream in 2 patients and of unknown aetiology in 2 cases. All our patients had received local corticosteroid therapy with complete regression of the lesions after an average delay of 4 days.

ALEP is a localised variant of AGEP without associated general signs. It shares the same clinical and histological features as AGEP. There is a predominance of females. Six paediatric cases have been reported, including one involving contact with plant-based products. Almost all published cases were induced by systemic medication, particularly antibiotics. Non-drug-related cases of ALEP (16%) have recently been described after topical or systemic exposure to herbal substances, such as *Tapsia garganica* in Tunisia and after covid vaccination.

Conclusion:

ALEP is a rare entity that has to be considered in the differential diagnosis of localized pustular eruptions. We described 5 new cases. Our series is notable for the predominance of facial involvement and the occurrence after a spider bite and after application of a vegetable oil-based cream.



**Abstract N°: 6236****Development of a novel SJS/TEN prognostic score CRISTEN: identification of clinical characteristics of high-risk cases**Natsumi Hama¹, Riichiro Abe¹¹Niigata University Graduate School of Medical and Dental Sciences, Division of Dermatology, Niigata City, Japan**Introduction & Objectives:**

Stevens–Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN) are life-threatening, severe mucocutaneous adverse reactions. Severity prediction at early onset is urgently required for treatment. However previous prediction scores have been based on data of blood tests. This study aimed to present a novel score that predicts mortality in patients with SJS/TEN in the early stages, based on only clinical information, and furthermore to clarify the clinical characteristics of high-risk cases.

Materials & Methods:

We retrospectively evaluated 382 patients with SJS/TEN in development study. A clinical risk score for TEN (CRISTEN) was created according to the association of potential risk factors with death. We calculated the sum of these risk factors using CRISTEN, and this was validated in a multinational survey of 416 patients and was compared to previous scoring systems. In addition, we investigated the clinical characteristics of high-risk patients with a high CRISTEN score in the development study.

Results:

The significant risk factors for death in SJS/TEN comprised of 10 items, including patients' age of ≥ 65 years, $\geq 10\%$ BSA involvement, the use of antibiotics as culprit drugs, the use of systemic corticosteroid therapy prior to the onset, and mucosal damage affecting ocular, buccal, and genital mucosa. Renal impairment, diabetes, cardiovascular disease, malignant neoplasm, and bacterial infection were included as underlying diseases. The CRISTEN model showed good discrimination (AUC=0.884) and calibration. In the validation study, the AUC was 0.827, which was statistically comparable to those of previous systems. In addition, in the initial study to develop the score (N=382), there were 13 cases of CRISTEN 7 or higher (10 cases dead, 3 cases alive). The characteristics of this high-risk case include older age (76.5 years) than the average age of the cohort (56.2 years), causative agent being an antibiotic, $\geq 10\%$ BSA involvement, and severe renal impairment during the course of treatment.

Conclusion:

A scoring system based on only clinical information was developed to predict mortality in SJS/TEN and was validated in an independent multinational study. CRISTEN may predict individual survival probabilities and direct the management and therapy of patients with SJS/TEN.



**Abstract N°: 6333****Severe Cutaneous Adverse Drug Reactions: A Search for the Culprit (Retrospective Study of 107 Patients)**

Zakia Douhi^{*1}, Sqalli Ghita¹, Soughi Meriem¹, Elloudi Sara¹, Baybay Hanane¹, Mernissi Fatima Zahra¹

¹Hospital University Hassan II , Dermatology, Fez, Morocco

Introduction & Objectives:

Severe drug eruptions, consequences of systemic drug administration, can jeopardize the patient's life, emphasizing the crucial need to immediately discontinue the implicated medication. This study aims to shed light on the most involved drugs by examining the clinical profile and associated prognosis.

Materials & Methods:

A retrospective descriptive and analytical study (2014-2023) was conducted, including hospitalized patients with Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS), Stevens-Johnson Syndrome (SJS), Toxic Epidermal Necrolysis (Lyell syndrome), and Acute Generalized Exanthematous Pustulosis (AGEP).

Results:

The main implicated drugs were Allopurinol (44.9%), neuroleptics (20.6%), antibiotics (12.1%), sulfasalazine (5.6%), and non-steroidal anti-inflammatory drugs (NSAIDs) (5.6%). Allopurinol was responsible for DRESS (51.4%), SJS (35.3%), and Lyell syndrome (45.5%), with no cases of AGEP. Neuroleptics were responsible for SJS (35.3%), Lyell syndrome (27.3%), and DRESS (18.1%), with no cases of AGEP. Antibiotics were associated with AGEP (28.6%), SJS (17.6%), Lyell syndrome (9.1%), and DRESS (9.7%). Sulfasalazine was linked to Lyell syndrome (9.0%) and DRESS (6.9%), with no cases of Stevens-Johnson or AGEP. NSAIDs were implicated in AGEP (42.9%) and DRESS (4.2%). No significant correlation was found between the drug and the type of drug eruption. Allopurinol, neuroleptics, sulfasalazine, and antibiotics caused hepatic impairment (50%, 16.7%, 11.9%, 9.5%, respectively), with a significant association between sulfasalazine and hepatic impairment. Allopurinol, neuroleptics, and antibiotics were responsible for renal failure (70%, 11.8%, 3.9%, respectively) with a statistically significant relationship ($p < 0.05$). The overall mortality rate was 9.3%, primarily attributed to Allopurinol (60%), followed by antibiotics (20%) and sulfasalazine (20%). Regarding sequelae, 3.7% of patients had systemic effects (thyroid disorders), all attributed to Allopurinol, and 30.8% had cutaneous-mucous sequelae (post-inflammatory hyperpigmentation, xerosis, nail abnormalities, genital, and ocular sequelae), with 51% attributed to Allopurinol, 27.27% to neuroleptics, 6% to NSAIDs, and 3% to sulfasalazine.

Conclusion:

Allopurinol, neuroleptics, antibiotics, and sulfasalazine are the most implicated drugs in our study. However, Allopurinol and neuroleptics lead to severe manifestations with hepatic and renal complications.




Abstract N°: 6369
Papulo-pustular rash as a side effect of treatment with epidermal growth factor receptor (EGFR-I) inhibitors: a case report

 Andra-Luana Calitoiu^{1, 2}, Ana-Olivia Toma^{1, 3}
¹Clinica de Dermato-venerologie Timisoara, Dermatovenerology, Timișoara, Romania, ²Spitalul CFR, Dermatovenerology, Timișoara, Romania, ³Victor Babeș University of Medicine and Pharmacy, Dermatovenerology, Timișoara, Romania

Introduction & Objectives:

Epidermal growth factor receptor inhibitors (EGFRIs) are frequently used for malignancies of epithelial origin. Although these therapies are better tolerated than conventional chemotherapy, they have unique side effect profiles that are related to their mechanism of action. Given the function of the epidermal growth factor receptor in the skin, nails and hair, dermatological side effects are commonly seen with the use of EGFRIs. These case reports includes a practical approach to recognizing and treating the most common dermatologic adverse reactions seen with EGFRIs, including papulopustular eruptions, nail changes, xerosis and pruritus, hair changes, mucositis, and flares of radioactive dermatitis.

Materials & Methods:

A 52-year-old patient presented to the Dermatovenerology Clinic of the Timișoara Municipal Emergency Clinical Hospital in November 2022 with a papulo-pustular eruption accompanied by yellow-brown scales spread across the face and anterior chest, along with generalized itching, paronychia, and fissures on the fingertips and toes. These lesions appeared after a month after the institution of chemotherapy with Panitumumab, Capecitabine and Irinotecan. The patient was diagnosed with adenocarcinoma of the intestinal type with an unspecified starting point in 2021. In October 2022, palliative FOLFOX6 type polychemotherapy was instituted following oncological re-evaluation, the patient presenting lung, liver and abdominal metastases.

Results:

EGFRs are required for the normal function of the skin and adnexal structures, so it is not surprising that anti-EGFRs induce frequent dermatological abnormalities. EGFR receptors are located in the basal cells of the epidermis, in the hair shaft, on the sebaceous glands and in the outer sheath of the root of the hair follicle. Because EGFR signaling is essential for normal skin development and regeneration, EGFR inhibition has been shown to compromise skin integrity, subsequently causing a weakened stratum corneum and ultimately leading to xerosis and skin cracking. The main dermatological side effects associated with EGFR-I are hypersensitivity reactions such as acneiform eruptions, photosensitivity, pruritus, skin xerosis, paronychia and mucositis. Papulopustular rash is the most common side effect of EGFR-I, affecting 60-80% of patients treated with Panitumumab.

Conclusion:

Dermatologic toxic effects are the most common side effects of EGFR inhibitor therapy. Patients are often unable to cope with these side effects, leading to poor adherence to cancer therapy, dose reduction, dose interruption or even discontinuation, and potentially reduced quality of life. The most important conclusion is that skin reactions induced by EGFR inhibitors can be effectively treated in all stages and grades. All dermatological effects induced by EGFR inhibitors are assumed to be reversible. Topical antibiotics such as metronidazole, erythromycin or

clindamycin are recommended at the early onset of skin reactions; Systemic oral antibiotics, i.e. the synthetic tetracyclines doxycycline or minocycline, are recommended for grade ≥ 2 dermatologic toxicities due to their anti-inflammatory properties. In most cases, this approach allows patients to continue anti-EGFR treatment without interruption, dose delay or drug discontinuation and should aim to maintain the patient's quality of life.

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**Abstract N°: 6389****Clinical Characteristics of Severe Drug Adverse Reactions: A Single-Center Retrospective Study**Mengmeng Li^{*1}, Wei Li¹¹West China Medical School, West China Hospital, Sichuan University, Cheng Du Shi, China**Introduction & Objectives:**

Cutaneous Adverse Drug Reactions (CADRs) refer to clinical manifestations in the skin, mucous membranes, and appendages caused by drugs or their metabolites. The incidence of CADRs in adults ranges from 1% to 3%, and around 2.5% of children experience CADRs following medication usage. As high as 10% of inpatients experience CADRs. In recent years, the substantial development and promotion of new drugs like molecular targeted medicines, immunological checkpoint inhibitors and biological preparations offer new treatment options for different types of malignancies and refractory inflammatory diseases; however, the resultant rashes and other adverse drug reactions are significant.

Materials & Methods:

Severe adverse drug reaction cases from our hospital were retrospectively collected in this study, and the clinical characteristics of traditional drug rashes and adverse reactions to the novel drugs were analyzed and summarized.

Results:

In total, 19 cases of severe adverse drug reactions were included; 12 males and 7 females, aged between 18 to 77 years old (average 48.6) with disease duration ranging from 3 to 30 days. Rash appearance after medication ranged from 1 to 30 days, with two cases unknown. Eleven cases involved fever, fourteen cases involved mucosal lesions, three cases appeared with abnormal liver function, two with abnormal kidney function, and hospitalization duration ranged from 12 to 50 days. Traditional medicines caused 14 instances and new drugs caused 5 instances, specifically lenvatinib Mesylate (2 cases), Pembrolizumab (1 case), Triprutinib Monoclonal Antibody (1 case), and Cindilimab (1 case). Among treatments, 16 cases used systemic glucocorticoids, 14 cases used Immunoglobulins, four cases used Cyclosporin, two cases used Etanercept. Five patients died, two of which were due to the new drugs.

Conclusion:

Incidence of Cutaneous Adverse Drug Reactions is increasing annually, demanding more clinical attention and research. The mortality rate of adverse drug reactions caused by new drugs is higher, indicating the need for early recognition and management.



**Abstract N°: 6404****A Systematic Review of Clinical Features, Etiologies and Treatment Outcomes of Erythema Multiforme**

Lorena Alexandra Mija^{*1}, Catherine Zhu², Megan Park BSc³, Orhan Yilmaz BSc⁴, Youssef Salem MD⁵, Zainab Ridha MD⁶, Ilya Mukovozov, MD, PhD, Frcpc, Dabd, Faad⁷

¹Université de Montréal, Faculté de Médecine, Montreal, Canada, ²McGill University, Faculty of Medicine, Montreal, Canada, ³University of Toronto, Temerty Faculty of Medicine, Toronto, Canada, ⁴University of Saskatchewan, College of Medicine, Saskatoon, Canada, ⁵Université de Montréal, Département de dermatologie, Montreal, Canada, ⁶McGill University, Division of Dermatology, Montreal, Canada, ⁷Toronto Dermatology Center, North York, Canada

Introduction & Objectives:

Erythema multiforme (EM) is an acute mucocutaneous hypersensitivity reaction caused by various factors. To date, the full spectrum of triggering agents and associated outcomes have not been characterized. This systematic review aims to comprehensively synthesize clinical findings, etiologies and treatment outcomes of EM for better clinical practice.

Materials & Methods:

A systematic search of MEDLINE, Embase, and PubMed was conducted using 'erythema multiforme' as a search term, without restriction on publication date, location or language (CRD42023490378). All manuscripts and abstracts were independently screened by three reviewers (LM, CKZ, MP). The inclusion criteria encompassed all clinical studies featuring patients diagnosed with EM.

Results:

The search yielded 1372 entries. After removing duplicates and full screening, 267 studies met our inclusion criteria, totaling 1207 cases of EM (mean age at diagnosis: 36.5±22.8 years; female: 28.7% (n=347/1207); male: 22.6% (n=261/1207); unspecified: 49.7% (n=599/1207)). EM was commonly noted on upper limbs (24.2%; n=192/796), along with facial (15.1%; n=116/796) and truncal (13.4%; n=107/796) involvement. EM was described as targetoid (32.2%; n=256/796) or blistering (8.3%; n=66/796) lesions. Pharmacotherapy (41.9%; n=439/1046), mainly antibiotics (n=108) and antiepileptics (n=55), and infectious agents (32.1%; n=336/1046), primarily SARS-CoV-2 (n=64) and herpes simplex virus (n=53), were the most reported causes (n=1046). Our findings indicate multiple other etiology categories, such as vaccines (6.3%; n=66/1046), half of which were against SARS-COV-2 (n=33), exposure to various chemicals (4.4%; n=46/1046), and radiation-associated EM (0.6%; n=6/1046). Regarding all EM specified treatments outcomes (n=321), the rate of complete EM resolution was highest with systemic corticosteroids (78.0%; n=92/118), followed by topical corticosteroids (71.4%; n=25/35), systemic antihistamines (67.7%; n=21/31), and systemic antivirals (67.6%; n=25/37).

Conclusion:

This systematic review provides important insight into the extensive manifestations and triggering factors of EM. Consideration of possible etiologies is important for patients with EM, as clinical responses vary considerably depending on medical management.





Abstract N°: 6415

Single Cell Resolution Immune Signatures of Cutaneous Inflammation Caused by Cancer Immune Checkpoint Inhibitor Therapy

Max Emmerich^{*1, 2}, Eleanore Carlyle², Kim Edmonds², Yuliia Dovga¹, Fiona Byrne¹, Justine Korteweg², Lisa Pickering², Kate Young², Andrew Furness², James Larkin², Samra Turajlić^{1, 2}

¹The Francis Crick Institute, London, United Kingdom, ²The Royal Marsden Hospital, Renal and Skin Cancer Unit, London, United Kingdom

Introduction & Objectives:

Immune checkpoint inhibitors (ICIs) targeting the cytotoxic T-lymphocyte-associated protein-4 (CTLA-4) and programmed cell death protein-1/programmed death ligand-1 (PD-1/PD-L1) signalling axes have significantly improved the outcomes for an ever-expanding range of malignancies. However, most patients treated with ICIs develop immune related adverse events (irAEs). irAEs are characterised by off-target inflammatory damage, which mimics conventional inflammatory disorders. Cutaneous irAEs are the most common, yet their aetiology remains poorly understood. Thus, their systemic treatment relies on high-dose corticosteroids, which impairs ICI efficacy and causes significant side effects. Targeted anti-inflammatories with superior side event profiles are underutilised because their targets have not been validated in cutaneous irAEs. To address this significant unmet need, we undertook single cell RNA sequencing to delineate the molecular mechanisms of skin inflammation in cutaneous irAEs.

Materials & Methods:

Punch biopsies were obtained with ethical approval from 5 patients with dermatologist-confirmed cutaneous irAEs, 5 healthy controls, and 5 ICI treated patients without skin inflammation. Biopsies were dissociated with the Miltenyi whole skin dissociation kit, flow sorted for viable T-cells (CD45+CD3+), non-T immune cells (CD45+CD3-), and non-immune cells (CD45-CD3-). The sorted populations were sequenced using the 10X Genomics 5' with V(D)J scRNAseq kit. Sequencing files were aligned to the human genome with 10X Cell Ranger (v7.1.0). Data analysis was performed in R utilising Seurat (v5.0.1) and Clustree(v0.5.1). Cluster annotation was by SingleR (v2.2.0) and manual annotation based on differential expression of hallmark genes.

Results:

To determine irAEs-associated immune cell clusters, we subclustered the dataset into CD8 T Cells, CD4 T Cells, and non-T immune cells. Within the CD8 subset, actively cycling and cytotoxic effector cells were significantly expanded. Effectors highly expressed granzymes, granulysins, and interferon gamma consistent with an activated phenotype mediating end organ damage. The CD4 T Cell subcluster also demonstrated expanded cycling T Cells as well as a Th1 effector cluster in cutaneous irAEs. In addition, cutaneous irAEs showed expansion of T-regulatory cells. The non-T immune cell subcluster predominantly comprised myeloid populations. A cluster of activated macrophages was significantly expanded in cutaneous irAEs. These macrophages were enriched for expression of the Th1-polarising and -recruiting chemokines CXCL9 and CXCL10.

Conclusion:

Our results represent one of the first reports on the molecular mechanisms of cutaneous irAEs at single cell resolution. We demonstrate a clear cutaneous irAE immune signature comprising Th1-polarising and -recruiting activated macrophages driving expansion of Th1 CD4 T-Cells and a highly cytotoxic CD8 T-Cell population likely

mediating end-organ damage. A compensatory expansion of immunosuppressive T regulatory cells appears to have been ineffective at curbing cutaneous inflammation. This immune signature is potentially targetable with anti-Th1-directed therapies, such as anti-tumour necrosis factor agents. Our results merit validation in a larger cohort to establish a firm foundation for potential future interventional trials evaluating the use of anti-TNF agents for steroid-sparing cutaneous irAE therapy.

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**Abstract N°: 6416****The positive impact of a dedicated immunotherapy toxicity MDT in the early intervention and guidance of patients presenting with dermatological irAEs**

Christine Fang¹, Styliani Germanou², Jason Chow², Bernard Ho³

¹Imperial College London, School of Medicine, London, United Kingdom, ²St George's University Hospitals NHS Foundation Trust, Oncology Department, London, United Kingdom, ³St George's University Hospitals NHS Foundation Trust, Dermatology Department, London, United Kingdom

Introduction & Objectives:

Immune checkpoint inhibitors (ICIs) involve a large, growing subset of systemic anti-cancer drugs, aimed at disrupting cancerous cells' ability to evade the immune system. The incidence of immune-related adverse events (irAEs) is increasing with ICI use. Despite dermatological irAEs being common, there is a lack of standardisation in classification, escalation protocols, and established national treatment guidance. Although steroids remain the mainstay of treatment, higher-grade irAEs need more complex management. Early initiation of immunosuppressive therapy are required in steroid-refractory irAEs to prevent progression to severe toxicity.

Our aim is to show that a multidisciplinary team (MDT) discussion of each individual case with a dermatological irAE can lead to an effective management with a safe outcome.

Materials & Methods:

We present data from a single centre on the management of a cohort of patients with Grade 2-4 dermatological irAEs from March 2023 to January 2024, discussed in immunotherapy toxicity MDT meetings, who required dermatology specialist input.

Results:

6 patients were on single-agent PD-1/PD-L1 inhibitors for various tumour types, and 1 was on combination PD-1 and CTLA-4 inhibitors. 43% (n=3) presented within 2-4 weeks of their first cycle and 57% (n=4) between cycle 4-21. Clinically examined and documented irAEs include macular and scaly rash, pruritus, erythema, allergy, lichenoid reaction and SJS/TEN; the latter two cases required skin biopsy. The average time of steroid initiation was 6 days (0-14 days) from symptom onset. 29% (n=2) experienced steroid-refractory toxicities requiring Infliximab. 86% (n=6) had complete resolution, with 1 case of SJS/TEN-related mortality.

Conclusion:

Dermatological irAEs are reversible if detected early and treated promptly. Our data supports the effectiveness of an immunotherapy toxicity MDT guiding prompt management of these patients, and would support the further development of nationally recognized guidelines to improve clinical outcomes.




Abstract N°: 6417
Tenegliptin induced pityriasis rosea

 Dhananjay Damle¹, Smita Damle²
¹Dr. Damle Skin clinic , Dermatology, Pune, India, ²Dr. Damle Skin & Laser clinic Pune, Dermatology, Pune, India

Introduction & Objectives:

Diabetes mellitus (DM), a global epidemic affects young & elderly population who are usually on multiple oral hypoglycaemic agents (OHA). A relatively new OHA gliptins are dipeptidyl peptidase-4 inhibitors (DPP-4) which are preferred for their least risk of hypoglycemia. Pityriasis rosea (P. rosea) a common skin disorder whose exact aetiology is unknown has been documented to be triggered by various drugs. We report a rare case of Tenegliptin induced P. rosea in an elderly with Type-2 diabetes mellitus (T-2DM)

Materials & Methods:

71 year female, diabetic & hypertensive, presented with intensely pruritic rash of 2 months duration with no prior history of fever cough or sore throat. The rash consisted of erythematous papules & plaques with hyperpigmentation & minimal scaling at few sites. She experienced intense burning over the rash & was even unable to bear contact with clothes. Clinically, Pityriasis lichenoides & Pityriasis rosea were considered & patient was investigated. Haemogram, liver & renal function tests were normal. Biopsy showed epidermal hyperkeratosis, focal parakeratosis & mild hyperplasia along with mild spongiosis & exocytosis of lymphocytes in the epidermis forming a collection. Few dyskeratotic cells were also visible. Dermis showed dilated capillaries with extravasated RBC's & superficial perivascular lymphocytes & eosinophils. These features were suggestive of P. rosea. Despite using anti-histamines like levocetirizine & hydroxyzine hydrochloride and mid-potent to super-potent topical corticosteroids patient did not show any improvement. Subsequently, oral corticosteroids were initiated. However a 2 week course of oral corticosteroids failed to alleviate the symptoms & rash. It was then decided to check the list of ongoing medications for T-2DM & hypertension. Patient had been receiving telmisartan, celnidipine, chlorthiazide, glicazide, metformin and tenegliptin which was the most recent addition. However, a literature search failed to show Tenegliptin as trigger for P. rosea. In view of the relentless progressive nature of skin condition it was decided to withdraw tenegliptin. This led to dramatic improvement in patient's condition with considerable decrease in itching & burning and complete resolution of rash in 4 weeks.

Results:

DPP-4 inhibitors are relatively new class of OHA which act by competitively inhibiting the enzyme DPP-4, promoting insulin secretion & suppressing glucagon secretion. Tenegliptin has been approved for management of T-2DM in India since 2015. Though widely used with good safety profile, there are

reports of cutaneous adverse reactions with use of gliptins, which includes bullous pemphigoid, hypersensitivity vasculitis, fixed drug eruptions, DRESS syndrome, SJS & TEN. Although P. rosea like drug eruption has been reported to occur with multiple drugs, gliptins have not been documented to cause P. rosea. Though several case reports are available in literature about gliptin induced bullous pemphigoid with it's proposed mechanism of action, the exact mechanism by which P. rosea could be triggered by tenegliptin is not explainable.

Conclusion:

Our case, clinically and biopsy proven P.rosea did not respond to conventional therapy but withdrawal of

tenegliptin led to rapid resolution of P. rosea and associated symptoms. To the best of our knowledge, this is a first reported case of Tenegliptin induced P. rosea.**

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**Abstract N°: 6521****Acute generalized exanthematous pustulosis: European expert consensus for diagnosis and management**

Florence Tetart¹, Sarah Walsh², Brigitte Milpied Homs³, Marie-Charlotte Brueggen⁴, Annick Barbaud⁵, Lars E. French⁶, Saskia Oro^{*7}

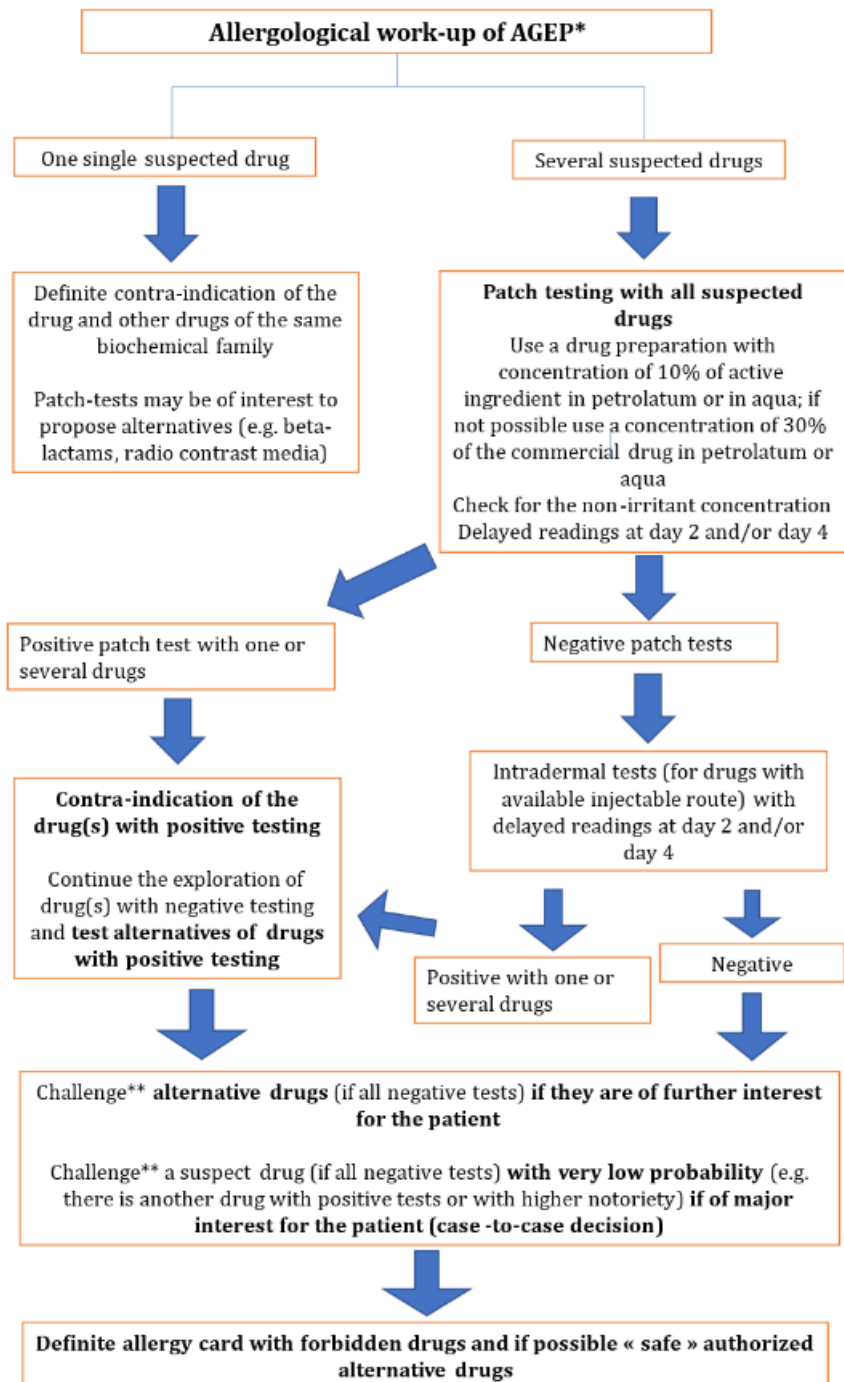
¹Hospital Center University De Rouen, Rouen, France, ²King's College Hospital, United Kingdom, ³Hospital Pellegrin Bordeaux, Bordeaux, France, ⁴University Hospital of Zürich, Zürich, Switzerland, ⁵Tenon Hospital, Paris, France, ⁶Ludwig Maximilian University of Munich, München, Germany, ⁷Henri-Mondor University Hospital, Créteil, France

Introduction & Objectives: Acute generalized exanthematous pustulosis (AGEP) is a rare, usually drug-induced, acute pustular rash. Despite the lack of strong data supporting the effectiveness of topical or systemic corticosteroids in this drug reaction, they are widely used. More generally, there is no consensus on the diagnostic modalities and the management of patients with AGEP. Our objective was to provide European expert recommendations for the diagnosis and management of patients with AGEP.

Materials & Methods: Twenty-six experts from 12 European countries,** all dermatologists and/or allergologists with expertise in drug reactions, met to write these recommendations based on their own experience and on a review of the literature. Recommendations were separated into the following categories: professionals involved in the management of the patient, assessment of the diagnosis of AGEP, setting and treatment modalities, and allergological work-up after the acute phase. Due to the lack of randomized therapeutic trials in AGEP, the level of recommendations in the literature was low (grade C). We therefore favored expert opinions for these recommendations.

Results: Consensus was obtained among experts for the professionals involved for the diagnosis and management of AGEP, and the minimum diagnostic work-up. The expert group advised hospitalization, immediate stop of the offending drug, bed rest, emollients, and potent or superpotent topical steroids for 5-7 days (mild dose systemic steroids in very severe cases). The modalities of the allergological work-up were also specified [Figure 1].

Conclusion: European experts in drug allergies propose herein consensus on the diagnosis and management of patients with AGEP. A multidisciplinary approach is warranted, including dermatologists, allergologists and pharmacovigilance services.



- *allergological work-up must be performed only by trained teams in expert centers
- **with full or progressive doses

Figure 1: Allergological work-up





Abstract N°: 6522

Pustular Psoriasis Induced by Infliximab in a Patient with Ulcerative Colitis.

Joanna Jarosz-Popek^{*1}, Marta Skorupska¹, Roman Niskovich¹, Natalia Zając¹, Aleksandra Pręgowska-Szczęśna², Małgorzata Kołos², Elżbieta Szymańska¹, Irena Walecka¹

¹National Medical Institute of the Ministry of Interior and Administration in Warsaw, Dermatology Department, Warsaw, Poland, ²National Medical Institute of the Ministry of Interior and Administration in Warsaw, Department of Pathomorphology, Warsaw, Poland

Introduction & Objectives:

Cutaneous manifestations associated with TNF- α inhibitor therapy are increasingly recognized as significant clinical challenges due to their widespread use in various diseases. Psoriasiform skin changes, common adverse dermatological effects in patients with Ulcerative Colitis (UC) treated with TNF- α inhibitors, exemplify paradoxical reactions. These reactions involve the unexpected development or exacerbation of a pathological condition despite effective biological therapy for another condition.

Materials & Methods:

This case report describes an acute episode of infliximab-induced pustular psoriasis in a female patient with severe UC.

Results:

A 51-year-old female patient suspected of drug-induced rash after receiving another dose of infliximab was urgently admitted to the Dermatology Clinic on June 13, 2023. She was diagnosed with ulcerative colitis in 2019. The patient had previously been treated with prednisone, azathioprine, 6-mercaptopurine, and mesalazine, all without improvement. Due to worsening symptoms of ulcerative colitis, she was initiated on biological therapy with infliximab. After the second dose of the medication (April 20, 2023), she noticed the gradual appearance of isolated nodular lesions filled with pus initially on the scalp and pubic mound, progressing to the upper and lower limbs and torso. On physical examination, scattered nodular lesions with purulent content on an erythematous base were found on the skin of the trunk, upper, lower limbs, scalp and pubic mound. Blood tests showed only a slightly accelerated Erythrocyte Sedimentation Rate (40mm/1h). During hospitalization, the patient received parenteral cyclosporine A at a dose of 100mg per day, analgesic treatment with paracetamol and ibuprofen, and topical treatment with a combined preparation of betamethasone and gentamycin. Two skin biopsies from the lower leg lesions were taken for histopathological examination (skin fragment showing microscopic features consistent with pustular psoriasis). Upon discharge from the dermatology department, the patient received the following recommendations: general treatment with cyclosporine A at a dose of 150mg per day orally (i.e., 3.19 mg/kg body weight), and topically the combined preparation of betamethasone and gentamycin. During the follow-up visit (one month post-hospitalization), significant clinical stabilization was observed, leading to a gradual cessation of oral cyclosporine A therapy. It was determined that the patient had contraindications to continue treatment with infliximab. During a visit to the gastroenterologist, it was decided to initiate treatment with a Janus kinase 1 (JAK1) inhibitor, filgotinib, at a dosing regimen of 200mg per day. As of July 2023, no further skin changes have been observed in the patient.

Conclusion:

Immunobiological therapy remains crucial in the management of chronic and severe conditions. There is an urgent

need for further research into paradoxical reactions to identify patients at an increased risk of such responses following treatment with TNF- α inhibitors and other biological agents. Therefore, vigilant monitoring of patients receiving immunobiological therapy is essential to better characterize and manage these emerging reactions.

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**Abstract N°: 6525****Pediatric DRESS: a diagnosis that must not be missed**Paolo Antonetti¹, Maria Esposito¹, Maria Concetta Fargnoli¹¹University of L'Aquila, Department of Biotechnological and Applied Clinical Sciences, University of L'Aquila, L'Aquila, Italy, L'Aquila

Introduction & Objectives: Drug reaction with eosinophilia and systemic symptoms (DRESS) syndrome is a serious and potentially fatal multiorgan drug hypersensitivity reaction, whose course is variable and unpredictable. It develops from 2 to 6 or more weeks after the start of administration of the culprit drug, and appears with fever, maculopapular rash, peripheral lymphadenopathy, haematological disorders, and impairment of one or more organs. It is very uncommon in children, and probably underdiagnosed due to its nonspecific presentation.

Materials & Methods: We report the case of a 14-years-old female patients, who developed DRESS syndrome after starting therapy with carbamazepine.

Results: Our patient was referred to Emergency Room for the appearance of a skin rash on almost the entire body surface and high fever (BT= 40.3°C). Her mother reported that the patient had started carbamazepine 1 month before, following an episode of focal seizures. On physical examination, we found a maculopapular rash, involving trunk, face, and limbs. Significant hepatic suffering emerged from laboratory tests performed at the admission, with high values of GOT (446 U/L), GPT (750 U/L) and gamma-GT (680 U/L); eosinophil count was 1.03x10⁹/L. Notably, abdominal ultrasonography revealed enlargement of the hepatic hilar lymph nodes, maximum size of 13 mm. After 3 days, the rash evolved to suberythroderma. Therefore, DRESS Syndrome was defined as "probable" according to RegiSCAR criteria. We immediately stopped the administration of carbamazepine and started therapy with methylprednisolone i.v., cetirizine and pantoprazole. The liver injury parameters went to almost complete normalization on day 14 of hospitalization, with a concomitant progressive decrease of eosinophil count. The skin rash resolved completely with fine desquamation. The girl was discharged from hospital in good general conditions and with the recommendation to progressively taper off the prednisone dose in 30 days. After 18 months of follow-up, the patient is in good health, with no sequelae.

Conclusion: DRESS syndrome is a hypersensitivity reaction triggered by drug exposure; its rarity in pediatric population may lead to an initial misdiagnosis, which could affect patient's treatment and prognosis. Therefore, it is crucial to consider DRESS syndrome when signs and symptoms arises in the proper clinical context, distinguishing it from other more common conditions such as Kawasaki disease, infectious exanthema, and febrile mucocutaneous syndrome.



**Abstract N°: 6536****Sclerodermiform syndrome induced by antracyclines: case report**

Kholoud Rharib¹, Bendaoud Layla¹, Maryem Aboudourib¹, Ouafa Hocar¹, Said Amal¹

¹CENTRE HOSPITALO-UNIVERSITAIRE MOHAMMED VI MARRAKECH, DERMATOLOGY VENEROLOGY, Marrakech, Morocco

Introduction & Objectives:

The skin represents one of the main target organs for toxicity associated with chemotherapy. A drug-induced scleroderma-type lesion is a condition in which the administration of a drug induces sclerotic skin lesions.

Clinical case:

We report the case of a 43-year-old woman with non-metastatic breast adenocarcinoma, treated with 4 courses of antracyclines, followed by 4 courses of taxanes. After the 3rd course of antracyclines, admitted via peripheral vein at the level of the crease of the right elbow, she presented with painful dermo-hypodermis over the right anterior and lateral aspect of the right elbow, non-febrile, clinically resembling erysipelas. These were edematous, indurated, painful erythematous-violaceous plaques, associated with functional impotence. A skin biopsy was carried out and histology revealed an atrophic epidermis, surmounted by orthokeratotic keratin, the middle dermis contains thickened collagen fibers organized parallel to the epidermis, with the presence of an inflammatory infiltrate of the superficial dermis made of lymphocytes and plasma cells of perivascular organization. From the 4th session, the venous route of administration of chemotherapy was replaced by an implantable chamber and the local evolution was slowly favorable under topical corticosteroid.

Discussion:

The clinical manifestations of drug-induced scleroderma-type lesions can be divided into two types: scleroderma-type lesions and morphea-type plaques. A wide variety of medications can cause drug-induced scleroderma-like lesions. Bleomycin, L-tryptophan, vinyl chloride and phytonadione (vitamin K1) have been reported, cases due to chemotherapeutic agents, such as taxane agents, gemcitabine and tegafur-uracil, and Immune checkpoint inhibitors have been reported. Drug-induced pseudoscleroderma is clinically and histopathologically similar to systemic sclerosis. It manifests itself as swollen, sclerotic areas that gradually harden. In some cases, the presentation may resemble diseases such as localized myxedema or eosinophilic fasciitis. Drug-induced pseudoscleroderma lesions primarily affect the limbs and often appear first on the lower legs and feet. Chemotherapy-induced pseudoscleroderma can occur several weeks or even months after treatment. His prognosis is uncertain. Some changes disappear spontaneously after the disappearance of the causative agent. Others, however, persist or worsen, and sometimes cause dysfunction in the patient's daily life by limiting mobility caused by hardened skin.

Conclusion:

This undesirable skin effect is not recognized, it which delays the diagnosis. It is often confused initially with erysipelas, despite the absence of fever. We believe that this toxicity cutaneous must be recognized because of its seriousness potential.



Abstract N°: 6545

Pustular baboon syndrome induced by piperacillin-tazobactam: a rare variant

Imane Hakim¹, Sarah Zemrani¹, Bendaoud Layla¹, Maryem Aboudourib¹, Hocar Ouafa¹, Said Amal¹

¹Mohammed VI University Hospital, Bioscience and health laboratory, Dermatology and venerology, MARRAKECH, Morocco

Introduction & Objectives:

Drug-induced Baboon Syndrome, recently renamed Symmetrical Drug-Related Intertriginous and Flexural Exanthema (SDRIFE), is a flexural dermatitis characterized by a symmetrical erythematous eruption located in the gluteal and intertriginous areas, with the pustular form remaining exceptional.

We report a rare case of pustular drug-induced Baboon Syndrome caused by the administration of Piperacillin-Tazobactam.

Clinical case:

A 40-year-old female patient, with a history of appendectomy 20 years ago and cholecystectomy 7 years ago, presented with a non-pruritic erythematous rash in skin folds, appearing one day after the administration of Piperacillin-Tazobactam for the first time, for the management of stage E pancreatitis. Dermatological examination revealed a symmetrical erythematous eruption beneath the sub-mammary, axillary, intergluteal folds, inner thighs, inguinal region, and V-shaped lateral abdominal areas, with some areas showing pustules and purpuric petechiae in the axillary region. There were no mucosal lesions or other visceral manifestations. Laboratory tests did not show signs of inflammation. Skin biopsy showed moderate spongiosis with intracorneal pustules. The dermis exhibited edema with a perivascular inflammatory infiltrate, mainly composed of mononuclear cells. The diagnosis of drug-induced pustular Baboon Syndrome or SDRIFE due to Piperacillin-Tazobactam was made based on chronological data and the absence of other causes explaining the clinical manifestations. The patient was treated with topical corticosteroids, resulting in resolution of skin lesions with desquamation after four days.

Discussion:

Drug-induced Baboon Syndrome is a delayed hypersensitivity reaction mediated by T lymphocytes, with diagnosis based on 5 criteria: 1) rash following systemic exposure to a drug (excluding contact allergies), 2) well-defined erythema in the peri-anal and gluteal regions and/or V-shaped erythema in the inguinal and peri-genital regions, 3) involvement of at least one other skin fold, 4) symmetrical eruption, and 5) absence of systemic signs and symptoms.

Histology is nonspecific, showing a perivascular mononuclear infiltrate and sometimes neutrophils and eosinophils. Vacuolization of basal keratinocytes may also be present.

Authors suggest distinguishing drug-induced Baboon Syndrome, more common in men, which typically occurs hours to days after drug intake. Various drugs can cause it, with half of the cases attributed to beta-lactams, particularly amoxicillin.

Its pathophysiology is not fully understood, thought to involve delayed hypersensitivity where patch tests might be useful.

Therapeutic management involves discontinuing the medication, antihistamines for associated pruritus, topical

corticosteroids, and sometimes systemic corticosteroids. Prognosis is generally good, but re-exposure can lead to recurrence.

Conclusion:

Despite its rarity, the diagnosis of drug-induced Baboon Syndrome should be considered in any patient presenting with a symmetrical intertriginous eruption involving drug intake, regardless of the molecule involved.

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**Abstract N°: 6557****When therapy induces disease : a rare case of drug-induced morbiliform rash following antihistamine use.**

Sarah Zemrani¹, Ouiame Karim¹, Bendaoud Layla¹, Maryem Aboudourib¹, Ouafa Hocar¹, Said Amal¹

¹CENTRE HOSPITALO-UNIVERSITAIRE MOHAMMED VI MARRAKECH, Dermatology , Marrakesh

Introduction & Objectives: Antihistamines are among the most widely used medications globally. Due to their primary role as antiallergic drugs, they are generally not suspected of causing drug hypersensitivity reactions. We report a rare case of a patient presenting with maculopapular rash due to hydroxyzine. **Materials & Methods:** This concerns a 49-year-old man with a history of pruritic lesions diagnosed as psoriasis. The patient was treated with hydroxyzine. Five days later, he developed a morbiliform rash with worsening pruritus. Dermatological examination revealed maculopapular lesions with scarlatiniform palmoplantar desquamation, scratch lesions associated with psoriasiform erythematous scaly plaques, buccal enanthema, and bilateral ocular redness. The rest of the examination was unremarkable. Laboratory tests showed neutrophil-predominant leukocytosis, normal eosinophil count, impaired liver function (ASAT x1.8N and ALAT 1.4XN), negative lipasemia, normal renal function, and negative 24-hour proteinuria. Total IgE levels were elevated at 52. Skin biopsy revealed a slightly acanthotic epidermis overlaid by parakeratotic hyperkeratosis, with the dermis showing a mononuclear inflammatory infiltrate. The diagnosis of drug-induced rash by hydroxyzine was established. The management involved discontinuation of hydroxyzine and initiation of corticosteroids, resulting in significant clinical improvement. **Results:** Allergic reactions reported with antihistamines appear to be very rare, considering their widespread use worldwide. The most commonly reported allergic manifestations are skin reactions such as urticaria, maculopapular exanthema, fixed pigmented erythema, rarely Lyell's and Stevens-Johnson syndrome, and even more rarely, anaphylaxis. Hydroxyzine is classified among second-generation H1 antihistamines, derived from piperazine. Hypersensitivity to antihistamines seems to be very rare and may be underestimated. Identifying a causal reaction is often challenging. Nearly all antihistamines have been reported to induce drug-induced skin reactions. Reactions to hydroxyzine have been most frequently described. Diagnosis relies on clinical suspicion and can be confirmed through provocation tests. **Conclusion:** Our case underscores the rarity of cutaneous reactions to antihistamines, emphasizing the importance of considering them as a potentially significant cause of drug-induced skin reactions.




Abstract N°: 6594
Methotrexate toxicity in the treatment of psoriasis vulgaris: clinical case, multidisciplinary management and therapeutic implications

Nouhaila Bourht^{*1}, Mohamed Houbayel², Layla Bendaoud², Maryem Aboudourib², Ouafa Hocar², Said Amal²

¹Mohammed VI University Hospital of Marrakech, Dermatology-Venerology, Marrakech, Morocco, ²Mohammed VI University Hospital of Marrakech, Department of Dermatology-Venerology, marrakech, Morocco

METHOTREXATE TOXICITY IN THE TREATMENT OF PSORIASIS VULGARIS: CLINICAL CASE, MULTIDISCIPLINARY MANAGEMENT AND THERAPEUTIC IMPLICATIONS

N. Bourht, M. Houbayeli, L. Bendaoud, M. Aboudourib, O. Hocar, S. Amal

Department of Dermatology-Venerology, Mohammed VI University Hospital of Marrakech,

FMPM, Cadi Ayyad University, Bioscience and Health Laboratory

Introduction & Objectives:

Methotrexate (MTX) is an immunosuppressive treatment widely prescribed for several conditions. Its toxicity is mainly obtained during prolonged or high-dose treatments and is rarely observed in dermatology. Here, we report the case of a patient presenting cutaneous and hematopoietic toxicity to medium-dose MTX in the treatment of moderate vulgar psoriasis.

Materials & Methods:

A 53-year-old male patient, followed in the private sector for a moderate psoriasis vulgaris of the scalp and trunk for 02 months, treated with topical corticosteroids and oral corticosteroid therapy at a dose of 60 mg/day without noted improvement. Initiation of MTX at 10 mg injectable per week with an increase of 20 mg orally was recommended. However, due to misunderstanding, the patient took MTX at a dose of 20 mg daily for 1 month in addition to 10 mg injectable per week, resulting in a cumulative dose of 600 mg/month. The patient presented, 1 week later, diffuse violaceous erythematous lesions, mucosal involvement, upper dysphagia as well as gastrointestinal disorders, evolving in a context of fever at 38.9°C and general deterioration.

Results:

Clinical examination revealed a febrile, tachycardic patient, with the presence of infiltrated violaceous erythematous plaques, mainly affecting the face, abdomen and limbs, plantar desquamation, fissured intertrigo of the retro-auricular region, inguinal folds and interdigital spaces, as well as painful erosions of the oral, nasal and genital mucosa with bilateral ocular redness. Biological investigations revealed severe leukopenia (330/ μ L) with neutropenia (80/ μ L), lymphopenia (230/ μ L), and thrombocytopenia (34,000/ μ L). Additionally, the infectious assessment showed a significant elevation of CRP (370 mg/L) and procalcitonin (4.22 ng/mL). The methotrexatemia was at 0.04 μ mol/L. The therapeutic decision involved immediate cessation of MTX, cautions tapering of corticosteroid, alkaline hyperhydration and administration of calcium folinate. Additionally, triple antibiotic therapy was initiated to treat febrile neutropenia, accompanied by the administration of growth factors to stimulate neutrophil production. Progressive clinical improvement was observed, with resolution of clinical symptoms, as well as a gradual normalization of biological parameters.

Conclusion:

Most cases of MTX toxicity involve high doses (3 to 8 g/m²) for solid tumors or hematologic malignancies, drug interactions (NSAIDs), or pre-existing conditions (renal failure). However, low or moderate dose intoxications are rare, often due to dosage or prescription errors, as seen in our case. This highlights MTX's potential for significant cutaneous and visceral toxicity even at lower doses. To prevent such complications, precise prescription writing is crucial, given that medication errors are the main cause of MTX toxicity.

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**Abstract N°: 6650****Dupilumab associated psoriatic arthritis**

Graciela Galva Roa*¹, Thais Porto¹, Carmen Andrea Guerrero Beleño¹, Omar Lupi¹

¹policlínica geral rio de janeiro, dermatology, rio de janeiro, Brazil

Introduction & Objectives:

Seronegative arthritis and enthesopathy associated with Atopic Dermatitis (AD) can be a rare but potential finding in patients with AD after treatment with dupilumab. Seronegative arthritis has a propensity toward enthesopathy and inflammatory arthritis, most typically characterized in psoriatic arthritis. We describe a case of a patient with AD, who developed musculoskeletal symptoms after treatment with dupilumab, a human IgG4 monoclonal antibody that blocks the functions of IL-4 and IL-13, key pathologic pathways in AD.

Materials & Methods:

A comprehensive review of the literature was carried out for this case.

Results:

A 46-year-old woman with a 6-year evolution of severe atopic dermatitis associated with nodular prurigo had experienced various treatment failures after using corticosteroids, cyclosporine, and methotrexate. In July 2022, she received a loading dose of dupilumab as per the European guidelines for treatment of AD. In December of 2022, six months after initiating treatment with dupilumab, the patient presented good response to treatment with an almost complete resolution of skin manifestations. However, in May 2023, the patient presented symptoms of hip, knee and shoulder pain, leading us to believe it could have to do with an enthesitis induced by the use of dupilumab, a collateral effect already described in literature. Based on electromyography, a diagnosis of seronegative arthropathy with knee, left shoulder and hip joint involvement was made. The patient was treated with pregabalin, amitriptyline and hydroxocobalamin acetate. In July 2023, the patient presented nail lesions with oil spots, stretch marks and onychodystrophy, in the left hand's first and fourth finger and third finger on the right hand, suggesting nail psoriasis. All these findings led us to believe it was a dupilumab induced psoriatic arthritis and nail psoriasis.

Conclusion:

A number of cases support the idea that the IL-4/IL-13 axis may act as a restraint toward Th17-type disease activation, thus blocking this axis reflects on an increased incidence of psoriatic-like disease, skin disease, nail disease, and joint disease. Both IL-4 and IL-13 are able to downregulate IL-23 from antigen-presenting cells or IL-17 from T cells and thus put a break on IL-17-driven inflammation.

The role of IL-4/IL-13 in restraining psoriatic inflammation has also been evaluated clinically, with patients with psoriasis showing significant improvement in PASI scores, so it is not surprising that the opposite strategy, blocking the functions of IL-4 and IL-13 as in the case of treatment with dupilumab, may be occasionally detrimental for psoriatic disease spectrum inflammation. This case is particularly relevant as it is an example of the potential secondary effects of the use of treatment with dupilumab in atopic dermatitis patients. Dermatologists should be aware of the high risk of trigger of these diseases to be able to identify them, and treat them accordingly early on.



**Abstract N°: 6674****Skin manifestations caused by sulfasalazine therapy in gastrointestinal diseases**Vivian Ho¹, Michelle Luis Sierra¹, Pablo Socias-Pappaterra¹¹Universidad Iberomaericana, Escuela de Medicina, Santo Domingo, Dominican Republic**Introduction & Objectives:**

Sulfasalazine is an aminosalicilate primarily used in the treatment of rheumatoid arthritis and ulcerative colitis. Its immunomodulatory, anti-inflammatory, and antiproliferative properties make it a potential therapeutic option for various dermatological disorders. However, the level of evidence supporting its efficacy and safety in dermatology is limited. The aim of this study is to explore the adverse events with skin manifestations for using sulfasalazine for gastrointestinal diseases conducted by searching relevant literature on PubMed.

Materials & Methods:

A comprehensive search of the PubMed database was conducted using the keywords “sulfasalazine” “dermatology” “inflammatory bowel disease” and “adverse events” The search was limited to articles published in English between 1998 and 2024. The selected articles were reviewed and analyzed for their relevance to the study objectives.

Results:

The most frequently reported adverse effects with sulfasalazine therapy are gastrointestinal effects. However, skin manifestations have also been reported, including skin rash, pruritus, urticaria, and photosensitivity. Generalized pruritic and maculopapular rashes are usually reported. Severe cutaneous adverse reactions reported occurrences of Stevens-Johnson syndrome, toxic epidermal necrolysis, bullous pemphigoid and drug reaction with eosinophilia and systemic. Other reports were found presenting adverse skin reactions such as lichenoid eruption, lupus-like syndrome, and phototoxicity. Although, in these cases sulfasalazine was not used as therapy for gastrointestinal diseases but rather rheumatologic diseases. However, it is important to identify all significant skin presentations for quick withdrawal of offending medication.

Conclusion:

Sulfasalazine has been associated with various adverse events, including skin manifestations. While gastrointestinal effects are the most commonly reported adverse effects, skin manifestations have also been reported. Clinicians should be aware of these adverse events and closely monitor patients for any signs or symptoms of skin manifestations. Early recognition and intervention can help mitigate potential risks and improve patient outcomes.



**Abstract N°: 6835****Beyond Ivy: Exploring Abdominal Vesicles in Wells Syndrome**

Miruna Ioana Cristescu¹, Elena Codruta Cozma^{1, 2}, Vlad-Mihai Voiculescu^{1, 3}

¹Elias Emergency Hospital, Dermatology, Bucharest, Romania, ²University of Medicine and Pharmacy of Craiova, Pathophysiology, Craiova, Romania, ³Carol Davila University of Medicine and Pharmacy, Dermatology, Bucharest, Romania

Introduction: Wells syndrome or eosinophilic cellulitis is an uncommon skin inflammatory disease characterized by the rapid onset of erythematous patches or plaques, sometimes covered with vesicles or bullae. They are often pruriginous and recurrent, frequently interested sites being the trunk and extremities, although they may also manifest on other parts of the body. The pathogenesis of the syndrome is unknown and it can be interpreted as an inappropriate eosinophilic reaction to a variety of stimuli such as: drugs, insect bites, allergens, infection or the presence of an underlying myeloproliferative disorder. Laboratory findings include peripheral eosinophilia in 50% of cases and histopathology is characterised by the presence of edema, eosinophilic infiltration in the dermis, “flame figures” in the dermis and absence of vasculitis. Laboratory findings include peripheral eosinophilia in 50% of cases and histopathology is characterised by the presence of edema, eosinophilic infiltration in the dermis, “flame figures” in the dermis and absence of vasculitis.

Case presentation: A 46-year-old female patient, with recent history of newly diagnosed asthma, presented at the emergency care unit with a large erythematous plaque (20/30cm in diameter), slightly infiltrated with vesicles and bullae on the surface. An increase in local skin temperature was observed at the level of the lesion. The patient was in good general condition. She reported the onset during the previous day. The drug administration history included Azithromycin in a dose of 500 mg twice daily for five days during the past week and Ivy extract syrup for cough for the past seven days. Anamnestic, we found a history of unspecified allergic reaction to Erythromycin. Laboratory findings revealed eosinophilia, without leukocytosis and normal inflammatory markers. We performed a 6 mm punch skin biopsy. The histopathological examination revealed numerous epidermic vesicles and bullae containing serous fluid and eosinophils, mild vacuolar interface dermatitis, dermal and subcutaneous adipose tissue edema, with mixed eosinophilic and neutrophilic infiltrate and “flame figures” dispersed in the dermis. The patient was given 8 mg per day of Dexametasone for three days, along with 40 mg iv of Pantoprazole per day during her hospital stay. The lesions were significantly regressed on day 3 of the treatment. She was discharged with the recommendation of progressive tapering of systemic corticosteroid doses, with favorable evolution, without recurrence after complete discontinuation of treatment.

Conclusion: Wells syndrome is a rare eosinophilic dermatosis, that can be suspected in the adequate clinicopathologic context. The histopathology is essential for the correct diagnosis and in some cases might suggest the etiology. Given the rarity of the disease, the treatment is not standardised, with topical and systemic corticosteroids being the first line and dapsone or cyclosporine secondly. The evolution is benign, sometimes recurrent, with a tendency to spontaneous regression.



**Abstract N°: 6852****Symmetrical drug-related intertriginous and flexural exanthema: case series**Bendaoud Layla¹, Aboudourib Meryem¹, Hocar Ouafa¹, Amal Said¹¹hospital university center mohammed vi, fmpm, biosciences and health laboratory, cad i ayyad university**Introduction & Objectives:**

Symmetrical drug-related intertriginous and flexural exanthema (SDRIFE), also known as baboon syndrome, is a benign drug reaction characterized by symmetrical erythema involving the gluteal and intertriginous regions without systemic involvement. The objective of this case series is to characterize the epidemiologic and clinical features of (SDRIFE).

Materials & Methods:

We report 6 cases of SDRIFE induced by different treatments

Results:

Six female patients were included. The mean age was 36 years. All patients presented with macular, papular erythematous plaques affecting an average of 4 folds, symmetrical, and pustular form in one case. They had no biological abnormalities. The causative drug was antibiotics (betalactam, metronidazole) and celecoxib. The median time to onset after drug exposure was 24 hours celecoxib, piperacillin and metronidazole, and 3 weeks for amoxicillin-clavulanic. Skin biopsy was performed in only one patient. The therapeutic decision was to discontinue the drug and start corticosteroids with good improvement

Conclusion:

SDRIFE is a self-limited phenomenon that primarily affects the intertriginous, gluteal, and flexural regions symmetrically in the absence of systemic involvement. It has been reported with a variety of medications. SDRIFE is a self-limited phenomenon that primarily affects the intertriginous, gluteal, and flexural regions symmetrically in the absence of systemic involvement. It has been reported with a variety of drugs. These include antibiotics, antiasthmatics, and allopurinol. For treatment, systemic or topical steroids are usually prescribed to accelerate the healing process, and antihistamines may be an option for symptomatic management of pruritus.



**Abstract N°: 6864****Liver involvement in DRESS syndrome: A study of 72 patients**Zakia Douhi^{*1}, Sqalli Ghita¹, Soughi Meriem¹, Elloudi Sara¹, Baybay Hanane¹, Mernissi Fatima Zahra¹¹University Hospital Hassan II, Dermatology, Fez, Morocco**Introduction & Objectives:**

The DRESS syndrome (Drug reaction with eosinophilia and systemic symptoms syndrome) is a severe drug-induced skin reaction that can be life-threatening, particularly due to its visceral involvement. The liver is the primary organ responsible for the metabolism of most medications. Several reviews and articles have highlighted the liver as the most affected organ in DRESS, making it intriguing to study this aspect in more detail.

Materials & Methods:

This is a retrospective descriptive and analytical study conducted at the dermatology department in Fez, Morocco, from 2014 to 2023, including all cases presenting with DRESS syndrome diagnosed based on clinical, biological, histological, and chronological arguments, with a RegiScar score classified as probable or definite. Hepatic involvement was assessed based on the classification of drug-induced hepatitis using alkaline phosphatase (ALP) levels, alanine aminotransferase (ALT) levels, and the ALT/ALP ratio (R), thus defining three clinical forms: cytolytic (ALT >2 or R >5), cholestatic (ALP >2 or R <2), and mixed (2 < R < 5).

Results:

72 patients were included, with 47.2% experiencing hepatic involvement, including 48.5% with cytolytic, 36.4% with cholestatic, and 15% with mixed forms. Among these patients, 55.9% had associated renal involvement, 29.9% presented with erythroderma, 55.9% with a maculopapular rash, 8.8% with a morbilliform rash, 5.9% with an erythema multiforme-like eruption, and 79.9% had eosinophilia. Allopurinol was the most implicated drug (50%), followed by neuroleptics (17.6%), salazopyrine (14.7%), and antibiotics (8.8%). The association between salazopyrine and hepatic involvement was significant ($p < 0.05$), while the statistical analysis of other parameters did not reveal such an association. Management involved local care, with 50% of patients placed on corticosteroid therapy. 8.8% of the patients died, while the others showed normalized liver function tests in 74.19% of cases, with the remainder lost to follow-up.

Conclusion:

Hepatic involvement is common in DRESS syndrome, predominantly manifesting as cytolytic or cholestatic patterns. Maculopapular rash and erythroderma are the most commonly observed cutaneous phenotypes. These patients are more likely to have associated renal involvement and eosinophilia. Allopurinol, neuroleptics, and salazopyrine are the most frequently implicated drugs.





Abstract N°: 6984

Acute radiodermatitis: An insight into therapeutic management through a clinical case study

Hind Majdoul^{*1}, Hali Fouzia¹, Soumia Chiheb¹

¹Ibn Rochd University Hospital Center, Dermatology and Venerology Department, Casablanca, Morocco

Introduction & Objectives:

Acute radiodermatitis is by far the most common side effect of radiotherapy, often leading to the interruption and consequent reduced efficacy of the treatment. Although there is currently no general consensus on either preventive or curative management of this condition, prior education of patients, implementation of rigorous hygieno-dietary measures and early dermatological consultation remain undoubtedly the main pillars.

This case report is therefore intended as a reminder, in the hope of one day reducing the incidence of this limiting and potentially fatal side effect.

Materials & Methods:

Results:

Case presentation:

A 50-year-old female patient with a history of hypothyroidism on hormone replacement therapy for the past 3 years, diagnosed with vulvar squamous cell carcinoma 2 years ago and having undergone total vulvectomy followed by 30 sessions of external radiotherapy, presented to the dermatology department with a highly pruritic acute skin eruption that appeared 10 days after her last radiotherapy session. Clinical examination revealed an intense, mildly oedematous erythema, arranged in broad confluent sheets, involving the pelvic and perineal regions, as well as the proximal part of the thighs; associated with an oozing desquamation of the inguinal folds, leaking a foul-smelling yellowish liquid, dried in places to give place to melicerous crusts. The retained diagnosis was grade 2 radiodermatitis according to the Common Terminology Criteria for Adverse Event (CTCAE). The patient was therefore put on a local treatment combining a gentle cleansing gel and a clear drying antiseptic, followed by a trolamine-based soothing cream applied several times a day. Given the clear signs of secondary infection, oral anti-staphylococcal antibiotherapy was also prescribed, using penicillin M 50mg/kg/d for 10 days. The outcome was favorable, with complete regression of symptoms in less than a week.

Conclusion:

Despite better knowledge of the risk factors for radiation-induced skin toxicity, acute radiodermatitis is still undoubtedly the most common complication of radiotherapy. Although now better controlled, it nevertheless remains a distressing experience for previously weakened cancer-fighting patients, and can have a considerable impact on therapeutic tolerance, acceptability and efficacy.

Treatment must be above all preventive, and therefore in the first instance the responsibility of the radiotherapist and/or oncologist; through patient education on the need to observe simple hygiene measures such as bathing in lukewarm water, using mild soap with a physiological pH, drying meticulously, moisturizing daily, wearing cotton clothing, rigorous photoprotection or, at best, avoiding the sun, etc. The appearance of the first cutaneous signs should rapidly lead to dermatological management adapted to the grade of radiodermatitis (1 to 5), using various treatments including topical dermatocorticoids, antiseptics, moisturizing or soothing emollients such as trolamine-, calendula- or hyaluronic acid-based creams, as well as the occasional use of hydrocolloid-type dressings. Finally,

we mustn't forget the analgesic component in the treatment of this sometimes very painful condition.

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**Abstract N°: 7067****Hydroxyurea's mucocutaneous toxicity.**

Sara Ait Oussous*¹, Fatima Zahra El Alaoui El Abidi¹, Hiba Kherbach¹, Badr El Idrissi¹, Chakiri Radia¹

¹University hospital center Souss-Massa, Dermatology, Agadir, Morocco

Introduction & Objectives:

Hydroxyurea is an antimetabolite widely used in the treatment of many haematological conditions including essential thrombocythemia. While hydroxyurea is a well-tolerated agent, it is known to have plenty side effects that vary in incidence. We highlight the cutaneous and mucosal side effects of hydroxyurea through a clinical case.

Materials & Methods:

Here, we report a case of hydroxyurea-induced tongue hypermelanosis, transverse Melanonychia and oral ulcerations, in a patient who had essential thrombocythemia.

Results:

A 75-years-old patient, with a history of colon cancer surgery 10 years ago, and a recent diagnosis of essential thrombocythemia, was receiving cytoreductive therapy with hydroxyurea at a dose of 1500mg/day for 3 months. After 1 month of chemotherapy, he started developing oral ulcerations, tongue, and nail discoloration. The patient was anxious considering the possibility of skin cancer.

At the dermatological examination, the patient exhibited fissured tongue with multiple painful ulcers characterized by a yellowish base and well demarcated edges surrounded by an erythematous halo, as well as diffuse irregular pigmentation, more evident on dermoscopy. Additionally, there was evidence of pluridigital transverse melanonychia without thickening or atrophy of nails. The rest of the examination revealed no abnormalities (No other cutaneous lesions or lymphadenopathy).

He was not taking any medication except for hydroxyurea. Because of a temporal association, those manifestations were attributed to hydroxyurea. However, Routine tests including ferritin and vitamin B 12 levels, were conducted, and returned within normal ranges.

The management involved chlorhexidine mouth rinses and corticosteroids gargling, along with a reduction in the dose of hydroxyurea after consultation with the hematologists. Also, the patient was counselled regarding the benign nature of the lesion.

Conclusion:

Hydroxyurea-induced cutaneous toxicity can trigger anxiety in patients and may lead to medication discontinuation. Patient education prior to initiating hydroxyurea could address this issue. Moreover, early, and accurate recognition of this clinical condition can avoid unnecessary investigations.



**Abstract N°: 7069****Tacrolimus- a wonder drug in non responsive cases of toxic epidermal necrolysis**Devi Priya S¹¹Government Doon Medical College, Dermatology, Dehradun, India**Introduction & Objectives:**

Toxic epidermal necrolysis is an aggressive and progressive, acute life-threatening disease affecting the skin and mucous membrane, involving more than 30% of the body surface area and carries a high mortality and morbidity rates. High risk drugs include phenobarbital, phenytoin, carbamazepine, lamotrigine, nevirapine, nonsteroidal anti-inflammatory drugs, allopurinol, cotrimoxazole, homeopathic medicines, and fluconazole. We report a patient with toxic epidermal necrolysis successfully managed with oral tacrolimus, who was non-responsive to oral cyclosporine even though they share similar mechanism of action.

Materials & Methods:

A 45year old female, known case of generalized tonic-clonic seizures for 15 years, was on tab sodium valproate 100 mg twice daily. Upon recent seizure episode, she went to a local hospital and was given injectable phenytoin sodium 20 mg/kg, following which she developed fever, erythematous maculo-papular rash over the body 4 hours after injection which later became vesiculobullous

BP-110/60 mm Hg, PR- 132 b/min, RR- 26 cycles/min

Cutaneous examination: Generalized erosions with few crusted plaques present over scalp, face, neck, trunk, back, bilateral upper and lower limbs. Few bullae present over back. Ocular, oral and vaginal mucosa was involved.

Pseudo-Nikolsky's sign- Positive

BSA > 70% involvement

SCORTEN score was 4

Treatment was started with fluid management, regular wound care, intravenous corticosteroids and oral cyclosporine 100 mg twice daily. But pseudo-nikolsky was positive even after 4 days of treatment, so patient was shifted to oral tacrolimus, 0.12 mg/kg/day in 2 divided doses and tapered after 3 days. She received tacrolimus for a total duration of 10 days.

Results:

Retrospective analysis of the case was done . Study revealed a significant therapeutic benefit of toxic epidermal necrolysis with oral tacrolimus with no side effects. The lesions stopped progressing and blistering stopped within 36 hours. Reepithelization started in 72 hours.

Conclusion:

Tacrolimus appears to be effective in Steven Johnson syndrome-toxic epidermal necrolysis . There are minimal side effects with the medication and hence it can be considered as a preferred drug in the treatment of TEN. However more studies with increased sample size is needed to further validate the study





Abstract N°: 7083

The Double Trouble: Acne and Pyogenic Granuloma in EGFR Inhibitor Treatment

Anastasia Stoian¹, Catalin Mihai Popescu¹, Ioana Ditu², Bianca-Alexandra Moise¹, Raluca Popescu¹, Monica Barbu¹, Elena Rotariu¹

¹Colentina Clinical Hospital, Dermatology I, Bucharest, Romania, ²Asterium Healthcare, Dermatology

Introduction & Objectives:

In recent years, emerging treatments aimed at the epidermal growth factor receptor (EGFR) have demonstrated effectiveness in combatting various cancer types. Monoclonal antibodies directed against EGFR (such as cetuximab and panitumumab) or EGFR tyrosine kinase inhibitors (like gefitinib and erlotinib) have exhibited favorable tolerability profiles, diverging from the harsh systemic side effects often associated with cytotoxic medications.

Many individuals undergoing treatment with EGFR inhibitors, nonetheless, experience dermatological reactions, commonly presenting as an acne-like rash. Additionally, they may encounter dry skin, inflammation, cracks, dilated blood vessels, skin discoloration, alterations in hair texture, and inflammation around the nails with the development of pyogenic granuloma.

Materials & Methods:

We present the case of a 73-year-old male who is known with rectosigmoid neoplasm diagnosed in 2002, who previously underwent surgery, radiotherapy, and chemotherapy, currently undergoing systemic chemotherapy with Panitumumab for pelvic local recurrence initiated 6 months ago (according to medical history).

He presents with an acneiform skin eruption consisting of confluent papules and pustules on an erythematous background localized on the facial area, especially on the cheeks and forehead, asymptomatic, evolving for approximately one month, for which he received treatment with cosmetic creams and low concentration of topical metronidazole without any clinical improvement.

Clinical appearance and medical history suggest a diagnosis of a moderate papulopustular acneiform eruption in the context of oncologic treatment with an EGFR inhibitor (Panitumumab).

Additionally, an erythematous, well-defined, asymptomatic, dome-shaped lesion is observed on the medial nail fold of the left hallux, evolving for several months, suggestive of a probable pyogenic granuloma arising in the context of EGFR inhibitor treatment.

Results:

Systemic and topical treatment was prescribed, consisting of doxycycline 100 mg, one capsule a day and adapalene/benzoyl peroxide 0.1%/2.5% gel, one application a day, in the evening, for 6 weeks with additional photoprotection during the treatment course.

An appointment was scheduled to address the surgical treatment of the periungual pyogenic granuloma and to evaluate the clinical response to the treatment for the acneiform eruption.

Conclusion:

Acneiform eruptions and pyogenic granulomas are common dermatological side effects in patients treated with

EGFR inhibitors. They can significantly impact patient quality of life, leading to physical discomfort, psychological distress, and treatment interruptions.

The skin adverse reactions during EGFR inhibitors treatment, appear to be mechanism-based linked to the inhibition of EGFR action but the exact pathophysiology remains elusive. Left untreated these dermatological side-effects could represent a threat to patient compliance and lower the quality of life. Therefore effective management is mandatory.

Close collaboration between oncology specialists and dermatologists is essential for effective treatment outcomes. These adverse events can significantly impact patients' quality of life and may necessitate treatment modifications or discontinuation, thus highlighting the importance of effective management strategies.

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**Abstract N°: 7134****An acquired type of perforating dermatosis due to anti TNF alpha inhibitor in a psoriatic woman**

Laura Pellegrini¹, Enrico Pascucci¹, Elena Mason¹, Chiara Colato², Giampiero Girolomoni¹, Paolo Gisondi¹

¹Section of Dermatology and Venereology, Department of Medicine, University of Verona, Verona, Italy; ²Section of Pathology, Department of Diagnostics and Public Health, University of Verona, Verona, Italy

Introduction & Objectives:

We report a case of a 35-years-old woman with a 5 years history of plaque psoriasis and psoriatic arthritis. Previous treatment administered for her condition were: nb-UVB phototherapy and Adalimumab biosimilars subcutaneous injections (40 mg every two weeks) since May 2019, with optimal efficacy and safety, obtaining complete clinical remission.

In September 2023 ongoing therapy with Adalimumab biosimilar GP2017 has been replaced with one other Adalimumab biosimilar CT-P17 because of drug availability issues.

After two weeks from the first injection multiple papules, nodules and violaceous plaques, centrally ulcerated, some of which covered by haemorrhagic crusts appeared on thighs, buttocks and elbows.

Topical cortico-antibiotics and systemic glucocorticoids were administered without efficacy.

The therapy with CT-P17 biosimilar was interrupted considering a potential causal role in the acute dermatosis.

Materials & Methods:

The patient underwent clinical and dermoscopic examination of cutaneous lesions and incisional lesional biopsy with histopathological and immunohistochemical examination was performed.

Results:

Histopathological examination revealed epidermis ulceration surmounted by dendritic granulocyte crust associated with trans-epidermal elimination of elastic fibers (elastin) and dermal infiltrate rich in plasmacells.

Clinical features associated with histopathological findings induced us suspecting an acquired type of perforating dermatosis. Our hypothesis was strengthened by rare but described cases of acquired perforating dermatosis, as adverse effect to Adalimumab therapy.

After CT-P17 interruption progressive clinical improvement was achieved, otherwise an important psoriatic arthritis relapse occurred. Rheumatologic consultation was performed therefore prednisone 25 mg daily orally and methotrexate 12,5 mg subcutaneous injections weekly were started. Cutaneous psoriasis remained in remission also after Adalimumab interruption.

Conclusion:

Perforating dermatoses are characterized by the elimination of dermal connective tissue through the epidermis. The etiopathogenesis is not completely understood. Underlying conditions as diabetes and chronic renal insufficiency are frequently associated. Furthermore, several medications seem to act as possible trigger, including biological agents, like TNF-alfa inhibitors.

The case here reported efforts the importance of rare adverse effects in biologic therapies commonly used in psoriatic patients, underlining the usefulness of referring to literature in physician real life.

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**Abstract N°: 7147****An atypical presentation of toxic epidermal necrolysis without mucosal involvement**

Hiba Kherbach¹, Imane Lakhal¹, Sara Ait Oussous¹, Fatima Zahra El Alaoui El Abidi¹, Badr El Idrissi¹, Nachwa Kayouh¹, Hadzine Youssef², Reinhart Camelia², Nassik Hicham², Radia Chakiri¹

¹CHU SOUSS-MASSA, DERMATOLOGY, Agadir, Morocco, ²CHU SOUSS-MASSA, UNIT INTENSIVE CARE, Agadir, Morocco

Introduction & Objectives:

Toxic epidermal necrolysis (TEN) is a rare and potentially life-threatening skin reaction with ubiquitous involvement of mucosa. Drugs are the primary cause in most cases, often due to a hypersensitivity reaction. Atypical presentations include involvement of only mucosa without involvement of skin.

Materials & Methods:

We report a description of a rare case of TEN without any mucosal involvement.

Results:

A 50-year-old male patient hospitalized in the dermatology department for the management of a TEN. Two weeks after taking amoxicillin for tonsillitis, the patient developed non-pruritic, erythematous-violaceous, and purpuric maculopapular lesions. Clinically, the patient was febrile and presented with altered general condition. Skin examination revealed erythematous-violaceous, purpuric maculopapular plaques on sun-exposed areas, trunk, abdomen, back, buttocks, and limbs. Some of these plaques showed blistering along with extensive skin detachment, and a positive Nikolsky sign was observed. 72% of the body surface area was concerned and there was no mucosal involvement. The histopathological examination revealed a subepidermal blistering with significant acidophilic necrosis of the epidermis and minimally inflammatory congestive dermis. The patient was reported to pharmacovigilance, concluding a TEN secondary to amoxicillin intake based on bibliographic and chronological data. The patient required transfer and management in the intensive care unit, where he developed respiratory distress and septic shock, requiring invasive mechanical ventilation and vasoactive drugs with empirical intravenous antibiotic therapy. The result of the blood culture indicated a multi-resistant *Staphylococcus aureus*. Unfortunately, the patient passed away one day after receiving these results, likely due to acute respiratory distress syndrome.

Conclusion:

NET syndrome is a rare and severe form of drug reaction, and cases where only skin is affected without mucosal involvement are even rarer.



**Abstract N°: 7154****An unexpected reaction to meropenem: A clinical challenge**

Karama Sboui¹, Mouna Korbi², Nadine Khaskhoussy³, Abdelfattah Zakhama³, Karim Aouam³, Jameleddine Zili³

¹Dermatology department, ²Faculty of medicine of monastir, Dermatology, Monastir, ³Faculty of medicine of monastir

Introduction & Objectives:

Acute Generalized Exanthematous Pustulosis (AGEP) is a severe reaction pattern primarily caused by systemic drugs. Herein, we reported the fourth documented case of meropenem-induced AGEP in which the clinical features overlapped with Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) syndrome.

Materials & Methods:**Results:**

A 56-year-old patient received intravenous vancomycin and meropenem for meningitis. After 19 days, she developed fever and non-follicular pustules on an erythematous base in flexural areas. The rash progressed to severe facial edema and target-like lesions on her arms. Drug eruption was suspected, and the antibiotics were discontinued. Laboratory investigations revealed neutrophilia (11,165 / mm³) and elevated eosinophils (3654 / mm³), without liver enzyme abnormalities. Histological examination revealed non-follicular subcorneal pustules, necrotic keratinocytes, and papillary edema. The clinical and pathological findings were consistent with AGEP. Parenteral dexamethasone was initiated, resulting in a widespread desquamation within 13 days. Eight weeks' post-recovery, patch tests for vancomycin and meropenem were negative but delayed intradermal testing (IDT) showed positive results for meropenem. A biopsy of the IDT reaction revealed spongiosis and an abundant perivascular inflammatory infiltrate of lymphocytes and eosinophils in the dermis.

Conclusion:

Our patient's presentation, based on the EuroSCAR criteria, falls within the definitive diagnostic range for AGEP. However, high fever, facial edema, late onset, and absolute eosinophilia are all signs of DRESS. AGEP and DRESS are both T-cell mediated type IV hypersensitivity reactions with intricate immunological responses. Although one form of immune response is prominent, immune reaction overlap is not uncommon and could account for clinical and histopathologic crossover among severe cutaneous adverse reactions (SCARs). Overlapping SCARs meet the criteria for probable or definite diagnosis of at least two adverse drug reactions according to scoring systems. Recently, the term generalized pustular figurate erythema (GPFE) has been coined to describe cases of AGEP with delayed onset similar to our case. GPFE has been essentially linked to hydroxychloroquine. Patch tests are not always positive in AGEP. IDT with delayed readings can be helpful in these cases. A localized form of the initial drug eruption can be identified in histopathology from a positive IDT to the culprit drug, as in our case.

Identifying the culprit drug for a patient with a SCAR can be more crucial than making a precise diagnosis for the type of reaction. However, due to varying risks and the nature of long-term consequences, determining the type of SCAR is also important. Sequelae have never been documented following AGEP but are possible following DRESS syndrome. Therefore, we recommend a follow-up for patients diagnosed with AGEP/DRESS overlap.

**Abstract N°: 7156****When the treatment causes the disease: A rare case of drug eruption induced by antihistamines**

Ikram El Modafar^{1, 2}, Bendaoud Layla^{1, 2}, Maryem Aboudourib^{1, 2}, Hocar Ouafa^{1, 2}, Said Amal^{1, 2}

¹Mohamed the VIth University Hospital, Dermatology department, Marrakech, Morocco, ²Faculty of Medicine and Pharmacy, Cadi Ayyad University, Biosciences and Health Laboratory, Marrakech, Morocco

Introduction & Objectives:

Antihistamines are considered the mainstay therapy of allergic disorders. Due to their primary role as antiallergic medications, antihistamines are generally not suspected of causing drug hypersensitivity reactions.

We report an exceptional case of a patient presenting with DRESS syndrome induced by hydroxyzine.

Materials & Methods:

A 49-year-old patient presented to our department with a 2-day history of a pruritic erythroderma. He had a history of psoriasis treated with topical steroids, and a severe pruritus for which he took Hydroxyzine as a self-medication. Five days later, the patient developed pruritic erythroderma and fever. Dermatological examination revealed dry erythroderma with scarlatiniform palmoplantar desquamation, mild facial oedema and generalized psoriasiform scaly erythematous plaques. The clinical examination also noted a cervical adenopathy measuring 1cm. Biological tests objectified hyperleukocytosis with predominantly PNN, a normal eosinophil count, a slightly altered liver function (ASAT, ALAT > 2,5N). No other organ involvement was objectified. Histology was in favor of a drug induced reaction. According to RegiScar Score, the diagnosis of DRESS syndrome induced by hydroxyzine was retained. Therefore, Hydroxyzine was stopped and the patient was treated with topical steroids. We obtained a complete clearance within a week.

Results:

Antihistamines are the most commonly used drugs in the treatment of allergic diseases, and they are generally considered to be safe.

However, hypersensitivity to antihistamines appears to be very rare and may be underestimated. A causal reaction is often difficult to identify. Almost all antihistamines have been reported to cause drug-induced reactions. Hydroxyzine and cetirizine have been the most common. Due to structural similarity of the hydroxyzine and cetirizine, crossreactions among these two molecules are possible.

The diagnosis is based on clinical suspicion and can be confirmed by provocation tests.

Allergic reactions due to hydroxyzine are very rare and they can produce a wide range of manifestations, including urticaria, morbilliform eruption, contact dermatitis and exceptionally generalized exanthematous pustulosis.

This case appears to be the first case of DRESS syndrome induced by hydroxyzine.

Conclusion:

Our case emphasizes the rarity of skin reactions to antihistamines, highlighting the importance of considering them as a significant possible cause of drug eruptions.



**Abstract N°: 7193****Beyond the Obvious: Diagnostic Challenges in Recognizing Fixed Drug Reaction**

Nikola Ferara^{*1}, Vanda Haralović¹, Klara Gaćina¹, Sanja Spoljar¹, Mirna Situm^{1, 2}, Marija Buljan^{1, 2}

¹Sestre Milosrdnice University Hospital Centre, Department of Dermatology and Venereology, ²School of Dental Medicine, University of Zagreb

Introduction & Objectives:

Fixed drug reaction (FDR) represents a unique immunological cutaneous adverse response marked by sharply delineated lichenoid lesions consistently recurring upon exposure to the causative agent. Typically, it manifests as one or more round to oval, erythematous, or livid plaques predominantly localized on acral regions (hands, feet, lips, genitals) or mucous membranes. The primary offenders often include antibiotics and nonsteroidal anti-inflammatory drugs (NSAIDs). Despite its characteristic nature, FDR frequently evades prompt diagnosis, leading to unnecessary diagnostic interventions and delayed diagnosis. In this context, we present a case of FDR masqueraded as alternative diagnoses.

Materials & Methods:

A 45-year-old female presented with recurrent sharply delineated erythematous and livid patches across her extremities, palms and soles, also affecting oral mucosa, with concomitant lip edema. Following systemic administration of corticosteroids and antihistamines, the lesions exhibited almost complete regression, only to reappear regularly with the onset of each menstrual cycle. Noteworthy medical history included microcytic anemia managed with iron supplementation and bilateral oophorectomy consequent to acute oophoritis.

Results:

Initial differential diagnoses included erythema multiforme (EM) and progesterone hypersensitivity, with the latter ruled out post laboratory assessments and endocrinological evaluation. Skin biopsy and subsequent histopathological analysis of a lesion on the upper leg revealed dense lymphocytic and eosinophilic infiltration alongside pigmentophages in the dermis, indicative of drug-induced dermatitis. Comprehensive inquiry revealed the patient's routine intake of naproxen and ibuprofen at the onset of menstruation for alleviating period pain. Cessation of these NSAIDs agents resulted in complete clearance of the recurrent skin lesions, although some residual hyperpigmentation persisted.

Conclusion:

While FDR may seem straightforward to diagnose owing to its typical presentation and patient's awareness of the offending drug, atypical scenarios pose diagnostic challenges. In such instances, an array of differentials including EM, herpes simplex, pemphigus vulgaris, Behcet's disease, and lichen planus must be considered. A thorough patient interview is imperative to guide suspicion and avoid unnecessary diagnostic procedures and treatments.



**Abstract N°: 7207****Severe Drug-Induced skin reactions: Epidemiological, Clinical, and Prognostic Profile**

Hiba Kherbach¹, Ikram Zouine¹, Sara Ait Oussous¹, Imane Lakhal¹, Salma Bellasri¹, Fatima Zahra El Alaoui El Abidi¹, Badr El Idrissi¹, Nassma Ait Abdelali¹, Nachwa Kayouh¹, Radia Chakiri¹

¹CHU SOUSS-MASSA, DERMATOLOGY, Agadir, Morocco

Introduction & Objectives:

Severe drug-induced skin reactions are cutaneous and/or mucosal manifestations caused by the systemic administration of medications. Although rare, these reactions can pose significant risks to both functional and vital prognosis. The aim of our study is to investigate the epidemiological, clinical, and prognostic profile of these severe drug-induced toxiderma.

Materials & Methods:

A retrospective analysis was conducted on the medical records of patients admitted to the dermatology unit of our university hospital center over a period of 2-year from January 2021 to September 2023, totaling 13 patients.

Results:

During this period, 13 cases of severe drug-induced toxiderma were identified, averaging 6.5 cases annually. The mean age of the patients was 38.38 years, ranging from 20 to 61 years. There was a male predominance, with a male-to-female ratio of 1.16. Common comorbidities included gout, hematologic disorders, and spondyloarthritis. In 76.92% of cases, the implicated medication was prescribed by a physician, and 69.23% of patients were on multiple medications. The most frequently implicated drugs were anticancer agents (23.07%), followed by uric acid-lowering agents, nonsteroidal anti-inflammatory drugs (NSAIDs), anticonvulsants, and Salazopyrine (each at 15.38%). Four distinct clinical presentations were observed: Stevens-Johnson syndrome/toxic epidermal necrolysis (SJS/TEN) in 46.15% of cases, drug reaction with eosinophilia and systemic symptoms (DRESS syndrome) in 38.46% of cases, acute generalized exanthematous pustulosis (AGEP), and fixed drug eruption (each at 7.69%). Pharmacovigilance reporting was performed systematically for all patients, confirming the drug-induced nature of the dermatoses. Treatment strategies included discontinuation of the causative drug and symptomatic management. Systemic corticosteroid therapy was administered to patients with DRESS syndrome, while oral erythromycin was prescribed to 23.07% of patients with Lyell syndrome. The clinical course was marked by the deaths of two patients with SJS/TEN due to acute respiratory distress syndrome and septic shock, while 11 patients experienced complete resolution of their lesions.

Conclusion:

Severe drug-induced skin reactions pose a significant public health challenge. They represent a diagnostic and therapeutic emergency with potential life-threatening implications. Thus, it is crucial to carefully evaluate the risk-benefit profile of prescribed medications and promptly report adverse reactions to pharmacovigilance authorities.




Abstract N°: 7299
Ribociclib-Associated Vitiligo: A Rare Dermatological Side Effect of Cancer Therapy

Roxana-Paraschiva Ciobanu¹, Antonia Clivet¹, Cristina Colac-Botoc¹, Catalina Anca Munteanu¹, George Branisteanu², Elena Porumb-Andrese^{1, 3}, Daciana Elena Branisteanu^{1, 3}

¹Railway Clinical Hospital Iasi, Dermatovenerology, Iasi, Romania, ²University of Medicine and Pharmacy "Grigore T. Popa" Iasi, ³University of Medicine and Pharmacy "Grigore T. Popa" Iasi, Dermatovenerology, Iasi, Romania

Introduction & Objectives:

Cyclin-dependent kinases 4 and 6 (CDK4/6) inhibitors have emerged as a first-line treatment for hormone receptor-positive (HR+) and human epidermal growth factor receptor-2 negative (HER2-) metastatic breast cancer, often administered concurrently with endocrine therapy. Despite their promising therapeutic outcomes, these drugs are associated with various cutaneous adverse effects, including the development of vitiligo-like lesions. Herein, we present a rare case report of such lesions arising in the context of ribociclib treatment for metastatic breast cancer.

Materials & Methods:

We report a 65-year-old female presenting with multiple hypopigmented plaques distributed across the dorsal regions of the feet, anterior torso and face. Diagnosed with HR+ and HER2-negative breast cancer one year prior, she had been receiving ribociclib and letrozole therapy. Histopathological examination revealed orthokeratosis, discrete focal spongiosis, and absence of melanocytes in the basal layer. Additionally, a small perivascular lymphocytic inflammatory infiltrate with rare melanophages was noted in the dermis, suggesting a diagnosis of vitiligo in an unstable stage. Local treatment with topical corticosteroids yielded a modest improvement, supplemented by strong recommendations for sun protection. Given the lesions' limited impact on the patient's quality of life, no adjustments were made to the ribociclib dosage or treatment regimen.

Results:

While the precise pathogenic mechanism of this rare cutaneous adverse effect remains elusive, it is postulated that CDK4/6 inhibitors disrupt keratinocyte precursor proliferation and apoptosis, leading to premature melanocyte death. The association between cutaneous adverse effects and improved therapeutic response is noted, albeit understudied. A promising theory suggests that this mechanism may involve cross-reactivity, whereby specific antigens expressed by melanocytes are also expressed by breast cancer cells. Activation of these antigens could induce irreversible vitiligo-like lesions while concurrently controlling metastatic disease.

Literature studies have demonstrated that vitiligo lesions occurring during ribociclib therapy typically manifest after a mean duration of 9 months of treatment, consistent with the emergence of lesions in our patient approximately 1 year after initiating therapy. Additionally, the histopathological alterations observed in our patient align with descriptions from biopsies presented in the literature.

Conclusion:

CDK4/6 inhibitors represent a promising therapeutic avenue for breast cancer patients, albeit with associated cutaneous adverse effects such as vitiligo-like lesions, as evidenced by limited cases in literature. Further studies are needed to explore the correlation between the occurrence of these adverse effects and the positive treatment response in patients.

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Abstract N°: 7329
DRESS Syndrome and Hepatic Involvement: Clinical-Biological Phenotype of 51 Cases

Saliha Jebbouje¹, Hali Fouzia¹, Chiheb Soumiya¹

¹chu Ibn Rochd Casablanca , dermatology

Introduction & Objectives:

Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS syndrome) encompasses various systemic and visceral manifestations, with hepatic involvement being the most common. Hepatic cytolysis predominates in 70-90% of cases, while hepatic cholestasis is also possible. Hepatic involvement can be severe, leading to fulminant hepatitis requiring liver transplantation. In this study, we report on the characteristics of hepatic involvement in patients hospitalized with DRESS syndrome in our department.

Materials & Methods:

This is a retrospective monocentric study spanning a period of 23 years (January 2000 - May 2023). All patients hospitalized for DRESS syndrome meeting the criteria of the European registry of severe cutaneous reactions to drugs (Regiscar) with a score of 3 points or higher and who presented with hepatic involvement were included.

Results:

Out of 89 cases of DRESS syndrome collected, 51 cases presented with hepatic involvement, corresponding to a prevalence of 57.30%. Twenty-eight were male; the mean age was 40.64 years [4-82 years]. Forty patients presented with maculopapular exanthema (79%), eight patients with exfoliative erythroderma (16%), two patients with erythema polymorphous-like (3.1%), and one patient presented with morbilliform erythema (1.9%). Hepatic cytolysis was present in all patients, marked by elevated liver enzymes: alanine aminotransferase (ALT) and aspartate aminotransferase (AST) levels ranging from 2 to 10 times the normal range. Thirty-seven patients (72.54%) presented with cholestatic syndrome. Pruritus was constant, although cutaneous-mucosal jaundice was noted in 5.8% of cases. Alkaline phosphatase (ALP) levels were significantly elevated in all patients, ranging from 3 to 9 times the normal range, with lower levels of gamma-glutamyl transferase (GGT). None of the patients developed fulminant hepatitis. All patients underwent hepatitis B and C serology, which returned negative. Hepatobiliary ultrasound was performed to rule out underlying organic causes, with no abnormalities observed in these patients. Antiepileptic drugs were the most implicated (41.17%), with carbamazepine being the most commonly associated molecule (35.29%), followed by allopurinol (27.45%), sulfasalazine (7.84%), antibiotics (5.88%), non-steroidal anti-inflammatory drugs, paracetamol, and terbinafine (1.90% each). Carbamazepine was associated with hepatic involvement ($p=0.023$), and the presence of erythema polymorphous-like was associated with severe hepatic cholestasis ($p=0.02$). Thirty-two patients (62.74%) received systemic corticosteroid therapy at a dose of 0.5 mg/kg/day with a good clinical and biological outcome.

Conclusion:

Our study aligns with existing literature regarding the frequency of hepatic involvement in DRESS syndrome. Hepatic cytolysis was present in 57.30% of patients, with 41.57% presenting with associated cholestasis. Erythema polymorphous-like is considered a clinical factor of poor prognosis due to its correlation with more severe hepatic involvement, highlighting the importance of strict biological monitoring. Carbamazepine is more commonly associated with hepatic involvement in DRESS syndrome.

The use of systemic corticosteroid therapy in hepatic involvement is important for better patient outcomes

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**Abstract N°: 7337****Acneiform eruption induced by vedolizumab - a case report**

Tanja Mladenovic¹, Andrija Jović¹, Danijela Popovic¹, Sladjana Cekić¹, Zorana Zlatanovic¹, Danica Todorovic^{1, 2}

¹Clinic for dermatovenerology, University Clinical Center Nis, ²Faculty of Medicine, University of Niš

Introduction & Objectives: Medications can cause various skin changes. The development of biological therapy for the treatment of inflammatory, oncological and autoimmune diseases carries with it the risk of new side effects. Vedolizumab is a humanized monoclonal antibody that blocking integrin specific to the T helper Ly destined for the gastrointestinal tract, for the treatment of ulcerative colitis and Crohn's disease. Paradoxically, acne can be triggered or worsened by the use of vedolizumab. We present a patient with changes on the skin of the face, neck and chest in the form of erythematous papules, pustules, some covered with yellowish crusts induced by vedolizumab.

Materials & Methods: A 26-year-old man was referred to a dermatologist because of changes on the skin of the face, neck and chest in the form of erythematous papules, pustules, covered in places with yellowish crusts. The patient suffers from ulcerative colitis and is currently on biological therapy with vedolizumab for 9 months, before that he received infliximab and adalimumab.

Results: During the dermatological examination, the presence of facial erythema, papules and a large number of pustules on the skin of the face, neck and chest covered with yellowish crusts was observed. The patient suffers from ulcerative colitis on biological therapy with vedolizumab, which he receives according to the protocol once a month for the past 9 months. Skin changes appeared 5-6 months after starting the therapy. He was treated under the diagnosis of acne with systemic (tbl. Azithromycin 500mg) and local (sol. Erythromycin 2%) antibiotic therapy for 10 days. Due to the appearance of acneiform changes on the patient's skin, the biological drug was discontinued. The applied therapy leads to a gradual withdrawal of the changes.

Conclusion: Adverse reactions on the skin can occur when using different drugs. Drug-induced or aggravated acne occurs less frequently. Drug-induced or aggravated acne can often be a challenge. As new drugs appear, it is necessary to take a good medical history in order to record possible side effects and timely discontinuation of the drug.



**Abstract N°: 7347****Toxic erythema of chemotherapy: three illustrative cases**

Fatima Zahra El Alaoui El Abidi¹, Mhaimar Soukaina¹, Sara Ait Oussous¹, Badr El Idrissi¹, Radia Chakir¹

¹Agadir, DERMATOLOGY, Agadir

Introduction & Objectives:

Toxic erythema of chemotherapy encompasses a spectrum of cutaneous eruptions secondary to the use of antineoplastic drugs

Materials & Methods:

We report 3 cases of toxic erythema with varying degrees of severity.

Results:

Case1: A 77-year-old woman undergoing chemotherapy for urothelial bladder carcinoma.

She developed erythematous lesions, appearing 10 days after the initiation of Paclitaxel, in the axillary folds, submammary folds, and groin folds, they were bilateral and symmetrical distribution and were very itchy. The patient's vital signs were stable. There was no lymphadenopathy or fever

A skin biopsy was performed, revealing epidermal necrosis consistent with TEC

The patient was prescribed strong topical, leading to significant improvement within about ten days.

Case2: A 60-year-old undergoing chemotherapy for carcinoma of the breast with bone metastases, The patient developed erythematous lesions, one week after the introduction of Docetaxel, in the axillary folds, submammary folds, and groin folds, which exhibited a bilateral, symmetrical distribution. The condition progressed to desquamation and post-inflammatory hyperpigmentation

4 months after the initial episode, and 24 hours after the reintroduction of Docetaxel, the patient

presented with erythematous scaly lesions, topped with pustules and painful erosions, in the axillary, submammary, and subumbilical regions. The patient's vital signs were stable. A skin biopsy revealed epidermal necrosis consistent with toxic erythema of chemotherapy

The patient received a prescription for potent topical steroids combined with sterile dressings, leading to marked improvement in approximately 10 days.

Case3: A 55-year-old male patient with a history of refractory follicular non-Hodgkin lymphoma,

unresponsive to chemotherapy, was placed on palliative treatment. The patient developed 21 days after the initiation of Purinethol a general malaise with erythematous patches and post-bullous erosions and hemorrhagic crusts on the neck, trunk, and back. There was a warm and edematous purpuric inflammatory patch on both forearms extending to the mid-arm, with tense purulent bullae on the palms and post-bullous erosions. The legs showed purpuric plaques centered on erosions, and there was a purpuric rash on the soles of the feet with a negative Nikolsky sign. Oral mucosal examination revealed erosions covered with hemorrhagic crusts. Cervical and axillary lymphadenopathies, as well as inguinal lymphadenopathy, were noted. The skin biopsy was consistent with

toxic erythema.the patient developed aplastic anemia, which complicated the use of systemic corticosteroid treatment.Local dermocorticosteroids and supportive care were provided, but the patient passed away one week later

Conclusion:

Our experience with these cases shows that the severity of toxic erythema varies, ranging from mild forms with simple erythema to severe forms requiring an intensive management.

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**Abstract N°: 7371****Stevens-Johnson syndrome to immune checkpoint inhibitors in a patient with metastatic melanoma**

Lara Vasari^{*1}, Luka Simetić², Davorin Lončarić³, Romana Čeović³, Daška Štulhofer Buzina³

¹Special hospital for medical rehabilitation Naftalan, Ivanić-Grad, Croatia, ²University Hospital Centre Zagreb, Department of Oncology, Zagreb, Croatia, ³University Hospital Centre Zagreb and University of Zagreb School of Medicine Zagreb, Department of Dermatology and Venereology, Zagreb, Croatia

Case report: A 44-year-old female was diagnosed with nodular melanoma of the scalp pT4b N3M0, stage 3b. Initially, patient underwent treatment with BRAF/MEK therapy (dabrafenib plus trametinib). Almost four years later new metastasis occurred in the sternoclavicular joint and in the lungs, and the BRAF/MEK therapy was switched to immune checkpoint inhibitors nivolumab plus ipilimumab. After two cycles of immunotherapy, the patient developed febrility and pneumonitis, leading to discontinuation of the immunotherapy. One month later an erythematous targetoid exanthema accompanied by mild itching and burning sensation appeared first on the wrist, spreading gradually to the trunk, face, scalp and eventually to the lower legs. Exanthema was confluent on the trunk and body surface area was 30%. There was no involvement of mucous membranes and neither organomegaly and lymphadenopathy. Laboratory tests revealed lymphocytopenia, slightly elevated C-reactive protein, and high levels of thyroid-stimulating hormone, indicating thyroid dysfunction. However, there were no abnormalities in liver function tests or signs of nephritis. The pathohistological finding of the skin biopsy was consistent with a skin reaction to the drug. Following parenteral corticosteroid therapy with gastroprotection and topical steroids, the exanthema resolved within two weeks with postinflammatory hyperpigmentations. Cutaneous adverse events to immune checkpoint inhibitors are common, arising in up to 34% of patients on PD-1 inhibitors and 43% to 45% on CTLA-4 inhibitors.

Conclusion: In summary, patient had Stevens-Johnson syndrome including severe cutaneous and systemic adverse reactions to second line treatment therapy with anti-PD-1 antibody nivolumab plus anti-CTLA-4 antibody ipilimumab for metastatic nodular melanoma which required immediate discontinuation of immune checkpoint inhibitors and rapid parenteral administration of corticosteroids in high doses.



**Abstract N°: 7378****Panniculitis in metastatic melanoma patients on targeted therapy**

Laura Plešnar*¹, Daska Stulhofer Buzina¹, Mirna Bradamante¹, Davorin Herceg², Krešimir Blazicevic²

¹University Hospital Centre Zagreb and School of Medicine University of Zagreb, Department of Dermatovenereology, Zagreb, Croatia, ²University Hospital Centre Zagreb, Department of Oncology, Zagreb, Croatia

Introduction & Objectives:

Panniculitis is one of the rare adverse events in metastatic melanoma patients on BRAF and MEK inhibitors, with reported rates ranging from <1% to approximately 5%. The proposed* pathophysiological mechanisms* involve MAPK pathway inhibition and immune dysregulation. It typically emerges early in treatment, presenting as tender nodules on extremities. According to some scientific data development of panniculitis during treatment may predict treatment outcomes, new data do not confirm this. In this case series, we will describe four patients that developed panniculitis during BRAFi and MEKi therapy.

Materials & Methods:

A retrospective examination was conducted on the medical files of patients diagnosed with metastatic melanoma and undergoing treatment with BRAF inhibitors vemurafenib or dabrafenib combined with MEK inhibitors, trametinib or cobimetinib, at the Dermatology Clinic of the University Hospital Centre. This investigation covered the period from July 2021 to March 2024, with a specific focus on identifying the occurrence of erythema nodosum (EN)-like lesions, as well as the diagnosis of panniculitis, during the course of BRAF and MEK inhibitor therapy.

Results:

In this analysis, we detected four cases of erythema nodosum-like lesions occurring during BRAF and MEK inhibitor therapy. Among these cases, three patients were treated with dabrafenib plus trametinib, while one received vemurafenib combined with cobimetinib. The lower extremities and arms were predominantly affected, suggesting a potential site-specific manifestation of these reactions. Histopathological examination in one case identified panniculitis and in two erythema nodosum. Associated symptoms, including arthralgias and fever, were observed. Notably, treatment discontinuation occurred in one case due to intolerable side effects. The onset of side effects varied manifested after one to two months of therapy induction. Despite the adverse events, symptomatic and local management was sufficient and the lesions resolved in all patients.

Conclusion:

Panniculitis remains a significant adverse event in patients undergoing targeted therapy for metastatic melanoma. This case series provides insights into the clinical presentation, histopathological characteristics, and treatment approaches associated with this dermatological toxicity. The variability in onset and resolution of panniculitis underscores the need for vigilant monitoring and tailored management strategies to mitigate its impact on patient outcomes. These findings contribute to the expanding body of knowledge surrounding skin toxicities in targeted therapy, informing clinical decision-making and patient care in the management of metastatic melanoma.



**Abstract N°: 7381****Description of a rare case of DRESS syndrome associated with intake of a dietary supplement**

Pigi Vlachou^{*1}, Artemisia Papadaki¹, Zinovia Charalampidi¹, Theodora Kalbeni¹, Christina- Paraskevi Katsili¹, Nikolaos Alexiou¹, Tatiana Tataridou¹, Marina Koupetori¹, Oksana Tsatov¹, Styliani Sympardi¹

¹Thrasio General Hospital of Elefsina, 1st Department of Internal Medicine, Magoula, Greece

Introduction & Objectives:

DRESS syndrome is a severe adverse drug-induced hypersensitivity reaction occurring 2–6 weeks after the initiation of a therapeutic agent and is characterised by febrile temperature and skin rash accompanied by haematological abnormalities (hypereosinophilia and/or atypical lymphocytes) and impairment of one or more organs. The associated mortality rate for DRESS syndrome is estimated around 10%. This case report presents the rare case of a 70-year-old male patient diagnosed with DRESS syndrome (Drug Reaction with Eosinophilia and Systemic Symptoms) related to the intake of a dietary supplement.

Materials & Methods:

A 70-year-old male patient presented to the Emergency department (ED) with an erythematous maculopapular rash extending to the head, trunk, and extremities with a reported onset of two days, fever up to 39.2°C and slight itching. The patient reported that the symptoms developed after the recent consumption of a dietary supplement. In the ED, physical examination revealed crackles bilaterally and hepatosplenomegaly. Laboratory tests reported eosinophilia (19%) and increased inflammatory markers (C-reactive protein: 73 mg/l). The patient was admitted to our clinic for further investigation and treatment. Empiric antimicrobial therapy was initiated after obtaining cultures and corticosteroids were administered after completion of a broad laboratory testing.

Results:

Extensive screening was performed to rule out infections, autoimmune diseases, and malignancy. A whole-body computed tomography was performed where numerous swollen cervical, mediastinal, pulmonary portal, mesenteric, para-aortic were found. A skin biopsy was performed and revealed superficial perivascular dermatitis lesions. Extensive immunological testing was negative. Blood, urine, stool cultures and rapid syndromic testing for respiratory viral and bacterial infections were negative, as was the virological-serological testing (HIV, HBV, HCV, Coxiella, Mycoplasma, Chlamydia). Due to extensive lymphadenopathy, Endobronchial ultrasound-guided transbronchial needle aspiration bronchoscopy was performed, and the biopsy obtained showed the presence of several lymphocytes and was negative for malignancy. In addition, Positron emission tomography - computed tomography was performed, negative for malignancy. The patient met a sufficient number of RegiSCAR criteria to make a definitive diagnosis of Dress syndrome.

Conclusion:

DRESS syndrome is difficult to identify as it causes heterogeneous symptoms and affects multiple systems. Increased suspicion, thorough history taking, and extensive clinical, laboratory, and imaging investigation are required for a definitive diagnosis of the syndrome, since there are limited reports of the syndrome associated with dietary supplement intake in the literature.



Abstract N°: 7389

Lyell syndrome secondary to Epoetin beta : A case report

Yassine Berrada¹, Chourouq Mustapha Eid¹, Zaineb Kaouir², Syrine Hamada¹, Meriam Meziane¹, Nadia Ismaili¹, Laila Benzekri¹, Karima Senoussi¹

¹Mohamed V University - CHU Ibn Sina, Dermatology, Rabat, Morocco, ²Mohamed V University - CHU Ibn Sina, Nephrology, Rabat, Morocco

Introduction:

Anemia is common in patients with chronic kidney disease (CKD), especially in the most advanced stages. It is primarily due to a decrease in endogenous erythropoietin (EPO) production. Its correction is essential, as it helps slow the progression of CKD and reduce associated morbidity and mortality.

The introduction of recombinant human EPO has allowed for effective treatment of renal anemia with few adverse effects. Allergic reactions to this EPO are a rare but potentially serious side effect.

Clinical case:

We report the case of a 48-year-old female patient with end-stage kidney disease due to an undetermined nephropathy, with no history of atopy or hypersensitivity to any substance. One week after the introduction of a first dose of epoetin beta at a weight-adjusted loading dose, she developed a febrile and pruritic rash, consisting of erythematous macules, starting on the limbs and then spreading to the rest of the body, with involvement of the oral and genital mucosa. The examination also revealed odynophagia, hypersalivation, and eye pain. The diagnosis of Lyell's syndrome was made.

On laboratory tests, there was evidence of an inflammatory syndrome, eosinophilia, lymphopenia, and chronic kidney disease. No signs of bone marrow aplasia were found. A list of medications and foods received during the month preceding the event was compiled, thus establishing a causal link between epoetin beta and the occurrence of Lyell's syndrome. In the absence of skin tests, we cannot determine whether Lyell's syndrome was due to EPO or to one of its preparation components.

The patient's condition worsened with the development of generalized skin detachment complicated by refractory septic shock originating from the skin. Despite appropriate antibiotic therapy, the patient died. Over the past two decades, the literature has only reported about twenty publications discussing approximately sixty similar cases.

Discussion:

This clinical case raises important questions about the safety of erythropoiesis-stimulating agents (ESAs), particularly epoetin beta, in patients with chronic kidney disease. The occurrence of Lyell's syndrome, a severe and potentially fatal skin reaction, following the administration of a dose of epoetin beta, is a rare but serious event. To our knowledge, few similar cases have been reported in the medical literature, highlighting the exceptional nature of this reaction.

Previous studies have reported hypersensitivity reactions to ESAs, highlighting the major role of pharmaceutical excipients such as gelatin and polysorbate in anaphylaxis associated with these agents. Hypersensitivity reactions to ESAs have been classified into immediate and delayed reactions, with varied cutaneous manifestations ranging from pruritic maculopapular eruptions to more severe syndromes such as Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) and Lyell's syndrome. Cases of cross-reactivity between the molecular structures of

α and β ESAs have also been reported. Additionally, fatal reactions have been documented, underscoring the potential severity of these allergic reactions. Finally, desensitization strategies have been proposed as a method to reintroduce ESAs in patients with hypersensitivity reactions.

Conclusion:

Allergy to EPO remains a rare but potentially life-threatening complication. It is imperative to maintain constant vigilance for any cutaneous or general signs that patients may report upon the introduction of EPO.

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Abstract N°: 7404

Paradoxical reactions to TNF- α inhibitor treatment demonstrated by psoriasiform plaques and alopecia in male patient with colitis ulcerosa – a case report.

Joanna Jarosz-Popek^{*1}, Marta Skorupska¹, Agnieszka Szmurło¹, Roman Niskovich¹, Natalia Zając¹, Irena Walecka¹, Elżbieta Szymańska¹, Małgorzata Kołos², Aleksandra Pręgowska-Szczęsna²

¹National Medical Institute of the Ministry of Interior and Administration in Warsaw, Dermatology Department, Warsaw, Poland, ²National Medical Institute of the Ministry of Interior and Administration in Warsaw, Department of Pathomorphology, Warsaw, Poland

Introduction & Objectives:

Skin manifestations associated with TNF- α inhibitors treatment are becoming a growing clinical issue due to the increased use of these drugs in numerous diseases. Psoriasiform skin changes are common cutaneous adverse effects in patients with Colitis Ulcerosa (CU) treated with TNF- α inhibitors called paradoxical reaction. As they refer to the unexpected development or exacerbation of a pathological condition when a patient is undergoing effective treatment with biological agent for another disorder.

Materials & Methods:

We report a case of infliximab induced psoriasis in male patient with severe CU demonstrated by plaques and hair loss.

Results:

A 35-year-old patient diagnosed with CU since 2021 (severe course, involving pancolitis) presented with erythematous, infiltrative, and desquamative changes on the skin of the back and the scalp. In the medical history, the patient had been chronically treated orally with azathioprine, mesalazine, and intravenously with infliximab (since September 2022). After receiving the seventh dose of infliximab (in June 2023), the patient noticed the appearance of skin lesions on the back and scalp. The patient was admitted to the dermatology department initially presenting with erythematous and hyperkeratotic scaly plaques on the back, as well as with scaly plaques on the scalp associated with areas of alopecia measuring 2-5cm in diameter. Laboratory blood tests revealed leukopenia, neutropenia, monocytosis, slightly elevated C-reactive protein levels, and slightly accelerated Erythrocyte Sedimentation Rate. Trichoscopy revealed (silver-white scales, erythema, twisted red loops vessels and red dots).

Histopathological examination revealed (scalp and back): skin fragments with microscopic features of a diagnosis of psoriasis. Topical treatment (betamethasone dipropionate with calcipotriene), resulted in improvement in the skin of the back and slight improvement in the hairy skin of the scalp. Based on the test results, it was decided that the patient has contraindications to continue infliximab treatment. After consultation with the gastroenterology department, it was decided to initiate ustekinumab treatment. We performed several follow-up visits with trichoscopy evaluation while ustekinumab treatment. After 6 months after completion of infliximab treatment and 4 months after starting ustekinumab treatment there were no visible trichoscopic features of psoriasis-related hair loss.

Conclusion:

Nowadays immunobiological therapy plays a crucial role in the most effective treatment of chronic and severe

disorders. There is a great need for further research of paradoxical reactions with the aim of to identify patients with increased risk of paradoxical reaction after TNF- α inhibitors and other biological agents. Therefore vigilant monitoring of patients undergoing immunobiological therapy seems crucial to better characterize and manage these emerging reactions.

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Abstract N°: 7427

Erythema multiple major due to TD vaccine

Amarda Gica¹, Ornela Marko², Silvana Mishtaku¹

¹American Hospital 3, Department of Dermatology, Tirana, Albania, ²American Hospital 2, Department of Dermatology, Tirana, Albania

Introduction & Objectives: Erythema multiforme is an immune-mediated reaction that involves the skin and sometimes the mucosa. Classically infections, especially herpes simplex virus and *Mycoplasma pneumoniae*, and medications constitute most of the causes of erythema multiforme; immunizations and autoimmune diseases have also been linked to erythema multiforme. EM major has a similar cutaneous eruption with 2 or more sites of mucosal involvement with more extensive oral involvement. The [mucous membranes](#) most commonly involved are the conjunctiva and [oral mucosa](#).

We present a case of erythema multiforme (EM) associated with a second (booster) dose of Td vaccination in a patient who had no cutaneous reactions to previous doses, suggesting vaccines containing diphtheria and tetanus toxoids as a potential precipitating factor to erythema multiforme.

Materials & Methods: CASE REPORT

A 18-year-old female presented with a painful mouth, red eyes and lesions all over the skin. History revealed that these lesions started 3 days ago, 1 day after she had received the second dose of Td (Tetanus, Diphtheria) vaccine. The lesions started on her mouth, down on her throat and began to spread quickly, following which she noticed vesicles on the bilateral buccal mucosa and labial mucosa. She had lesions on her eyes, with severe erythema and edema. The lesions spread all over the upper and lower extremities, on her trunk and face, starting as oval shaped coalescing soon with each other, covering most of the skin surface.

Odynophagia and dysarthria was present. No history of febrile episode was present. There was no history of drug intake before the onset of these lesions. The lesions on her neck and round the eyes were dark red to brown with desquamation, especially severe round the eyes, causing pain to the patient. Encrustations were noticed on the lips and upper and lower labial mucosa which were jagged and tender, sparing gingiva.

Cardiovascular, neurologic, respiratory, and abdominal examinations were otherwise unremarkable. Routine hematological investigations were within normal range.

A respiratory panel and chest X-ray were obtained to rule out *Mycoplasma pneumoniae* as a culprit of EMM, both of which were negative. The following laboratory tests were negative: PCR for HSV Type 1 and 2 was also obtained from a tissue sample and was negative. A Pemphigus IgG antibody panel and IgA antibodies were also negative.

The diagnosis was made according to the clinical presentation, and the therapy containing antihistamines orally and dexamethasone was used for 7 days, also local therapy for the mouth and throat, for the eyes and the skin. At 10 days of hospitalization, symptoms disappeared and the patient was discharged and on follow up about 2 weeks after the initial encounter, the patient reported improvement in her symptoms.

Results: At physical examination was notable for post-inflammatory hyperpigmented patches around cutaneous lips and neck and with clearance of lesions from other locations.

Conclusion: There is no precise diagnostic investigation for EM. The vital clues to diagnosis continue to be the clinical history and clinical findings. In this case report, the lesion presents with clinical manifestations that affect

the skin and mucosa, especially the perioral region.

Furthermore, our case emphasizes the need to remain vigilant for vaccine-associated EM in any patient recently vaccinated, regardless of whether previous vaccinations were administered without cutaneous reactions.

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**Abstract N°: 7431****Deciphering the role of a causative agent: a challenge in the management of bullous dermatosis**

Filip Bosnić¹, Nikola Ferara¹, Klara Gaćina¹, Vanda Haralović¹, Mirna Situm¹, Ivana Prkačin¹

¹Sestre milosrdnice University Hospital Center, Department of Dermatology and Venereology, Zagreb, Croatia

Introduction & Objectives:

Bullous pemphigoid is an autoimmune disease caused by the production of antibodies against hemidesmosomal proteins BP180 and BP230 of the basal membrane. Etiopathogenesis of a disease is yet unknown but it is observed that in some cases medication may be the culprit. Drug-induced bullous pemphigoid (DABP) mimics pathohistologically and clinically idiopathic forms of disease with very few notable differences. Clinical features of a disease are intense pruritus sometimes accompanied by papules, papulovesicles, urticarial patches, eczematous reactions and/or tense bullae. In rare cases pruritus can be the only symptom of a disease that can last for years without other clinical manifestations.

Materials & Methods:

A 71-year-old male, with a 10-year long history of arterial hypertension, diabetes mellitus type 2 and dyslipidemia presented with urticarial patches on the skin of the trunk and tense serous bullae on the skin of the palms and soles, alongside scattered erosion, accompanied with intense pruritus. Due to intense pruritus and papulo-bullous lesions, the condition was initially interpreted as scabies infestation and generalized herpes zoster. However, both of the suspected diagnoses were ruled out and the patient was finally referred to a dermatologist for further assessment. The list of patient's chronic therapy included vildagliptin/metformin, losartan/hydrochlorothiazide, and atorvastatin, with no alterations up till 8 months before the onset of the skin lesions.

Results:

Dermatological examination revealed symmetrical lesion distribution and sparing of central areas, both Nikolsky phenomena being negative. Given the characteristic clinical findings and the extensive list of medications, some of which raised high suspicion as potential causes of the disease, a decision was made to discontinue and revise the chronic therapy.

A skin biopsy showed subepidermal cleft and dermal edema alongside a dense infiltrate of mononuclear cells and eosinophils. Direct immunofluorescence showed linear deposits of IgG and C3 along the basal membrane and ELISA BP180 and BP230 are still pending. Patient was treated with intravenous methylprednisolone 0.5mg/kg/day in a tapering schedule and local corticosteroid ointments, exhibiting substantial improvement, without new lesions erupting.

Conclusion:

This case highlights the complexity of diagnosing bullous pemphigoid, particularly in the context of its resemblance to other dermatological conditions such as scabies and herpes zoster. The patient's presentation underscores the importance of thorough evaluation and consideration of drug-induced factors in autoimmune diseases, as illustrated in this case, given the fact that almost all of the previously mentioned medications could potentially be the cause of the onset of the disease.





Abstract N°: 7476

Drug-induced subacute cutaneous lupus erythematosus by capecitabine

Arturo Robles-Tenorio¹, Georgina Sierra-Silva²

¹School of Medicine and Health Sciences TecSalud ITESM, Monterrey, Mexico, ²DERMATOLOGICO INSTITUTE OF JALISCO, Guadalajara, Mexico

Introduction

Subacute cutaneous lupus erythematosus (SCLE) is clinically and histopathologically indistinguishable from drug-induced SCLE (DI-SCLE). Several drugs such as proton pump inhibitors, thiazides, antifungals and chemotherapeutic agents have been associated with this reaction. Capecitabine is a chemotherapeutic fluorouracil (FU) prodrug capable of inducing dermatological side effects such as erythrodysesthesia and DI-SCLE.

Case report

A 70-year-old female patient presented with a 4-week history of a slightly pruritic rash and sudden hair loss, which started after initiating capecitabine chemotherapy for metastatic colorectal carcinoma. On examination, there were multiple polycyclic, erythematous, photo-distributed plaques, areas of scarring alopecia, and plantar erythrodysesthesia. Skin histopathology demonstrated epidermal atrophy, liquefactive degeneration of the base membrane, a dense lymphocytic inflammatory infiltrate and mucin deposits. Laboratory examinations showed positive ANAs and increased anti-Ro/SSA ENA levels. Four weeks after suspending capecitabine chemotherapy, the patient presented clearance of all active lesions. Chemotherapy was reestablished with intravenous 5-FU and bevacizumab without showing signs of recurrence. Based on these observations, the diagnosis of DI-SCLE was confirmed.

Discussion

Capecitabine is an oral fluoropyrimidine prodrug, currently used for the treatment of breast, stomach, and colorectal cancer. It is readily absorbed in the intestine and metabolized in the liver, plasma, and tumor tissue into FU. The intratumoral activity and reduced systemic toxicity of oral capecitabine are clear advantages over intravenous FU. Cutaneous adverse reactions like erythrodysesthesia are common with capecitabine, yet DI-SCLE is infrequently described. Reportedly, FU is reportedly a photosensitizing, cutaneous lupus-inducing drug.

Eleven cases of capecitabine-induced SCLE have been published, including ours. All patients were females, with a mean age of 65.8 years. Colorectal cancer was the most frequently associated malignancy (54.6%), followed by breast (27.2%) and gastric cancer (18.2%). Personal or family history of autoimmune diseases was documented in 3 cases. DI-SCLE onset occurred from 7 days to 4 months after capecitabine chemotherapy initiation. Accompanying erythrodysesthesia was reported in nearly half of the patients. Only 2 cases of scarring alopecia have been observed, one in a patient with personal history of SLE and ours. The autoantibody profile was varied, but most cases exhibited positive ANA and anti-Ro titers, with negative anti-histones, anti-dsDNA, anti-La results. Drug rechallenge was performed in 2 cases, confirming SCLE induction by capecitabine. Complete clearance was noted in all cases after drug discontinuation. Similar to our case, another report showed no recurrence after suspending capecitabine and reinitiating chemotherapy with FU. These two cases suggest that capecitabine and FU may trigger SCLE through different mechanisms, possibly related to their particular pharmacodynamic profile.

Conclusion

Although dermatological side effects such as erythrodysesthesia is common with capecitabine, LEIF is a rare occurrence. Recognizing these side effects may avoid unnecessary treatments and provide a prompt recovery upon removal of the culprit drug.

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Abstract N°: 7512
Possible Drug-Associated Hidradenitis Suppurativa From Sunitinib In A Patient With Metastatic Renal Cell Carcinoma: A Case Report

Sezgi Sarikaya Solak*¹, Akin Kurtoglu¹

¹Trakya University Faculty of Medicine, Department of Dermatology, Edirne, Türkiye

Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic, relapsing, painful, follicular, occlusive and inflammatory disease that affects the folliculopilosebaceous unit mainly, but not exclusively, in intertriginous axillary, groin, perianal, perineal, genital, and inframammary skin. There are rare reports of drug-associated HS and the exact mechanism underlying this association remains unclear.

Materials & Methods:

Here, we present a case of clinically diagnosed HS that is possibly associated with the use of oral sunitinib for the treatment of metastatic renal cell carcinoma (RCC).

Results:

A 52-year-old man presented to our clinic with red, tender, painful, and persistent wounds on his bilateral axilla, inguinal folds, and scrotum. Dermatological examination revealed multiple erythematous, inflamed, and tender papules and nodules on his bilateral axilla and inguinal folds. Upon palpation, these papulonodular lesions exhibited mild purulent discharge. A review of the patient's medical history revealed a diagnosis of RCC made in February 2014. Additionally, he concurrently had a brain metastasis originating from RCC. He was initiated sunitinib, a multi-kinase inhibitor approved for the treatment of RCC, in March 2014. He noted that he developed painful erythematous nodular lesions in the scrotal and groin areas 2 years after initiating sunitinib therapy. According to the patient's history and clinical findings we made a diagnosis of possible drug-associated HS. Our assessment has yielded a Naranjo score of 4 for our patient, indicative of a possible probability of an adverse drug reaction, as per the structured evaluation criteria delineated by the Naranjo Adverse Drug Reaction Probability Scale.

Conclusion:

In literature, the most frequently implicated drugs with the development of HS include adalimumab, infliximab, lithium, etanercept, rituximab, vemurafenib, cyclosporine, and tocilizumab. To the best of our knowledge, there is only one article in the literature reporting the association of HS with sunitinib. In their article, Montero-Vilchez and colleagues reported that three patients who were undergoing treatment with sunitinib for RCC had developed new HS lesions or experienced a recurrence of HS. This finding is similar to the case presented here. They reported that the interval between the initiation of sunitinib treatment and the onset of illness ranged from 8 to 80 weeks. In our case, HS developed approximately two years after the start of sunitinib treatment. It can be postulated that because drug-associated HS does not manifest as an acute drug reaction, the period for its onset after initiating medication may extend to several years as has been observed in our patient.

The pathophysiology of development or reactivation of HS by sunitinib is an interesting area of research. Its VEGF inhibition effect may hold the key to understanding this process. In a study employing an in vitro scratch assay on this subject, it was observed that the VEGF level in HS keratinocytes was significantly lower than that in normal

keratinocytes. This is a notable finding that may help us to better understand the role of sunitinib on HS.

In conclusion, it is important for physicians who treat, follow up or see patients using sunitinib to be aware of the potential adverse drug reactions of this drug. Appropriate diagnosis and treatment of this side effect can facilitate early intervention and improve patient outcomes.

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Abstract N°: 7526

Dermatomyositis-like eruption induced by hydroxyurea: A case report

Amira Laribi¹, Malek Ben Slimane¹, Faten Rebhi¹, Kahena Jabeur¹, Mohamed Raouf Dhaoui¹

¹The Military Hospital of Tunis, dermatology, Ben Arous

Introduction & Objectives:

Hydroxyurea, a cytotoxic chemotherapeutic agent frequently employed in the management of myeloproliferative disorders, is associated with relatively common cutaneous side effects, particularly during prolonged therapy. Herein, we detail a case of dermatomyositis-like eruption induced by hydroxyurea and provide a comprehensive review of its characteristic features, as documented in existing literature.

Materials & Methods:

A 75-year-old woman, diagnosed with essential thrombocythemia and undergoing hydroxyurea treatment since 2020, presented to the dermatology clinic due to the emergence, over the past year, of erythematous-violaceous patches and plaques with desquamation and atrophy on the dorsum of her hands (particularly over the metacarpophalangeal and proximal interphalangeal joints), as well as on the dorsum of both feet, elbows, and knees. Additionally, she exhibited pronounced overall xerosis (ichthyosis-like). No muscle weakness or significant cutaneous-mucosal manifestations were noted. Laboratory tests showed normal inflammatory parameters and muscle enzyme levels. Myositis antibodies and antinuclear antibodies were negative. Histopathological examination revealed lichenoid inflammation with vacuolar changes in the basal layer, along with a mild lymphocytic infiltrate in the superficial dermis. Based on these findings, we diagnosed a dermatomyositis-like eruption secondary to hydroxyurea treatment. The patient was referred to a hematologist to discuss discontinuation of hydroxyurea treatment, but continuation of the current regimen was recommended. She did not attend her subsequent follow-up appointment.

Results:

The presented case exemplifies hydroxyurea-induced dermatomyositis-like eruption, a known adverse reaction associated with prolonged hydroxyurea therapy. This condition manifests with typical dermal features reminiscent of dermatomyositis, including scaly erythema on the dorsum of the hands with atrophic and telangiectatic changes. However, systemic symptoms are absent, and there is no evidence of proximal muscle weakness or abnormal muscle enzymes. Histopathological examination typically reveals vacuolar alteration of the basal cell layer and a moderate dermal mononuclear perivascular inflammatory infiltrate.

The similarity of the histological picture in hydroxyurea-induced dermatomyositis-like eruption and true dermatomyositis may pose diagnostic challenges. However, the absence of abnormalities in laboratory findings and systemic symptoms, coupled with the presence of marked xerosis and cutaneous atrophy—common features in hydroxyurea-treated patients—enabled accurate diagnosis. The onset of symptoms typically occurs months to years after initiation of hydroxyurea therapy, and resolution of skin lesions usually follows discontinuation of treatment within 10 days to 18 months. Close monitoring for squamous cell carcinoma development is warranted in patients developing a dermatomyositis-like eruption while on hydroxyurea therapy, necessitating discontinuation of hydroxyurea and initiation of alternative treatment.

Conclusion:

Common cutaneous side effects of a prolonged hydroxyurea therapy include leg ulcers, lichen planus-like and dermatomyositis-like reactions, and non-melanocytic skin cancer in sun-exposed areas .

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**Abstract N°: 7535****Extensive pyogenic granuloma on the scalp due to the use of amivantanab**

Amadeu José Rodrigues Queiróz^{*1}, Eduardo Coronato Nogueira Constantino²

¹Faculty of Medicine of São José do Rio Preto, Internal Medicine and Rare Diseases, São José do Rio Preto, Brazil,

²Faculty of Medicine of São José do Rio Preto, Pathology, São José do Rio Preto, Brazil

Introduction & Objectives: Drug reactions are dermatological emergencies. The emergence of new classes of drugs, especially new oncological therapies, brings challenges due to new presentation patterns and, consequently, unusual treatments, given that it is often necessary to maintain oncological treatment. Furthermore, in some new drugs, the skin reaction to the drug directly correlates with the anti-tumor effect, that is, it is up to dermatologists to care for the skin, reversing or controlling adverse effects in order to maintain specific oncological treatment, avoiding grade 4 adverse reactions.

Amivantanab is a bi-specific, fully human immunoglobulin G1 based antibody, targeting the epidermal growth factor (EGFR) and epithelial-mesenchymal transition receptors. Amivantanab is indicated for the treatment of advanced non-small cell lung cancer, with insertion mutations in exon 20 of the EGFR, after failure of platinum-based therapy.

We will report a case of extensive pyogenic granulomas as a manifestation of a reaction to amivantanab.

Materials & Methods: Case report.

Results: A 36-year-old female patient with T4N2M1c lung adenocarcinoma (metastases to the central nervous system and bones) – clinical stage IV with mutations TP53, EGFR insertion exon 20, TMB 5, PDL1 50% underwent 3rd line of palliative chemotherapy with docetaxel. She presented monomorphic papules and pustules on the face and trunk two months after starting amivantanab. Treated with doxycycline, topical corticosteroids, photoprotection and hydration, evolving with good control.

Six months after starting amivantanab, red bleeding papules appeared on the lateral and medial region of all nail plates of toes and fingers that clinical-histologically were compatible with pyogenic granulomas. Treated with timolol. One month later, she developed red, bleeding ulcers on the scalp, progressing to the entire scalp, leading to alopecia. Due to intense pain, the patient used opioids. Patient did not tolerate surgical approaches to the scalp. Proposed use of propranolol, which required increasing the dose to 480mg/day. There was partial and short-lasting control, with progression of the rash.

Conclusion: The interface between Dermatology and Oncology must be narrowed in order to establish preventive measures against the use of new therapies, such as the use of tetracyclines and corticosteroids for the prophylaxis of acneiform eruptions common in the use of EGFR, in addition to providing early diagnoses and attempts and intervention to maintain oncological treatment. It is important to highlight the difficulties of intervention and the lack of literature data on how to manage cases of conditions that are often common, but initiated by the use of new drugs, such as the case presented.





Abstract N°: 7537

A case of iatrogenic kaposi's sarcoma following long term use of corticosteroid treatment for bipolar aphthosis

Chourouq Mustapha Eid¹, Fatima Zahra Sassine¹, Najoua Ammar¹, Syrine Hamada¹, Meriam Meziane¹, Nadia Ismaili¹, Laila Benzekri¹, Karima Senoussi¹

¹Ibn Sina University Hospital, Department of Dermatology, Rabat, Morocco

Introduction:

Kaposi's sarcoma (KS) is a lymphoangioproliferative multifocal process associated with human herpes virus 8 (HHV8). Iatrogenic KS is a rare variant. It usually occurs in patients who have undergone solid organ transplants. However, immunosuppressive (IS) therapy such as corticosteroids (CS) may enhance the risk of KS. We describe a patient with a bipolar aphthosis (BP) who developed KS after long term use of CS. To our knowledge, this is the first case reporting iatrogenic KS with BP.

Case Description:

A 67-year-old female presented for evaluation and management of multiple purpuric lesions scattered over her legs, 5 years after starting CS for a BP. The patient was receiving oral prednisone 60 mg daily in combination with colchicine 1 mg daily since 2019. The treatment was tapered off slowly by the patient's attending internist. Yet, she stopped the follow-up in 2021 and continued treatment with oral prednisolone at a dose of 5 mg daily.

Physical examination revealed several violaceous nodules and plaques, ranging from 1.0- 6.0 cm, distributed on lower limbs and soles of the feet. The lesions had gradually enlarged over the course of the last 3 months. A small violaceous papule was noted on the left thumb. Most of the lesions were non-scaly and did not bleed on pinprick. No lymphadenopathies, organomegaly, oral or genital lesions were found.

Dermoscopic examination showed a purplish background for most lesions, and a rainbow pattern with white scales in other lesions.

Iatrogenic KS was suspected and confirmed by histopathology. On immunohistochemistry, the tumor cells were positive for CD31 and CD34. HHV-8 stain showed positivity.

Laboratory studies were normal. The serological test for human immunodeficiency virus (HIV) was negative. A total body computed tomography scan was performed, showing no evidence of secondary localisation of KS. No endoscopy tests were done due to the absence of mucosal involvement and any digestive symptoms.

A final diagnosis of iatrogenic KS was made. Oral prednisolone was stopped and immediately switched to oral hydrocortisone.

Discussion:

KS manifests as a cutaneous disorder, with a possible mucosal, visceral and/or lymphatic involvement.

Clinically, KS lesions vary from purplish patches and plaques to violaceous nodules or even exophytic tumors. Lesions may bleed, ulcerate or invade nearby tissues, including bones. In our case, no extra cutaneous lesions were found.

Iatrogenic KS was first described in subjects receiving high doses of IS, such as organ transplant recipients. It can

complicate treatment with CS in a wide spectrum of patients requiring IS drugs for underlying conditions such as rheumatoid arthritis , pemphigus vulgaris, glomerulopathy, hemopathy, bullous pemphigoid or other chronic inflammatory diseases.

In literature, iatrogenic KS is rarely documented. Indeed, most patients receiving CS do not develop KS, suggesting the ethnic or genetic role in KS development. KS may occur between one month and 20 years after the IS drug is introduced.

Management focuses on reducing IS, which often results in regression or complete healing. After stopping CS, our patient showed good response.

Conclusion:

Kaposi's sarcoma (KS) can occur in long-term users of steroids even in the absence of HIV infection or transplantation. Steroids are the most commonly used form of IS therapy and vigilance must be maintained to prevent KS from occurring.

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**Abstract N°: 7584****Allopurinol and severe drug reactions: A retro-prospective study of 48 patients**

Zakia Douhi^{*1}, Sqalli Ghita¹, Soughi Meriem¹, Elloudi Sara¹, Baybay Hanane¹, Mernissi Fatima Zahra¹

¹University Hospital Hassan II, Dermatology, Fez, Morocco

Introduction & Objectives:

Allopurinol is the first-line treatment for gout and hyperuricemia worldwide. However, it can induce drug reactions ranging from a simple rash to severe drug reactions. The aim of our study was to identify the epidemiological, clinical and evolutionary profile of these patients, and to report on the main clinical risk factors.

Materials & Methods:

Retro prospective descriptive study from 2014 to April 2024 including 48 patients hospitalized for severe drug reaction to Allopurinol. All patients were put on this treatment for asymptomatic or symptomatic hyperuricemia, at a dose between 100 and 200mg. Notification of treatment was made by the pharmacovigilance center. Data analysis was performed using SPSS V26 software.

Results:

We noted an average age of 66, with a predominance of women (66.7%), a history of cardiovascular disease in 57.4% and kidney disease in 10.4%. We found 77% drug hypersensitivity syndrome (DRESS), 12.5% Stevens Johnson syndrome and 10.5% toxic epidermal necrolysis (Lyell). 43.2% of patients had liver damage (DLI), often asymptomatic, and 75% had kidney damage, functional in 58.3% and of the acute tubular necrosis type in 41.7%. Patients with cardiovascular or renal medical history mainly developed DRESS syndrome and associated renal damage. In terms of treatment, 58.3% were treated with dermocorticoids, 14.6% with dermorticoids 30g, and the remainder with adapted local care alone. 37.5% were treated with oral corticosteroids. The mortality rate was 12.5%. The causes of death were: sepsis, renal failure and decompensation of heart disease. There was no difference between local and systemic treatment in terms of mortality.

Conclusion:

In the light of these results, it would appear that allopurinol is incriminated in DRESS syndrome, mainly with renal involvement first and hepatic involvement second. In addition, female gender, advanced age and a history of cardiovascular and renal disease appear to be risk factors for allopurinol reaction, as numerous studies have already demonstrated. The prescription of allopurinol in the presence of hyperuricemia must therefore be carefully considered.



**Abstract N°: 7620****Drug reaction with eosinophilia and systemic symptoms: Analysis of cutaneous phenotype as a prognostic factor**

Zakia Douhi^{*1}, Sqalli Ghita¹, Soughi Meriem¹, Elloudi Sara¹, Baybay Hanane¹, Mernissi Fatima Zahra¹

¹University Hospital Hassan II, Dermatology, Fez, Morocco

Introduction & Objectives:

The DRESS syndrome (Drug Reaction with Eosinophilia and Systemic Symptoms) is a severe and potentially fatal toxidermia due to various visceral involvements. Identifying factors predisposing to serious complications is essential for clinical and therapeutic management. This study aims to analyze the cutaneous presentation of DRESS and its role as a prognostic factor.

Materials & Methods:

This is a retrospective, descriptive, and analytical study conducted over nine years at the dermatology department in Fes, including all hospitalized DRESS cases.

Results:

The maculopapular rash was the most frequent phenotype (49.3%), followed by erythroderma, morbilliform exanthem, and polymorphous erythema-like rash. 52.8% of patients had renal involvement and 45.8% had hepatic involvement, while 81.9% exhibited hyper eosinophilia. The maculopapular rash and erythroderma were more associated with internal organ involvement, although no significant statistical correlation could be demonstrated. Allopurinol was the most implicated drug in 51.4% of the cases. No correlation was found between the type of medication and the cutaneous presentation. 8.3% of the patients died, primarily those with erythroderma (15.8%).

Conclusion:

The lesion polymorphism of DRESS does not allow for defining a specific cutaneous phenotype associated with severity in terms of visceral involvement and prognosis. However, the maculopapular rash and erythroderma are the most common presentations and are more associated with complications of internal organs, with a more unfavorable prognosis for erythrodermic cases.





Abstract N°: 7621

Etanercept therapy in toxic epidermal necrolysis

Amadeu José Rodrigues Queiróz^{*1}

¹Faculty of Medicine of São José do Rio Preto, Internal Medicine and Rare Diseases, São José do Rio Preto, Brazil

Introduction & Objectives: Toxic epidermal necrolysis (TEN) is an acute and serious adverse drug reaction with mucocutaneous involvement in more than 30% of the body surface. It has a mortality rate of approximately 25-30% in addition to the high risk of chronic multisystemic sequelae. The diagnosis is clinical and treatment includes discontinuation of the causative drug and interdisciplinary support in an intensive care unit (ICU). Effective specific therapies are being researched for better management of the patients.

Materials & Methods: Retrospective, observational, descriptive, cross-sectional, case series study of patients diagnosed with toxic epidermal necrolysis, treated from 2020 to 2024.

All patients were evaluated according to the protocol established by Paradisi et al., 2014 and staged regarding the possibility of using etanercept within 6 hours of their arrival at the hospital or request for evaluation, by the same dermatologist.

Five patients were diagnosed with TEN. Three male patients were diagnosed with TEN and were able to receive etanercept 50 mg, subcutaneously, in a single dose, in addition to treatment at ICU and immediate suspension of the causative drug.

The protocol was approved by the institution's ethics committee and patients were instructed appropriately.

Results: Case 1: A 57-year-old patient, after 4 days of exposure to lamotrigine, was referred for evaluation and started treatment with etanercept, diagnosed with NET SCORTEN 4. He was discharged without complications after 22 days.

Case 2: A 44-year-old patient, 5 days after the start of the rash, was admitted to the service and was diagnosed with NET SCORTEN 3, due to Coronavac. During hospitalization, he had additional diagnoses of sepsis due to *Staphylococcus aureus*, tuberculosis and chronic obstructive pulmonary disease. He was discharged after 33 days with visual sequelae.

Case 3: An 88-year-old patient treated at another service was being investigated for dengue, hemolytic-uremic syndrome, endocarditis and meningococemia. After 4 days of hospitalization, he was transferred and diagnosed with NET SCORTEN 4 due to beta-lactam. He developed acute kidney injury and refractory septic shock caused by *Candida albicans*, the cause of death.

Conclusion: TEN is a rare and serious drug-induced disease with a high rate of mortality and complications. Although it is a medical emergency, there is still no effective and well-defined specific treatment. Lack of knowledge and delayed diagnosis are the main reasons for poor outcomes. It is necessary to define the causative drug and exclude its use.

Studies show that etanercept may be a new approach for TEN, although results are still conflicting in the literature, showing the need for studies with more robust samples and a control group to reach a definitive conclusion.

The advantage of using etanercept is the fact that it is a single dose and shows fewer adverse effects in the

medium and long term when compared to other options. Early use is essential for a better response.

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**Abstract N°: 7626****Lichenoid drug eruption induced by Trastuzumab : a case report**

Safae el Msayryb¹, Bellasri Salma¹, el Halla Hanane¹, Ait Abdelali Nassma¹, Chakiri Radia¹

¹souss massa hospital university, dermatology, agadir, Morocco

Introduction & Objectives:

Lichenoid drug eruptions are rare and similar to idiopathic lichen planus, commonly presenting as erythematous violaceous papules. Pruritus is a common feature. However usually have a symmetrical distribution, with a clear temporal relationship between onset of cutaneous manifestations and drug initiation.

Many medications have been reported in association with lichenoid drug eruption.

Generally, the latent period is 2–3 months and has even been reported to develop after the drug has been ceased. This can make it challenging to identify the offending drug.

We present a rare presentation of a lichenoid drug.

Materials & Methods:

We present a case of lichenoid drug due to Trastuzumab (Herceptin) for her breast cancer.

Results:

A 61 years-old female patient, her medical history included hypertension and cardiopathy.

since five years, [Crohn's disease managed with Mesalazine since four years, and her initial breast cancer treated with chemotherapy, mastectomy and radiotherapy.](#)

She was seen in our consultation for a profuse and pruriginous rash occurring 2 months after administration of Trastuzumab.

Dermatological examination revealed erythematous pigmented squamous plaques over the trunk and limbs and extremities, associated with erosions.

The dermoscopy showed diffuse erythema, scaling and pointed vessels.

The skin biopsy confirmed a lichenoid reaction by presence spongiotic epidermis with lymphocyte exocytosis and lichenoid changes of the epidermal basal layer including interface dermatitis, vacuolization and pigment incontinence.

The pharmacovigilance investigation has confirmed that Trastuzumab as the offending drug.

The patient was treated with topical moisturizer, antihistamine and Topical corticosteroids. The outcome involved complete regression of the eruption after 15 days of stopping Trastuzumab.

Furthermore, analysis of the WHO global database (Vigibase) shows only 5 reported cases of the association Trastuzumab and lichenoid keratosis among 6801 cases of reported skin reactions.

In the current case, the diagnostic of drug lichenoid induced by Trastuzumab is based on clinical presentation,

dermoscopy, histopathology and when the eruption appeared after taking Trastuzumab, and it was improved after cessation of the drug.

Conclusion:

The trigger medication should be stopped, and the rash can take weeks to months to disappear. Sometimes the medication cannot be ceased because of the importance of the underlying medical condition compared to the rash. The dose may be reduced or continued unchanged and the rash treated with topical or oral corticosteroid.

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**Abstract N°: 8099****Development of a staphylococcus epidermidis strain for the topical treatment of epidermal growth factor receptor (EGFR) inhibitor-induced dermal toxicity**Sara Mootien¹, Roger Leger¹, Travis Whitfill¹, Mary Clare Spellman²¹Azitra, Inc, Branford, CT, United States, ²San Francisco, United States

Introduction & Objectives: Agents targeting the EGFR-mediated signaling pathway are prescribed for the treatment of various advanced cancers. Significant dermal toxicities, which occur in up to 90% of patients treated with EGFR inhibitor (EGFRi) and therapies inhibiting downstream signaling pathways, may be disruptive to a patient's quality of life and adherence to therapy. The most common dermal toxicity occurs primarily on the scalp and face, back, and upper chest and develops in the first few weeks of treatment, with an "acneiform" eruption comprised of folliculocentric, erythematous papules or pustules, which is frequently accompanied by severe pruritus, pain, and psychological stress. Inhibition of the EGFR pathway may suppress host defenses and lead to opportunistic pathogenic colonization or infection. EGFRi-induced dermal toxicity is associated with elevated levels of *Staphylococcus (S.) aureus* and IL-36g. ATR04-484 is a topical ointment containing *S. epidermidis* strain SE484, isolated from a healthy human volunteer that was selected for its ability to inhibit *S. aureus* and IL-36g.

Materials and Methods: Reconstructed human epidermis (RHE) and ex vivo pig skin were used to measure the effect of ATR04-484 on *S. aureus* in therapeutic and prophylactic settings, by adding methicillin-resistant (MRSA) or methicillin-sensitive (MSSA) *S. aureus* prior to or after ATR04-484, respectively. ATR04-484 comparably inhibited growth of both MRSA and MSSA in therapeutic and prophylactic settings. In a therapeutic setting, ATR04-484 inhibited MRSA growth by 1 log (90%) compared to untreated MRSA in both RHE and pig skin. In a prophylactic setting, ATR04-484 inhibited MRSA growth by approximately 5 logs on RHE and 2 logs on pig skin.

To evaluate the anti-inflammatory effects of ATR04-484, IL-36g levels were measured on untreated RHE (as a control) and on RHE treated with erlotinib alone or in combination with ATR04-484. Application of ATR04-484 reduced IL-36g to a level comparable to that of untreated RHE. The effect was dose-dependent; application of 109CFU/cm² of ATR04-484 showed more potent IL-36g reduction compared to 108 CFU/cm².

The initial clinical study is a multicenter, randomized, blinded, vehicle-controlled Phase 1/2 trial of topically applied ATR04-484 in adult patients with moderate to severe EGFRi-related non-infected dermal toxicity affecting the face. The study objectives focus on the evaluation of the safety and local tolerability of ATR04-484 following daily topical application to skin of the face, neck, chest, and back (using 4 g of study drug) over a 28day period. The clinical effects at each site which has been affected by EGFRi-related dermal toxicity, are assessed by the investigator (referencing a uniform clinical assessment scale), and key symptoms of pruritus and pain will be assessed by the patients.

