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Abstract N°: 10

Fixed Drug Eruption to methotrexate: A Case Report With a Unique Presentation

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Introduction & Objectives:

Fixed drug eruption (FDE) is a delayed type IV immune drug reaction that manifests as single or multiple pruritic erythematous patches or plaques with well-defined borders, sometimes accompanied by edema or vesicles. FDE is caused by skin-resident memory T cells and reappears at the same location upon subsequent exposure to the drug. Methotrexate is an antimetabolite used at low doses for the treatment of psoriasis and other dermatological conditions. Although alopecia and stomatitis are common adverse events, incidences of drug eruptions secondary to methotrexate are infrequent. Here we report a case of methotrexate-induced FDE in a patient receiving methotrexate therapy.

Materials & Methods:

A 78-year-old woman with a long history of hypertension and hypercholesterolemia treated with simvastatin, hydrochlorothiazide and valsartan was diagnosed with giant cell arteritis. She received a combination of systemic corticosteroids followed by a tapering regimen, and subcutaneous methotrexate at a starting dose of 15mg per week. Follow-up at 15 months revealed the presence of a fixed drug eruption localized on several sites of injection. Diagnosis was confirmed by histology. Patch tests, intradermic tests and prick tests were also performed. Clinical images were obtained on the 1st visit in our Dermatology department and repeated at the following month. Informed consent was obtained.

Results:

Fifteen months after starting subcutaneous methotrexate, the patient presented with itchy erythematous plaques, which successively appeared on injection sites every week after subcutaneous administration of the drug. Some lesions were associated with central vesicles or crusting. The lesions progressed despite the use of topical corticosteroids. Patch tests, intradermic tests, and prick tests showed negative results for methotrexate. Based on the clinical and the very suggestive histological findings, the patient was diagnosed with methotrexate-induced fixed drug eruption. Treatment involved discontinuation of methotrexate and the use of topical corticosteroids. One month after methotrexate withdrawal, the lesions resolved, leaving post-inflammatory hyperpigmentation.

Conclusion:

Although FDE is a well-known drug reaction, its association with methotrexate is rare. The localization of FDE plaques in injection sites is an uncommon presentation that has been documented with other medications. It is important to recognize the features of FDE to make an accurate diagnosis, prevent further exposure to the offending drug, and improve patient outcomes.

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Abstract N°: 22

Erythema dyschromicum perstans related to ribocicib therapy for invasive breast carcinoma

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Introduction & Objectives: Erythema dyschromicum perstans (EDP) is a chronic progressive pigmentary disorder that is characterized by gray or blue-brown macules or patches, commonly affecting individuals with Fitzpatrick skin types III-V. The cause of EDP is unknown, but drug-induced cases of EDP had been implicated. We present a rare case of EDP induced by ribocicib therapy for invasive breast carcinoma.

Materials & Methods: A 48-year-old Indian female presented with 8-month history of progressive, non-pruritic generalised pigmented dermatosis, which started over the lower limbs and subsequently worsened to involve her trunk, buttocks, and upper limbs. The patient was started on letrozole and ribocicib in December 2020 for invasive breast carcinoma, approximately 2 months prior to onset of dermatosis. Physical examination showed multiple small and large, hyperpigmented, brown to slate-grey patches distributed over the upper arms, forearms, thighs, lower limbs and buttocks. There was a white lacy patch seen over the right buccal mucosa and no nail abnormalities were observed.

Results: Histopathological examination showed vacuolar interface dermatitis with focal spongiosis, dermal pigmentary incontinence, with mild periadnexal and perivascular lymphocytic infiltrate. A provisional diagnosis of erythema dyschromia perstans (EDP) related to ribocicib was made. After discussion with her oncologist, ribocicib was stopped and letrozole was continued for the treatment of breast cancer. The patient was treated with emollients and topical mometasone furoate cream. On follow-up, her cutaneous pigmentation began to improve within 3 months after cessation of ribocicib.

Conclusion: EDP is an acquired macular pigmentary disorder of unknown aetiology. It presents as symmetrically-distributed grey macules over the trunk, neck, face and upper limbs1. It commonly occurs in Asian and Latino patients with darker skin phototypes. Histopathological examination may show basal vacuolar degeneration, dermal pigmentary incontinence and perivascular lymphocytic infiltrate. Clinicopathological correlation is required for a prompt diagnosis and identification of the causative drug. Although ribocicib-related EDP is rarely reported in the literature, the prominent pigmentation can be distressing for patients, which warrant increased clinician awareness. Further studies are required to understand disease pathophysiology and guide appropriate therapy.

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Abstract N°: 333

The Jarisch-Herxheimer reaction to second line drug for Syphilis

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Introduction & Objectives: The Jarisch Herxheimer Reaction was first observed in patients suffering from syphilis. It is a type of hypersensitive reaction. The exact mechanism of the JHR reaction is unknown, but it has been suggested that antibiotics break down spirochetes and release pyrogens and cytokines (TNF, IL-6, IL-8).

Symptoms of JHR manifest after 1-2 hours following penicillin, tetracycline, doxycycline, minocycline, and erythromycin treatment of spirochetal infections.

High-grade fever, nausea, vomiting, myalgia, headache, tachycardia, hyperventilation, generalized weakness, and prominent skin rashes are the symptoms of JHR.

This JHR reaction is self-limiting. It lasts about 12 to 24 hours. Some causes of this reaction can be treated with oral corticosteroid (Methylprednisolone).

This reaction is an “all or none phenomenon”, with full potential if it occurs at all. Hence starting treatment with a low dose of antibiotic does not give any protection.

Materials & Methods: This was an interesting case report of a 26-year-old, unmarried female, who presented in the outpatient department with complaints of multiple elevated painful papular lesions over the face, trunk, extremities, palm and sole. Six months back, the patient was asymptomatic and well but after that, she started developing symptoms such as a fever that was constantly on and off. She also experienced a loss of appetite, and joint pain that was bilateral in the knee joint.

On her examination, skin coloured, brown to coppery flat-topped papules and macules were present over the face, extremities, trunk, palm and sole. Macular eruptions of the palm and sole were scaly. The lesion was painful. Thinning of the lateral side of the eyebrows was also seen.

Her routine blood investigations were within normal limits with increased ESR. Her viral markers (HIV I and II, hepatitis B antigen, and anti-hepatitis C virus antibodies) were negative. The serological test for syphilis was **reactive** (VDRL- reactive (1:64)

(TPHA- reactive (1:1280)

At first, she was prescribed oral azithromycin 1 g daily. Due to the patient’s unwillingness to consent, penicillin was not given to her.

But due to the worsening of the symptoms, the patient revisited the OPD within four days. She complained about fever, chills, rigours, nausea, vomiting, headache and general weakness. She also complained about an increase in previous skin lesions in number as well as in size.

On examination, previous skin lesions (scaly macules over palm and sole and papular lesions on face, trunk and extremities) were seen to be shiny, oedematous and more prominent and had increased in number and size. After this, the patient was investigated and given treatment in the form of oral corticosteroid (Methylprednisolone) 16 mg daily for 1 week.

Results: The patient was taken under observation and within 72 hours, the fever subsided, the lesions decreased and the patient felt better. The patient was put on oral doxycycline (100 mg twice a day) thereafter and she responded very well to that clinically and serologically.

Conclusion: In this Era, syphilis is a curable disease but can cause substantial morbidity and mortality if left untreated. Despite of availability of treatment syphilis remains exists in a sporadic form in India.

My case report is an important study because very few cases are reported about Jarisch-Herxheimer Reaction in Secondary Syphilis after treatment with azithromycin. Also, this case reminds us that we should never forget Syphilis and its complications.

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Abstract N°: 338

Cutaneous toxicity of CAR T-cell therapy: a case of a bullous life-threatening reaction

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Cutaneous toxicity of CAR T-cell therapy: a case of a bullous life-threatening reaction

Introduction & Objectives:

Chimeric antigen receptor (CAR) T-cell therapy has shown exceptional activity against several B-cell malignancies As CAR T-cell therapy becomes more extensively applied, new toxic reactions are being identified that may potentially affect any organ or system.** We report a case of a life-threatening bullous cutaneous reaction occurring after CAR T-cell infusion.

Materials & Methods:

A 63-year-old man with mantle cell non-Hodgkin lymphoma stage IV received conditioning chemotherapy and CAR T-cell therapy after disease recurrence following allogeneic hematopoietic stem cell transplantation (allo-HSCT). On day 3 after CAR-T-cell infusion he developed fever, hypotension and cognitive defects. Laboratory investigations showed increased levels of creatinine, ALT and interleukin(IL)-6 He was diagnosed with cytokine release syndrome (CRS) grade 2 and immune effector cell-associated neurotoxicity syndrome (ICANS) grade 1, thus he was started on intravenous tocilizumab (600mg, one dose/day for two days). On day 6 hypotension and neurological symptoms persisted, therefore he was admitted to the intensive care unit and started on methylpredinisolone (1 mg/kg/day) and levetiracetam for seizure prophylaxis. On day 8 he developed a pruriginous and painful maculo-papular rash on his head, trunk, and upper and lower extremities. After a few hours, the rash showed a bullous evolution on the head and extremities, and mucosal erosions were noted on the soft palate. Due to the persistence of hypotension despite vasopressor support, the worsening of neurological symptoms, and the onset of hypoxia and liver impairment he was diagnosed with CRS grade 4 and ICANS grade 2.

Results:

A skin biopsy of the left thigh was performed, and histological examination revealed subepidermal bullae, necrosis of the epidermis, and a moderately intense perivascular, predominantly lymphocytic infiltrate in the dermis. Direct immunofluorescence analysis was negative for IgG, IgA, IgM, C3, and C4, which ruled out autoimmune bullous dermatoses, as well as specific antibody serology tests. Laboratory exams excluded abnormalities suggestive of infections (CMV, EBV, HIV, HHV6). ALDEN score excluded a Stevens-Johnson syndrome due to the recently* introduced medications, including piperacillin-tazobactam and levetiracetam. *The diagnosis of CAR-T therapy cutaneous toxic reaction was strongly considered.* Due to the rapid clinical worsening, methylprednisolone (1g/day) and intravenous immunoglobulin (1g/kg/day) were administered, achieving a good response. After 3 days, following the resolution of neurological symptoms, the normalization of liver function and progressive healing of cutaneous lesions, intravenous immunoglobulin were discontinued, methylprednisolone was tapered, and the patient was discharged from the intensive care unit.

Conclusion:

Cutaneous toxic reactions after CAR T-cell therapy have rarely been reported.

Due to the timing of the onset after CAR-T infusion, the concomitance of CRS grade 4, and the histological findings, we strongly considered the maculopapular rash followed by bullous eruption of our patient as a life-threatening CAR T-cell related toxic cutaneous reaction.

More studies and case reports are required to further investigate the possible pathogenic reaction between Car T-cell therapies and skin toxicity.

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Abstract N°: 421

Desloratadine induced fixed drug eruption: An exceedingly rare presentation.

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Introduction & Objectives: Fixed drug eruption (FDE) is a relatively common drug reaction that often recurs at the same location after exposure to the same drug. It is characterized by single or multiple tenders or pruritic, well-demarcated, round-oval erythematous edematous plaques. It may develop a dusky violaceous hue or central bullae that later end up with erosion secondary to epidermal detachment. More than one hundred drugs have been incriminated in the causation of FDE. Drugs most commonly associated with FDE include sulfonamides, β-lactams, fluoroquinolones, tetracyclines, non-steroidal anti-inflammatory drugs (NSAID), aspirin, barbiturates, azole antifungal, dapsone and macrolides. Rarely, antihistamines, being anti-allergic drugs, paradoxically induce FDE in some patients. FDE due to desloratadine has rarely been reported in the literature. Here in, the author reports a case of FDE due to desloratadine.

Materials & Methods: A 28-year-old man presented with reddish lesions over Right upper arm. He had visited some physician for itching on the back for which he was prescribed oral desloratadine and some topical steroids. One day after taking the first dose of desloratadine, patient started burning sensation and itching over proximal right arm followed by appearance of redness. On examination, there were two annular erythematous patches of size 3.5cm and 5cm. The centre of the two patches had dusky violaceous hue which was more marked in the larger one. The central area of larger patch was edematous with pinpoint vesicles. Rest of the cutaneous examination including mucosae was unremarkable. Patient revealed that 4 years back, he had similar episode after taking same medicine, when he developed erythema and bulla at the same site. The bulla developed erosions which healed spontaneously without leaving a scar. Based on history and clinical examination, a diagnosis of FDE due to desloratadine was made.

Results: He was advised to stop taking desloratadine/loratadine. He was prescribed topical mometasone furoate 0.1% cream to be applied once daily for 1 week.

Conclusion: H1-antihistamines are widely prescribed in dermatological practice. They are rarely incriminated in the development of adverse cutaneous drug eruptions and have an excellent safety profile. There is paucity of reports of FDE caused by second generation H1-antihistamines like cetirizine, levocetirizine, loratadine and desloratadine. Despite meticulous search, author could find only two cases of FDE induced by loratadine and only one case by desloratadine. As desloratadine is the active metabolite of loratadine, this case supports the previous two cases of FDE induced by loratadine. Additionally, it is believed that there is a high probability that patients who developed FDE to desloratadine can develop FDE to loratadine. For such patients, it is recommended to prescribe some other second generation antihistamine.

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Abstract N°: 428

An unusual adverse effect during crusted scabies treatment

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Introduction & Objectives:

Scabies is part of the neglected tropical diseases, it occurs worldwide and is endemic in many developing countries (1,2). It is caused by the ectoparasite *Sarcoptes scabiei* var. hominis. Patients with classic scabies usually have around 5-15 burrowing female mites. However, patients with crusted scabies could harbor thousands to millions of mites (3). Risk factors for crusted scabies include immunosuppression, neuropathy, arthropaties and psychiatric disorders (4).

With this case we aim to describe an unusual adverse effect of ivermectin, one of the therapeutic options to treat scabies, as well as to familiarize physicians with this public health problem that affects people worldwide but predominantly third world countries.

Materials & Methods:

A 23 year-old man complained of a 6 month history of generalized pruritus and hyperkeratotic, crusted, fissured and scaly plaques localized in axillary folds, back, periumbilical skin and flexor surface of the knees. He also had multiple erythematous papules and excoriations due to scratching in trunk and extremities (pictures). His past medical history and revision of systems were unremarkable. He denied contact with ill people and he had not used any previous treatment.

A complete metabolic panel and skin scraping were ordered.

Results:

Laboratory results were within normal limits. However, microscopic examination of skin scraping revealed multiple mites (video), confirming the diagnosis of crusted scabies. Permethrin and ivermectin were administered, but during hospitalization day 3 the patient presented fever (38°) and numerous non follicular pustules over erythematous plaques on trunk and extremities. A biopsy was performed and findings were consistent with acute generalized exanthematous pustulosis (AGEP). Ivermectin was immediately discontinued and permethrin regimen was completed with satisfactory evolution after 2 weeks.

Conclusions:

In June 2019, the WHO added ivermectin to the 21st WHO Essential Medicines List. AGEP is not a common adverse effect of ivermectin. As Scabies remains a public health priority globally, this case highlights the importance of knowing possible reactions to frequently used medications and of novel therapeutics that serve as alternatives when it comes to scabies management.

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Abstract N°: 597

Lichen planus induced by anti-Programmed Death protein 1

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Introduction & Objectives:

Immune checkpoint blockers (ICB) have revolutionized the management of advanced cancers in dermatology as well as in other disciplines. Nevertheless, the immune-mediated oncologic response is often achieved at the cost of ICB-related adverse events that may potentially affect any organ. Dermatologic ICB-related adverse events are among the most common and are observed in about 40% of all treated patients. They include maculopapular, psoriasiform, lichenoid, vitiligoid and eczematous rashes, auto-immune bullous disorders, pruritus, hair, nail and mucosal changes, as well as a few severe life-threatening drug reactions.

Materials & Methods:

Herein we describe a case of an ICB-induced lichenoid eruption in a patient being treated with anti-Programmed Death protein 1 (Anti-PD1) for a lung cancer.

Results:

A 60-year-old Caucasian man, with a history of hypothyroidism supplemented since years and who is being treated with pembrolizumab for a pulmonary giant cell carcinoma since April 2022, presented in November 2022 with a pruritic eruption that appeared two weeks ago. The eruption started with confluent papules of the wrists then extended to the limbs and the trunk. The patient did not have any other relevant history. Skin examination showed bright purple confluent scaly papules on wrists, proximity of limbs, back and buttocks and palmar keratoderma made of violaceus and confluent papules covered with reticular fine white striae. Mucosal and nail examination was normal. The standard biological tests were within normal values. History of unprotected sexual intercourse and staining for syphilis antibodies were negative. Differential diagnosis included lichen planus and lichenoid drug eruption. Histological examination revealed an epidermal hyperplasia, vacuolization of the basal layer, necrotic keratinocytes and a band-like subepidermal lymphocytic infiltrate with many eosinophils. The diagnosis of an ICB-induced lichenoid eruption was then retained. Anti-PD1 therapy was withheld because of the severity and the extension of the lesions. Superpotent topical steroids were prescribed with a significant improvement of the pruritus and the rash within 3 weeks. Given the stability of the cancerous disease, checkpoint inhibitors were not reintroduced. At the fourth month follow up, all skin lesions have healed.

Conclusion:

The incidence of ICB-mediated lichen planus-like rash is still not determinated, but it represents one of the most frequent dermatologic ICB-related adverse events. Delay of onset from the beginning of treatment is still unknown but delays of several months like the case of our patient have been reported. ICB-related lichen planus can be histologically indistinguishable from classic lichen planus. In our patient, the onset of the disease seven months after the initiation of ICB, the infiltrate rich in eosinophils and the eruptive and rapidly diffused character within two weeks are indications of an ICB-incuced lichen planus.

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Abstract N°: 634

A Retrospective Observational Study to Assess the Risk of Select Adverse Events of Special Interest During Oral Corticosteroid Use in Bullous Pemphigoid Patients

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Introduction & Objectives:

Bullous pemphigoid (BP) is a rare autoantibody-driven blistering disease. Oral corticosteroids (OCS) are often used as part of initial therapy. There is limited research directly estimating the risk of OCS-related adverse events (AEs) in BP patients.** Here we assess the risk of select AEs during real-world OCS use in BP patients.

Materials & Methods:

US** adults with a new diagnosis of BP in the Optum Clinformatics database were followed from diagnosis (01/01/2016 to 06/30/2022). AEs such as cardiac, endocrine, and infectious events based on the Glucocorticoid Toxicity Index were identified using International Classification of Diseases (ICD) codes. Crude incidence rates (IR) of OCSrelated AEs were reported. A frailty model was fitted to assess risk of AEs during OCS exposure as hazard ratios. OCS exposure by dose (Low: <15 mg/day, Medium: 15-30 mg/day, High: >30 mg/day) and concomitant medication use were included as time-varying covariates; fixed covariates, such as comorbidities, were also included.

Results:

Of the** 2,806 BP patients identified in the database, 1190 (42%) were treated with OCS at baseline (**Table 1**). The mean age of the cohort was 77 years (standard deviation [SD] 11.0) with 47% male, with median OCS episode duration of 112 days (interquartile range (IQR) 37–255). Crude IR of OCS-related AEs was 2.03 (95% CI: 1.91–2.15) per patient-year (**Table 2**). Adjusted frailty models identified an increased hazard of any AE during periods of OCS exposure for all OCS dosages, Low: 1.26 (1.16–1.37), Medium: 1.18 (1.09–1.28), High: 1.25 (1.14–1.38) relative to no OCS exposure (**Table 3, Figure 1**).

Conclusion:

OCS exposure was associated with significantly increased hazards of AEs in BP patients. Evidence-based therapies that go beyond broad immunosuppression and target the underlying disease are needed.

Table 1. Baseline characteristics. Baseline comorbidities reported in the 1 year prior to index date. Baseline OCS patients were defined as patients who started OCS within 90 days of index date, and non-OCS patients were defined as patients not receiving OCS OR starting OCS after 90 days.

Characteristic	Overall, N = 2,806	OCS Use, N = 1,190	No OCS Use, N = 1,616
Patient Demographics			
Oral Corticosteroid Use (n, %)			
No OCS Use	1,616 (58%)	0 (0%)	1,616 (100%)
OCS Use	1,190 (42%)	1,190 (100%)	0 (0%)
Age at Diagnosis (Mean, SD)	77.01 (10.97)	76.87 (11.00)	77.12 (10.95)
Female Sex (n, %)	1,479 (53%)	627 (53%)	852 (53%)
Follow-up Time (Years, Mean, SD)	1.97 (1.59)	1.92 (1.55)	2.01 (1.62)
Health Insurance Type (n, %)			
Commercial	346 (12%)	146 (12%)	200 (12%)
Medicare	2,460 (88%)	1,044 (88%)	1,416 (88%)
US Region (n, %)			
North Central	808 (29%)	326 (27%)	482 (30%)
Northeast	533 (19%)	232 (19%)	301 (19%)
South	961 (34%)	388 (33%)	573 (35%)
Unknown	3 (0.1%)	0 (0%)	3 (0.2%)
West	501 (18%)	244 (21%)	257 (16%)
Race (n, %)			
White	2,115 (75%)	847 (71%)	1,268 (78%)
Black	306 (11%)	153 (13%)	153 (9.5%)
Hispanic	146 (5.2%)	75 (6.3%)	71 (4.4%)
Asian	97 (3.5%)	56 (4.7%)	41 (2.5%)
Unknown	142 (5.1%)	59 (5.0%)	83 (5.1%)
Comorbidities (n, %)			
Charlson Comorbidity Score (mean, SD)	3 (3.02)	3 (3.11)	2 (2.94)
Myocardial Infarction	207 (7.4%)	100 (8.4%)	107 (6.6%)
Congestive Heart Failure	532 (19%)	241 (20%)	291 (18%)
Peripheral Vascular Disease	790 (28%)	362 (30%)	428 (26%)
Cerebrovascular Disease	496 (18%)	208 (17%)	288 (18%)
Dementia	352 (13%)	168 (14%)	184 (11%)
Chronic Pulmonary Disease	705 (25%)	337 (28%)	368 (23%)
Rheumatic Disease	132 (4.7%)	66 (5.5%)	66 (4.1%)
Peptic Ulcer Disease	52 (1.9%)	27 (2.3%)	25 (1.5%)
Mild Liver Disease	138 (4.9%)	68 (5.7%)	70 (4.3%)
Diabetes without Chronic Complications	913 (33%)	394 (33%)	519 (32%)
Diabetes with Chronic Complications	555 (20%)	244 (21%)	311 (19%)
Hemiplegia or Paraplegia	78 (2.8%)	34 (2.9%)	44 (2.7%)
Renal Disease	702 (25%)	317 (27%)	385 (24%)
Any Malignancy	435 (16%)	181 (15%)	254 (16%)
Moderate or Severe Liver Disease	12 (0.4%)	5 (0.4%)	7 (0.4%)
Metastatic Solid Tumor	107 (3.8%)	53 (4.5%)	54 (3.3%)
AIDS/HIV	3 (0.1%)	1 (<0.1%)	2 (0.1%)

OCS, oral corticosteroid; SD, standard deviation; AIDS, acquired immunodeficiency syndrome; HIV, human immunodeficiency virus; US, United States

Table 2. Crude incidence rates and ratios of adverse events of interest. Incident rates reported as event/person-years.

Event	Incidence rate (OCS-exposure)	Incidence rate (No OCS-exposure)	IRR (95% CI)
Any adverse event	1.30	0.64	2.03 (1.91-2.15)
Hypertension	0.03	0.02	1.60 (1.08-2.35)
Heart failure	0.38	0.19	1.99 (1.79-2.21)
Endocrine	0.04	0.04	3.59 (2.50-5.17)
Bone	0.12	0.08	1.50 (1.25-1.79)
Muscle and tendon	0.03	0.01	2.05 (1.35-3.08)
Eye	0.37	0.24	1.52 (1.37-1.68)
Glucose tolerance	0.53	0.27	1.93 (1.77-2.12)
Gastrointestinal	0.04	0.02	1.70 (1.23-2.33)
Skin	0.54	0.31	1.76 (1.62-1.92)
Neuropsychiatric	0.41	0.21	1.95 (1.76-2.16)
Infection	0.26	0.14	1.86 (1.63-2.11)
Other	0.33	0.19	1.76 (1.58-1.97)

OCS, oral corticosteroid; IRR, incidence rate ratio; CI, confidence interval

Table 3. Adjusted frailty model results for hazard ratios of adverse events with OCS-exposure. The reference group is non-OCS exposed periods. OCS dose by prednisone equivalent: low <15mg/d, moderate 15-30 mg/d, high >30 mg/d. Models adjust for patient age, gender, race, region, and payer (at index date), Charlson Comorbidity Index (defined in the 1 year baseline period), OCS use in the 1 year prior to index date, and concomitant medication use (time varying use of ivig or IST during OCS exposure or non-exposure episodes).

Event	HR (95% CI, low dose OCS)	HR (95% CI, moderate dose OCS)	HR (95% CI, high dose OCS)
Any adverse event	1.26 (1.16-1.37)	1.18 (1.09-1.28)	1.25 (1.14-1.38)
Hypertension	1.00 (0.52-1.91)	1.21 (0.63-2.33)	2.34 (1.17-4.66)
Heart failure	1.07 (0.89-1.28)	1.26 (1.06-1.50)	1.14 (0.93-1.41)
Endocrine	2.69 (1.55-4.66)	1.87 (0.95-3.66)	2.53 (1.17-5.47)
Bone	1.41 (1.07-1.85)	1.10 (0.82-1.48)	1.22 (0.85-1.74)
Muscle and tendon	1.39 (0.65-2.97)	1.68 (0.84-3.34)	3.06 (1.51-6.19)
Eye	1.20 (1.02-1.40)	1.11 (0.95-1.30)	0.98 (0.80-1.21)
Glucose tolerance	1.03 (0.89-1.21)	1.01 (0.87-1.17)	1.19 (1.01-1.40)
Gastrointestinal	0.97 (0.53-1.78)	1.48 (0.91-2.41)	1.39 (0.75-2.59)
Skin	1.17 (1.02-1.35)	1.26 (1.11-1.44)	1.26 (1.07-1.48)
Neuropsychiatric	1.35 (1.14-1.60)	1.42 (1.21-1.66)	1.39 (1.14-1.69)
Infection	0.99 (0.78-1.24)	1.45 (1.18-1.78)	1.79 (1.41-2.28)
Other	1.20 (1.00-1.44)	1.37 (1.16-1.63)	1.24 (1.00-1.56)

OCS, oral corticosteroids; HR, hazard ratio; CI, confidence interval

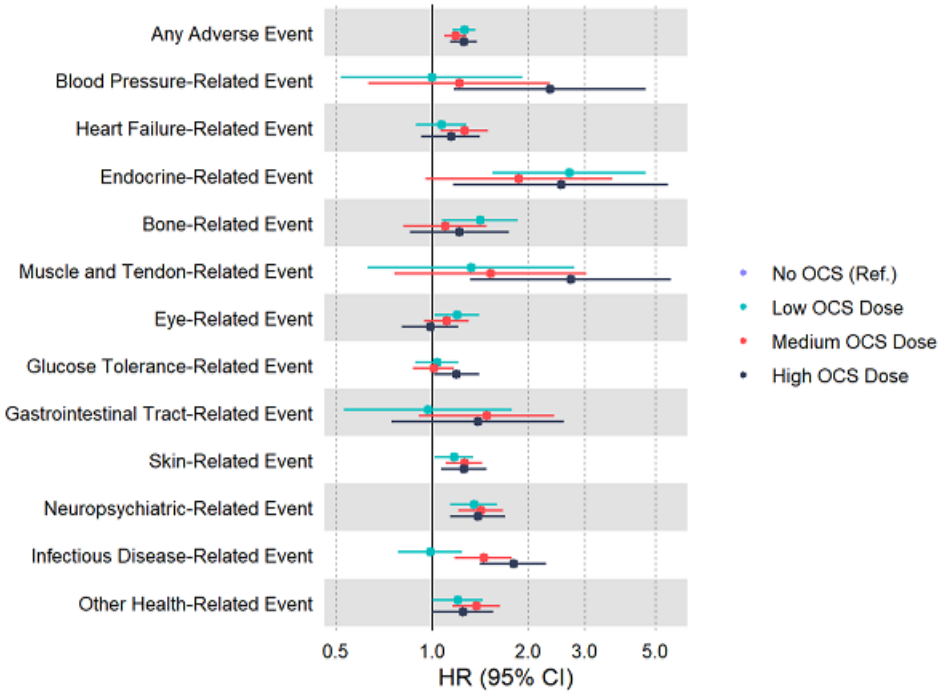

Figure 1. Adjusted frailty model results for hazard ratios of adverse events with OCS-exposure. The reference group is non-OCS exposed periods. OCS: oral corticosteroid.

OCS dose by prednisone equivalent: low <15mg/d, moderate 15-30 mg/d, high >30 mg/d

Models adjust for patient age, gender, race, region, and payer (at index date), Charlson Comorbidity Index (defined in the 1 year baseline period), OCS use in the 1 year prior to index date, and concomitant medication use (time varying use of ivig or IST during OCS exposure or non-exposure episodes).

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Abstract N°: 777

Case report: Successful treatment of DRESS with narrow-band UVB phototherapy

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Title: Case report: Successful treatment of DRESS with narrow-band UVB phototherapy

Introduction & Objectives:

Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) / Drug-Induced Hypersensitivity Syndrome (DIHS) is a severe, systemic, T cell-mediated drug reaction with combinations of cutaneous, hematologic, and internal organ involvement. The mainstay treatment of DRESS is systemic steroids, alongside identification and withdrawal of the culprit drug. Case reports and small studies have examined cyclosporine, IVIG, mycophenolate mofetil, cyclophosphamide, and rituximab as alternative therapeutic options, but there are no reports of phototherapy with narrow-band UVB. We have experienced a case in which narrow-band UVB phototherapy was significantly effective and successfully reduced the PSL.

Materials & Methods:

We report a case of DRESS successfully treated with narrow-band UVB phototherapy.

Results:

A 79-year-old female with rheumatoid arthritis and methotrexate-induced interstitial pneumonia, presented with a one-week widespread rash associated with a fever and anorexia. Physical examination revealed a 38.6°C temperature, a generalized rash with edematous erythema, and purpuric lesions. Biology showed hypereosinophilia (735 /µL), atypical lymphocytosis (400 /µL), liver enzymes and serum creatinine levels exceeding 2-3 times the upper baseline, and viral reactivation of cytomegalovirus.

A nasopharyngeal SARS-CoV-2 PCR and hemocultures were negative. The diagnosis of DRESS syndrome was made because of a score of 7 on the RegiSCAR scoring system.

Celecoxib was initiated three months before the onset of the rash; Iguratimod was initiated one month before the onset of the rash; and acetaminophen was initiated two weeks before the onset of the rash.

The patient was treated with oral prednisolone (PSL), and the culprit drugs were discontinued. The rash partially improved but worsened again around one month after the initiation of oral PSL. Therefore, narrow-band UVB phototherapy was performed in combination with oral PSL. The rash improved quickly, and the oral PSL was tapered.

Conclusion:

DRESS is an idiosyncratic multisystem drug hypersensitivity disorder characterized by fever, rash, lymphadenopathy, eosinophilia, and visceral involvement. Although the pathogenesis of DRESS/DIHS remains unknown in detail, it is generally regarded as a T-cell-mediated hypersensitivity reaction.

The marked increase in the frequencies of regulatory T cell (Treg) is specifically found in the acute phase of DRESS/DIHS, but the frequencies of Treg decrease and their function is impaired in the chronic phase. NB-UVB phototherapy is an effective and safe treatment that promotes immune response by Treg; it might be a useful

adjunctive therapy in addition to steroids in this case. The primary treatment for moderate and severe DIHS/DRESS is oral PSL, but in steroid-resistant or refractory cases, the disease frequently relapses, and reduction of the PSL dose can be difficult to achieve. We believe NB-UVB phototherapy is one of the possible alternate therapeutic options for DRESS/DIHS.

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Abstract N°: 861

Prognostic value of Systemic Immune-Inflammation Index (SII), neutrophil-lymphocyte ratio (NLR) and platelet-lymphocyte ratio (PLR) in patients with Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis (SJS/TEN)

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[1]Faculty of Medicine - University Malaya, Medicine, Kuala Lumpur, Malaysia,[2]Universiti Malaya Medical Centre, Kuala Lumpur, Malaysia

Title: Prognostic value of Systemic Immune-Inflammation Index (SII), neutrophil-lymphocyte ratio (NLR) and platelet-lymphocyte ratio (PLR) in patients with Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis (SJS/TEN)

Introduction & Objectives:

Systemic immune-inflammation index (SII), neutrophil-lymphocyte ratio (NLR) and platelet-lymphocyte ratio (PLR) are emerging inflammatory markers used to predict severity of various diseases, such as cancers and cardiovascular diseases. **

Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN) are life-threatening dermatological emergencies. Severity-of-illness Score for TEN (SCORTEN) is widely used to predict mortality in SJS/TEN. In a single centre study (n=24), NLR and eosinophil count (EC) had been shown as prognosticator of severity in SJS/TEN. We aimed to investigate if SII, NLR and PLR correlates with patient outcomes and to determine a cut-off value for the receiver-operator curves (ROC) of these variables to predict outcome.

Materials & Methods:

A retrospective audit of patients diagnosed with SJS/TEN from January 2018 till December 2022 in a tertiary hospital was performed. Clinical characteristics and SII/NLR/PLR at admission, day 7, 14 and 21 of diagnosis were studied. IBM SPSS Statistics version 29.0 was used to analyse the data. Multiple logistic regression by backward stepwise (Wald) method were performed to identify associated factors of mortality in SJS/TEN patients. ROC curves were used to determine the cut-off values of these markers in predicting mortality. Repeated measures ANOVA was used to explore the mean differences of these markers from day of admission, day 7, 14 and 21 of diagnosis.

Results: ** A total of 34 patients were diagnosed with SJS/TEN. Mean age at diagnosis was 45.71 years (standard deviation, SD 24.28). Mean SCORTEN score was 1.73 (SD 1.57). Mean values for SII, NLR and PLR on admission were 1597 (SD 1904.18), 6.52 (5.99) and 201.74 (SD 135.01) respectively. Multiple logistic regression by a backward stepwise method showed that admission SCORTEN was a statistically significant factor associated with mortality (p=0.029). However, SII/NLR/PLR on admission did not show statistically significant correlation to SCORTEN.

ROC curves demonstrated that the cut-off value for admission SII, NLR and PLR to predict mortality were 1238.25 (80% sensitivity, 68% specificity, area under ROC 0.82), 8.32 (80% sensitivity, 84% specificity, area under ROC 0.8) and 284.66 (60% sensitivity, 84% specificity, area under ROC 0.78) respectively. For patients who survived, their SII, NLR and PLR showed decreasing trends over time. In contrast, these markers increased markedly over time for patients who died. However, both time effect and time*outcome effect were not statistically significant for SII (p=0.676), NLR (0.729) and PLR (0.645) respectively.

Conclusion:

Our study did not demonstrate positive correlation between SII/NLR/PLR with SCORTEN. However, it is interesting to observe the different trends of these markers among patients who survived versus those who died. Larger sample size multicentre studies are needed to further evaluate the prognostic values of these markers.

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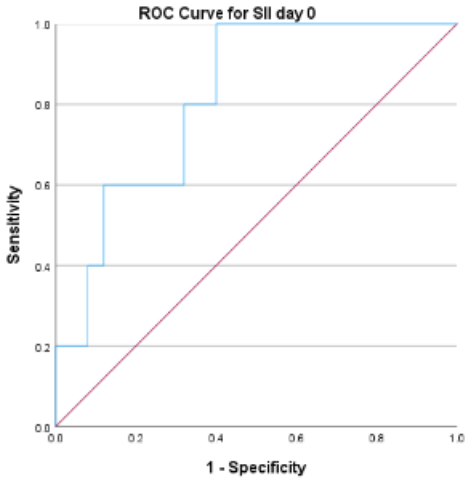

Figure 1: ROC curve for SII on admission

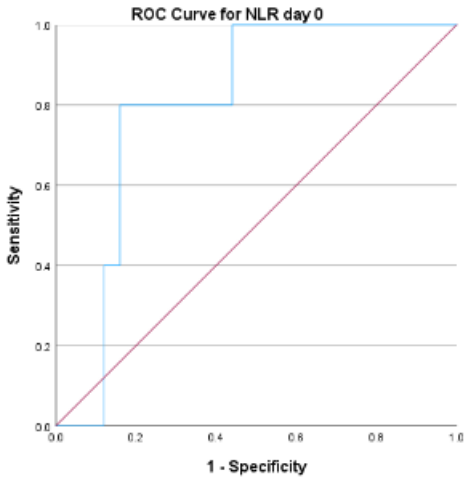

Figure 2: ROC curve for NLR on admission

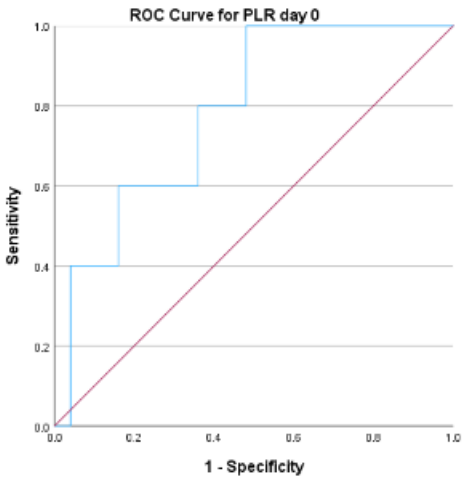

Figure 3: ROC curve for PLR on admission

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Abstract N°: 972

A case of Acute localised exanthematous pustulosis (ALEP) caused by hydroxychloroquine.

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Introduction

The antimalarial drug Hydroxychloroquine (HCQ) is widely used by dermatologists and rheumatologists for treatment of autoimmune diseases. Among the cutaneous adverse reactions of HCQ, which are rare, maculopapular rash and skin and mucosal hyperpigmentation have been more frequently reported. Severe cutaneous adverse reactions (SCARs) such as Steven Johnson syndrome, DRESS and AGEP have been linked to HCQ in a few cases. Herein we present a case of a female patient that developed ALEP (acute localized exanthematous pustulosis) ten days after initiation of HCQ.

Case presentation

A female 60 year old patient presented to the emergency department due to a pruritic rash with acute onset 24 hours ago. The patient did not report any systemic symptoms, neither history of psoriasis or any chronic skin disease. Recently, she was diagnosed with Sjogren syndrome and was receiving HCQ 200mg twice per day since 10 days.

The rash was located in the scalp, neck and chest area, consisting of multiple small pustules on an erythematous, partly scally, base, whereas the palms soles and mucosa were not affected.

Acute localised exanthematous pustulosis as a hypersensitivity reaction to HCQ was suspected. Therefore treatment with topical and systemic corticosteroids was initiated and HCQ was discontinued. On review of the patient, 2 weeks later, the rash had completely resolved.

Discussion

The term Acute Localised Exanthematous Pustulosis (ALEP) describes the rare localized variant of Acute Generalised Exanthematous Pustulosis (AGEP).

It is considered a type IV cutaneous hypersensitivity reaction typically caused by drugs. Most frequent causative agents are antibiotics (beta lactams, macrolides), NSAIDs etc.

Clinically ALEP is characterized by the acute eruption of multiple sterile pustules on an erythematous background, typically involving the face, neck and the upper torso. Fever and leukocytosis can coexist. It appears hours to days after administration of the causative agent

Histological findings of ALEP include subcorneal or intraepidermal spongiotic pustules consisting of neutrophils, papillary dermal oedema and perivascular mixed infiltrate. The existence of eosinophils can lead to the differential diagnosis from pustular psoriasis.

Patch testing can be helpful, especially when multiple drugs are suspected.

This case demonstrates that ALEP could be an adverse event of HCQ and highlights the necessity for drug discontinuation for the treatment concurrently with topical and systemic corticosteroids

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Abstract N°: 1080

Rhabdomyolysis and acne - isotretinoin use in the young and active

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Introduction & Objectives:

The use of isotretinoin in the treatment of acne vulgaris is common practice within dermatology clinics as it is highly effective for the treatment of moderate to severe cases. Side effects with treatment are generally well tolerated as low-dosing is becoming more favourable. Rhabdomyolysis is a rare complication with treatment using isotretinoin with only a few reported cases in the literature.

Materials & Methods:

We present a case where low-dose oral isotretinoin in combination with vigorous exercise induced rhabdomyolysis in an otherwise healthy 16-year-old male who had been on treatment for 5 months.

Results:

His symptoms had primarily consisted of fatigue and myalgia which quickly resolved after cessation of medication and supportive treatment with fluids.

Conclusion:

This case supports the notion of laboratory monitoring and the importance of routine follow up when using this commonly prescribed medication for acne.

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Abstract N°: 1171

The PEN-FAST+: additional criteria to improve negative predictive value for the delayed penicillin allergy clinical decision rule PEN-FAST in adults

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Introduction & Objectives:

About 10-15% of individuals report a suspected allergy to penicillin are truly allergic (1). Skin tests (ST) followed by drug provocation test (DPT) with penicillin is the gold standard method but is time consuming (1). Trubiano *et al.* had been developed and validated a clinical decision rule; a PEN-FAST score of less than 3 identify patients with low-risk penicillin allergy (2).

Our objective was to improve PEN-FAST score to identify which patient with suspected penicillin allergy can be delabelling in particular in delayed hypersensitivity.

Materials & Methods:

First, we evaluated PEN-FAST in a retrospective cohort (27 proved penicillin allergic patients)

PEN-FAST had a limited efficacy to predict the relapse of skin and mucosal immediate hypersensitivity and delayed maculopapular exanthema, the most common form of penicillin hypersensitivity, with respectively 28.6 and 38.4% of patients misclassified

Secondly, after reviewing the medical records of misclassified patients and according to the literature (1), we identified 2 potential additional criteria: skin rash lasting more than 7 days, and immediate reaction occurring in less than 1 hour.

Then, we developed a new score using these 2 additional criteria (PEN-FAST+) and to compare its diagnosis performances with those of PEN-FAST in a prospective cohort of 252 successive patients with suspected or confirmed penicillin HS (with multivariable model).

Results:

With PEN-FAST+, only 1 allergic patient with delayed hypersensitivity confirmed with skin tests (ST) was misclassified (3.7%). With PEN-FAST+, 96.3% of patients with positive ST and 90.6% of truly allergic patients (proven by positive ST or drug provocation test) were correctly identified, in comparison with 55.6% and 56.2% respectively with PEN-FAST. The AUC of the ROC curve of PEN-FAST+ was significantly higher than the one of PEN-FAST (85% vs 72%, p=0.03).

Conclusion:

We have developed a new score; the PEN-FAST+, by adding 2 more criteria to the PENFAST, to better identify penicillin allergic patients, especially with delayed hypersensitivity.

A large prospective and multicentric study is needed to validate that PEN-FAST+ can accurately select low risk of

reaction’s patients.

\1. Romano A, et al. Allergy. 2020;75:1300-1315.

\2. Trubiano JA, et al. JAMA Intern Med. 2020;180:745–752.

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Abstract N°: 1178

Dermatological Side Effects of Drugs Used in Oncological Treatment

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Introduction & Objectives:

Anticancer drugs may have systemic or just dermatological side effects. Dermatological side effects of oncological drugs are usually not fatal, in general, it impairs treatment adherence and quality of life. For this reason, it is important for oncologists and dermatologists to evaluate oncology patients with skin side effects during chemotherapy treatment.

Materials & Methods:

In this single center study, between April 2021 and February 2022, patients who underwent conventional chemotherapy and targeted agent therapy due to cancer in the Oncology outpatient clinic were prospectively evaluated upon the development of skin side effects. The age, sex, type of cancer, character of skin lesions and treatment applied to the patients were recorded.

Results:

A total of 131 patients, 69 women and 62 men, were included in the study. The mean age was 58.12 years and the mean duration of the disease was 20.76 months. The 3 most common diagnoses were breast carcinoma, colon carcinoma and lung carcinoma. Targeted therapies were applied to 42% of the patients, conventional chemotherapies to 31.3%, immunotherapy to 6.1% and hormonal agents to 4.6%. In further analysis, it was seen that there was a significant difference in terms of gender in lung, breast and gastric carcinomas ($p<0.05$). Lung and gastric carcinoma in men; breast carcinoma was more common in women. The most common side effects are; acneiform rash, acral erythema, pruritus, herpes zoster, alopecia and hair follicle problems.

Conclusion:

Oncology and dermatology specialists need to work multidisciplinarily to ensure optimal treatment and patient management. In the management of dermatological side effects that may occur during anticancer treatment; oncologists and dermatologists need to have knowledge and experience. If possible, these patients should be given a skin examination at every outpatient clinic appointment.

Keyworlds:

cancer, dermatological side effects, chemoterapy, immunotherapy

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Abstract N°: 1271

Lupus like injection site reaction to Interferon beta in multiple sclerosis patient: Report of a rare entity

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Introduction & Objectives:

Multiple sclerosis (MS) is an acquired debilitating inflammatory disease of the central nervous system (CNS), which affects mainly young adults. It is characterized by the recurrence of neurological deficits caused by an autoimmune attack mediated by T cells directed against the CNS. Approved first line therapy for treatment of MS is immunomodulator interferon-β (INF-β). Subcutaneously (s.c.) injected INF-b often causes local reactions at the injection site including local erythema, induration, bruising, pain, necrotizing ulcerations and sclerotic dermal plaques.

Materials & Methods:

We report a patient with MS who developed lupus like injection site reaction (ISR), while being treated with INF-b, without any other signs or symptoms of a systemic disease.

Results:

A 28-year-old woman with relapse remitting MS has been treated with subcutaneous injections of INF-β at a dose of 125 mcg twice a month. After the first application of the drug, she developed flu-like symptoms along with the painless erythematous patch at the injection site that resolved spontaneously within a week. The patient has reported the occurrence of the same skin reaction after every single application of the drug. After being treated for 6 months she suddenly started developing painful erythematous plaques at the injection sites and was referred to dermatologist. She had no history of drug allergies, and denied any previous history of connective tissue or bleeding disorders. Skin examination revealed erythematous plaque on her left upper arm and brownish indurated plaque on her left thigh, both at a site of recent injections. Two 4 mm incisional biopsies were performed to exclude the diagnosis of lupus panniculitis and both of them showed similar histological findings. Increased amounts of mucin were seen in the reticular dermis along with superficial and deep perivascular and periadnexal lymphocytic infiltrate. In one of the specimens a few apoptotic keratinocytes were seen in the basal layer of the epidermis while moderate collections of lymphocytes, histiocytes, a couple of neutrophils and eosinophils were seen in the septa of the subcutaneous fat. A biopsy was suggestive of lupus erythematosus or lupus like reaction induced by interferon but not of lupus panniculitis. In order to exclude a diagnosis of a systemic lupus extensive laboratory evaluation was made (ANA, ENA, C3, C4 and CH50 were all within normal ranges). The treatment consisted of a cessation of the subcutaneous INF-β application and the patient was given a new drug-glatiramer acetat. The skin lesions resolved with the aid of a topically applied betametason ointment. No new lesions appeared since then.

Conclusion:

Although considered safe and well tolerated drugs, interferons frequently cause dermatological side effects. Drug induced lupus, systemic or local is one of them. There are only a few case reports of lupus like injection site reactions associated with INF-b therapy. Withdrawal of the offending drug usually leads to a complete resolution of skin lesions.

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Abstract N°: 1424

Incidence of symptomatic methaemoglobinaemia among patients receiving dapsone in a Dermatology out-patient clinic in South India: a pilot study.

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Introduction & Objectives: Dapsone is used for the treatment of leprosy and in chronic inflammatory diseases such as lichen planus, sub-corneal pustular dermatoses, hypersensitivity vasculitis and dermatitis herpetiformis.

The hydroxylamine metabolite of dapsone is a strong oxidising agent and causes haemolysis and methaemoglobinaemia. Low G6PD level is a strong predictor of severe haemolytic anaemia following the administration of dapsone. It does not, however, predict methaemoglobinaemia.

G6PD levels are checked routinely prior to starting dapsone and patients are monitored for haemolytic anaemia throughout therapy. Methaemoglobin levels are assessed only if the patient is overtly symptomatic.

There is no data on the incidence on methaemoglobinaemia with dapsone and no recommendations regarding screening patients during therapy. In this study, we attempted to determine the incidence of symptomatic methaemoglobinaemia in patients receiving dapsone and to identify the risk factors associated with the same.

Materials & Methods: All patients who were on dapsone or newly started dapsone during a period of 16 months were included in the study. Baseline characteristics before starting dapsone were obtained from records. This included G-6-PD levels, body weight, oxygen saturation by pulse-oximetry, use of other oxidant drugs and co-morbid illnesses.

All the patients were followed up in the out-patient department during the course of therapy and were screened for methaemoglobinaemia by: i. History of any new onset fatigue, breathlessness or exercise intolerance. ii. Examination for cyanosis iii. Measuring oxygen saturation by pulse-oximetry. Any patient who had new onset symptoms, cyanosis or an abnormal pulse oximetry underwent an arterial blood gas analysis.

Results: A total of 45 patients were included in the study. 13 (29%) were males and 32 (71%) were females. Age ranged from 2-86 years. 5 patients were below 12 years. Maximum dose of dapsone was 2mg/kg/day. Methaemoglobinaemia was detected in 2 patients (4.4%). Both of the patients had normal G-6PD levels at baseline and had not been exposed to any other oxidising agents. Both of them reported lowered exercise tolerance after starting dapsone, had pulse oximetry readings of 89% -92%, and methaemoglobin levels of 6.2% and 7% in arterial blood gas analysis. They did not have cyanosis, significant hemolysis or dyspnoea at rest. In both patients, symptoms resolved with cessation of dapsone.

Conclusion: Symptomatic methaemoglobinaemia is not an uncommon finding in South-Indian patients on dapsone for chronic dermatological conditions. It does not parallel G-6-PD levels or drop in haemoglobin levels. Cyanosis or dyspnoea at rest may be absent: but lowering of exercise tolerance can impair the quality of life. We recommend that all patients receiving dapsone be screened for methaemoglobinaemia at each visit by clinical history, examination and pulse oximetry.

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Abstract N°: 1445

Panitumumab-associated stomatitis in a metastatic colorectal cancer patient: a case report

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Introduction & Objectives: Panitumumab is a fully humanized, recombinant monoclonal antibody against the Epidermal Growth Factor Receptor (anti-EGFR mAb) that intercepts with signaling pathways critical for tumor survival and progression. Although it is one of the first targeted therapies used for epithelial malignancies, including colorectal cancer, its oral adverse events are insufficiently characterized, due to lack of relevant reports. A case of oral ulcers in a patient under panitumumab treatment is described.

Materials & Methods: A 63-year-old female, treated for metastatic colorectal cancer with 5-fluorouracil-folinic acid (5FU-FA) plus panitumumab (400mg), developed multiple painful oral "aphthae", 10 days after the first dose of panitumumab. The lesions were associated with "trauma during mastication" and caused considerable feeding difficulty. Her medical history included, also, ulcerative colitis, celiac disease, and iron deficiency anemia, but not recurrent aphthous stomatitis. Clinical examination showed multiple, superficial ulcerations on the non-keratinized mucosa, in contact with teeth. The lesions resolved following filling of sharp teeth and use of a prednisone-containing mouthwash, allowing continuation of panitumumab treatment.

Results: Mucocutaneous adverse events from anti-EGFR mAbs are expected due to the critical role of the EGF/EGFR signaling pathway in epithelial homeostasis. Oral lesions have been reported mostly as "stomatitis" or "mucositis", although they differ from conventional chemotherapy-induced mucositis.

Conclusion: As was seen in the present case, Panitumumab induced oral lesions share similarities with the Mammalian Target of Rapamycin Inhibitors-Associated Stomatitis and usually develop after the first two cycles of panitumumab. Early recognition, combined with measures to prevent trauma, and topical steroid agents allow the continuation of treatment and improve patients' quality of life.

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Abstract N°: 1532

Acute Localized Exanthematous Pustulosis in a child: a case report

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Acute Localized Exanthematous Pustulosis in a child: a case report

Introduction & Objectives:

Acute Localized Exanthematous Pustulosis (ALEP) is an exceptional variant of Acute Generalized Exanthematous Pustulosis (AGEP). Only few observations have been reported in the literature. We herein report a case of insect bite-induced ALEP in a child.

Materials & Methods:

Results:

A 9-year-old child visited our dermatology department for a rash of the face that had been evolving for 24 hours. On examination, there was an erythematous aspect with swelling of the left ear extending to the homolateral hemiface. Multiple non-follicular pinhead pustules were also present. The mucous membranes were spared. The patient's general condition was preserved without any fever. There was no history of drug intake. The mother reported an insect bite on the left earlobe one day before the skin lesions appeared. Diagnosis of ALEP was probable according to the EUROSCAR score. Histological confirmation was not possible in our case. The patient was put on oral corticosteroid therapy at a dose of 0.5mg/kg/day. A complete regression of the pustules with scaling was noted after two days of treatment. Improvement of the inflammation was observed after an interval of five days.

Conclusion:

PEAL is a localized and extremely rare variant of AGEP with less than 40 cases described in the literature. A drug intake is found in 84% of the case. In contrast, non-drug-induced ALEP are infrequent. In this category, cases caused by contact with a plant "*Tapsia garganica*" have been reported in Tunisia. Insect bite-induced ALEP, as in our case, remain exceptional. Children are frequently affected. According to a Tunisian series of 12 cases, all included patients were children with an average age of 8 years. Clinical presentation of ALEP is suggestive of the diagnosis. Afollicular and sterile pustules are often associated with an oedematous or inflammatory placard. The face is the most affected site in the reported cases, followed by the trunk. The disease is often self-limiting. In fact, the evolution is stereotyped with desquamation occurring within one to two weeks after eviction of the causative agent. Time to improvement was shortened in our case by the prescription of corticosteroids. The mechanism of ALEP is similar to that of AGEP with a hypersensitivity reaction and neutrophil chemotaxis leading to the formation of pustules. Theory of a genetic predisposition has also been suggested. A knowledge of this entity allows to avoid unnecessary complementary explorations. Insect bite in ALEP is an etiology to keep in mind.

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Abstract N°: 1684

Albendazole- induced anagen effluvium treated with topical minoxidil

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Introduction & Objectives:

Anagen effluvium (AE) is a non-scarring alopecia which is often reversible and reactive to a drug or toxin exposed to within the previous 14 days. Few cases of AE associated with albendazole, a widely used antiparasitic with a fairly innocuous safety profile, have been described.

Materials & Methods:

In order to investigate about this disease, we present the case of a 66-year-old woman with a hepatic hydatidosis. It was started treatment with albendazole. Throughout the second week of treatment, the patient began to present sequential liver toxicity in the form of epigastric pain as well as diarrhea. A few days later, she experienced hair loss with almost total alopecia in her scalp. After 3 weeks, albendazole was discontinued due to agranulocytosis, febrile neutropenia as well as anemia. During physical exam, diffuse reduction in her hair density without erythema, scarring or scaling was observed. The pull-test was positive. No peladic hairs or yellow dots were observed in trichoscopy; nonetheless, we did find some pigtail hairs. All these signs suggested an AE and treatment was started with 5% topical minoxidil with an improvement in the alopecia in just a few weeks, recovering the capillary density completely after two months.

Results/ Discussion:

Albendazole is a drug used in Helminth's infections treatment. There are not many cases of alopecia secondary to the use of Albendazole that have been described in literature, a drug which most usual side effects are relatively benign (nausea, abdominal pain, increase of transaminases, etc). Acute alopecia associated with albendazole, normally presents in the form of telogen effluvium due to the long-term or high doses use of the drug. Less frequently, another side effect known as idiosyncratic, takes place a few days after having started the treatment or with lower dosages of albendazole, producing an AE, like in our case. These cases usually associate other side effects such as cytopenia or hepatotoxicity, effects similar to those of conventional chemotherapy. This type of alopecia usually begins to improve during the first three weeks after dropping the medication. As far as we know, there is no reported case of irreversible AE.

Conclusion:

We thereby present a case of albendazole- induced anagen effluvium, a rare side effect that can take place when using this drug at therapeutic dosages in susceptible patients (idiosyncrasy). We want to highlight its good prognosis and the probable usefulness of topical minoxidil in order to speed up the resolution process.

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Abstract N°: 1835

ACUTE GENERALIZED EXANTHEMATOUS PUSTULOSIS TRIGGERED BY MEDICATIONS - CASE REPORTS

Matheus Alves Pacheco* , Fernanda E Lima , Ariel Rosa , Vanessa Maciel , Ana Paula Bald , Ricardo Schmitz , Christine Wegner , Athos Martini

Introduction & Objectives:

Acute Generalized Exanthematous Pustulosis (AGEP) is a rare and severe adverse cutaneous reaction. In the majority of cases, it is triggered by the use of medications. The objective of this report is to present a series of case reports of AGEP, highlighting its association with medication use.

Materials & Methods:

This is a presentation of three cases of AGEP, all seen within a span of two months in the same healthcare facility. The potential triggers identified in these cases were antibiotics and antimalarials. One of the cases had an undefined trigger, with unclear clarity whether it was triggered by a COVID-19 infection or an adverse reaction to the vaccine. The diagnoses were confirmed through anatomopathological examination.

Results:

The three cases of AGEP were identified within a short period of time in the same healthcare facility. All cases had confirmed diagnoses and showed some association with the ongoing pandemic: two were related to self-medication for SARS-CoV-2 infection, and one was likely related to vaccination. The patients were managed according to established guidelines. The cases showed favorable outcomes, and the patients remain under follow-up.

Conclusion:

The presented case reports highlight the occurrence of Acute Generalized Exanthematous Pustulosis (AGEP) triggered by medication use. The cases demonstrate the importance of recognizing and managing this rare adverse cutaneous reaction, particularly in the context of the COVID-19 pandemic. Further research and vigilance are necessary to enhance understanding and improve patient care in similar situations.

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Abstract N°: 1836

PARADOXICAL REACTION TO ADALIMUMAB FOR THE TREATMENT OF CROHN'S DISEASE- A CASE REPORT

Matheus Alves Pacheco* , Fernanda E Lima , Vanessa Maciel , Ana Paula Bald , Ariel Rosa , Ricardo Schmitz , Athos Martini

Introduction & Objectives:

Paradoxical reactions are defined as the occurrence or exacerbation of a pathological condition during treatment with a biological agent that usually responds to this class of drugs, while the patient is being treated for another condition that usually remains under control. The objective of this report is to highlight a case of paradoxical reaction to Adalimumab in the treatment of Crohn's disease.

Materials & Methods:

This is a case report of a 35-year-old female patient who presented with scaly plaques throughout the scalp associated with areas of alopecia, as well as erythematous and scaly plaques on the trunk and back for the past 4 months. The patient had been using Adalimumab 40 mg every 2 weeks for 9 months for the treatment of Crohn's disease. An anatomopathological examination was performed, which confirmed psoriasiform dermatitis, supporting the clinical hypothesis of a paradoxical reaction to Adalimumab. The patient was managed with topical corticosteroid therapy and referred to a gastroenterologist for a change in immunobiological therapy.

Results:

The results of this case report demonstrate the occurrence of a paradoxical reaction to Adalimumab in a patient with Crohn's disease. The dermatological manifestation observed, psoriasiform dermatitis, is one of the known paradoxical reactions associated with the use of biological agents.

Conclusion:

Paradoxical reactions were initially described in patients receiving anti-tumor necrosis factor agents and have since been reported with the use of other biologics. There are various subtypes of paradoxical reactions, and close monitoring of patients treated with newly available biological medications is necessary to detect and describe these new reactions.

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Abstract N°: 1873

Impact of Drug Pharmacokinetics on Outcomes in Steven-Johnson Syndrome and Toxic Epidermal Necrolysis

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Introduction & Objectives:

Stevens-Johnson Syndrome (SJS) and Toxic Epidermal Necrolysis (TEN) are a spectrum of a severe cutaneous disease with high mortality. While impaired metabolism is associated with increased mortality, little is known about the impact of drug half-life on disease outcomes.

Our primary objective was to determine the impact of drug half-life on outcomes of SJS/TEN. The secondary objective was to determine the impact of organ impairment on disease outcomes.

Materials & Methods:

This was a retrospective cohort study on 215 patients in Singapore General Hospital. Inciting drugs were identified using the algorithm of drug causality for epidermal necrolysis. Outcomes included the Severity-of-illness Score for Toxic Epidermal Necrolysis (SCORTEN), Re-SCORTEN, and mortality. Short half-life was defined as half-life <24 hours and long half-life was ≥24 hours.

Results:

Short half-life was associated with higher mortality (p=0.032), which was reflected in higher SCORTEN (p<0.001) and Re-SCORTEN (p<0.001) scores. For specific SCORTEN variables, short half-life was associated with age ≥40 years old (p=0.001) and modifiable risk factors, such as heart rate >120 beats/min (p=0.04) and serum urea >10 mmol/L (p=0.03). Patients with renal impairment who were taking renally cleared drugs had higher mortality (p=0.001) and ICU admission (p=0.011) than those without, but this was also true for patients with renal impairment whose inciting drugs were not cleared by the kidney.

Conclusion:

While the mechanism behind this association remains to be understood, short half-life drugs are associated with poorer mortality and outcomes. Further studies are needed to examine the relationship between drug pharmacokinetics and outcomes in SJS/TEN.

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Abstract N°: 1875

vitiligo napkin after hepatitis B vaccine : coincidence or causal link ?

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Introduction & Objectives:

Vitiligo is a chronic autoimmune skin disorder characterized by depigmented patches on the skin, resulting from the destruction of melanocytes. In rare instances, vitiligo may present as a “napkin” pattern, involving the diaper area. We report a case of a 3-month-old infant who developed vitiligo napkin shortly after receiving the hepatitis B vaccine (VHB). The aim of this case report is to explore the potential association between VHB vaccination and the development of vitiligo napkin in this particular infant.

Case report:

The infant presented with depigmented patches in the diaper area, which progressively spread over a few weeks following the VHB vaccine administration. Detailed medical history and physical examination excluded other potential causes of depigmentation. Laboratory investigations, including autoimmune markers, were within normal limits. A diagnosis of vitiligo napkin was made based on clinical findings.

Discussion:

The occurrence of vitiligo following vaccination has been a subject of debate and investigation. While several case reports and anecdotal evidence suggest a temporal relationship between vaccinations and the development of vitiligo, the causal link remains unclear. In our case, the infant developed vitiligo napkin shortly after receiving the VHB vaccine, raising concerns about a potential association.

Vaccines are designed to stimulate the immune system and protect against infectious diseases. However, in rare instances, immune dysregulation can occur, leading to autoimmune phenomena. Some studies have suggested that vaccines, including the hepatitis B vaccine, may trigger or exacerbate autoimmune conditions, including vitiligo, in genetically predisposed individuals. This hypothesis is supported by the observed association between vaccinations and the onset of vitiligo in some patients.

On the other hand, the natural course of vitiligo should be taken into consideration. Spontaneous development of vitiligo can occur at any age, including infancy, and it often follows a progressive and unpredictable course. It is important to evaluate the presence of other potential triggering factors, such as infections, medications, or environmental exposures, which could contribute to the development of vitiligo in susceptible individuals.

Conclusion:

In conclusion, we present a case of an infant with vitiligo napkin following VHB vaccination, raising questions about a potential causal link. Although rare, the possibility of vaccine-associated vitiligo should be considered in similar cases. Continued surveillance, research, and awareness are necessary to better understand the relationship between vaccinations and autoimmune conditions like vitiligo.

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Abstract N°: 1920

Investigation on the impact of cutaneous adverse reactions on the quality of life in cancer patients

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Introduction & Objectives:

While new cancer treatments have significantly improved survivals, they also led to a large variety of new adverse events including skin -related events that have a strong impact on patient's quality of life and can even lead to cancer treatment dose reduction or interruption in the most severe cases. The objective of this study was to investigate the prevalence of cutaneous adverse reactions among cancer patients who have experienced or are experiencing cancer treatment in China and its impact on their psychological and physical health.

Materials & Methods:

Online questionnaire survey was sent to the patients of the Beijing LoveBook Cancer Foundation for data collection. The survey contents included basic information, psychological and physical health status, and the social needs of cancer patients. The questionnaire design referred to several international scales including SF-36, EQ-5D, FACT-G, and DLQI. SPSS23.0 was used for data analysis. Comparisons were conducted by Chi-Square test. The relationship between cutaneous adverse reactions and mental and physical conditions was analyzed using a multivariate logistic regression model or an ordinal logistic regression analysis.

Results:

The survey included 2244 cancer patients (M: 320, F: 1924) from 22 provincial regions in China. Among all participants, breast cancer (56.61%) was the leading type of cancer.

Surgery (85.96%) and chemotherapy (76.25%) were the mostly experienced treatments.

The overall prevalence of cutaneous adverse reactions related to cancer treatment among all participants was 25.98% (N=583).

Pruritus (67.92%), xerosis (58.66%), and pigmentation (44.77%) were the most common symptoms of cutaneous adverse reactions of cancer patients.

Patients with cutaneous adverse reactions were more likely to experience emotional distress (62.61%), emotion impact on life (62.61%), sleep disorders (73.58%), psychological burdens (86.28%), and poor health status (67.07%) than those without cutaneous adverse reactions.

Besides, compare to patients without cutaneous adverse reactions (5.54%), more patients with cutaneous adverse reactions (8.75%) indicated that they were less familiar with cancer-related disease knowledge (data not shown, $p<0.001$). Majority (71.48%) of the patients considered the communication with doctors during the appointment as the main way to learn about the disease and side effects.

Conclusion:

The prevalence of cutaneous adverse reactions in cancer patients is high in China, which seriously affect their

psychological and physical health. Clinical physicians, especially oncologists and dermatologists, should pay great attention to the adverse skin reactions related to cancer treatment and provide professional and timely treatment to cancer patients to improve their quality of life and compliance to the cancer treatments.

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Abstract N°: 1943

Etoricoxib-induced oral fixed drug eruption: report of two cases.

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Introduction & Objectives: Fixed drug eruption (FDE) is a drug-induced side effect characterized by the recurrence of cutaneous or mucocutaneous lesions at the same anatomical site after re-administration of the causative agent. Among the drugs most implicated in FDEs are the nonsteroidal anti-inflammatory drugs (NSAIDs). In contrast to traditional NSAIDS, the selective cyclooxygenase 2 inhibitor etoricoxib is less frequently associated with cutaneous FDEs, usually affecting the extremities and lips, while oral mucosal involvement seems to be rare. Herein, two cases of oral FDEs associated with etoricoxib are presented.

Materials & Methods: Two male patients 44- and 36-year-old reported three episodes each of erythematous lesions on the tongue and the hard palate, respectively, after etoricoxib intake for orthopedic pain. Both patients were prescribed a topical dexamethasone solution to alleviate their symptoms.

Results: The lesions resolved within a week and no recurrence was reported since avoidance of the drug. The diagnosis of FDE might be rendered clinically, based on the recurrences in the same site after intake of the same causative drug. Patch tests that could support the diagnostic workup in case of cutaneous FDEs, are of questionable value for cases with mucosal involvement.

Conclusion: Etoricoxib is widely prescribed for the management of rheumatoid arthritis, ankylosing spondylitis, osteoarthritis, and gout; thus, clinicians should be aware of its possible involvement in adverse reactions, including FDE.

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Abstract N°: 1980

Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis Related to Immune Checkpoint Inhibitors in Two Lung Cancer Patients

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Introduction & Objectives: Immune checkpoint inhibitors (ICI) have transformed the therapeutic approach of various types of malignancies. Their unique mechanism of action enhances the immune response against cancer cells but often results in a novel spectrum of adverse events that may affect any organ system. Among cutaneous immune-related adverse events (irAEs), life-threatening reactions such as toxic epidermal necrolysis (TEN) and Stevens-Johnson syndrome (SJS) have been rarely reported.

Materials & Methods: We report two cases of ICI-related SJS/TEN. Data collection (age, gender, type of cancer, treatment and outcome) was performed systematically from the patients medical record.

Results: We present two patients, a 72-year-old female and a 70-year-old male. Both patients had stage IV non-small cell lung cancer. The suspect drug was pembrolizumab and the time to onset was 8 and 2 weeks respectively. Case 1 was diagnosed as TEN and case 2 as SJS-TEN overlapping with a compromise of 90% and 20% of their body surface area, respectively. Both patients were hospitalized and treated with 500 mg/d of methylprednisolone within 3 days. New skin areas became involved, cyclosporine 150 mg twice daily was started in case 1 and intravenous immunoglobulin (IVIG, 1 g/kg/d, three consecutive days) was prescribed in case 2. The corticosteroid dose was reduced gradually (during 4 weeks) and then stopped. Patient 1 experienced complete epithelialization after 1 month while patient 2 had a 3-month recovery. Treatment with pembrolizumab was interrupted in both patients.

Conclusion: ICI related life-threatening cutaneous eruptions such as SJS, SJS/TEN overlap and TEN have been rarely reported (less than 1%). Nevertheless, their incidence is likely to increase based on the increasing use of ICI. Urgent discontinuation of the offending drug, hospitalization and specific treatment is mandatory.

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Abstract N°: 2259

A Cross-Sectional Study of the Knowledge, Practice, and Attitude Towards Skin-Lightening Products Among the General Population in the Western Region of Saudi Arabia

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Introduction & Objectives:

Skin bleaching is a growing phenomenon worldwide and is becoming an increasing problem. Several skin-lightening products (SLPs) containing mercury, hydroquinone, and corticosteroids have impacted serious dermatological, nephrological, and neurological side effects. There is relatively little regulation, and the products are easily accessible and inexpensive. Justifications and beliefs for the use of these products vary from culture to culture, and there is little previous research on the use and abuse of skin-lightening cosmetics among Saudi women. This study examines the knowledge, attitudes, and practices of the public in the western region of Saudi Arabia regarding SLPs to understand the situation better.

Materials & Methods:

An observational, cross-sectional, questionnaire-based study was conducted over two months between July and August 2022. A 29-question survey was used to collect data from the general population. The study included all women residing in the western region of Saudi Arabia. Non-Arabic speakers were excluded. RStudio (R version 4.1.1) was used to analyze the data.

Results:

A total of 409 participants were included in this study; In general, 146 (35.7%) of the participants said they had ever used an SLP. More than two-thirds (67.1%) had been using them for less than a year. In terms of the most common site of SLPs application, women reported applying the products to the skin of their face (74.7%), elbows (47.3%), and knees (46.6%). Use of SLPs differed significantly across participants' ages, with the proportion of SLP users in the 20-30 age category significantly higher than non-users (50.7% vs. 36.9%, p=0.017), and non-users were more common than users within the age category >50 years. In addition, the proportion of SLP users relative to educational level was significantly higher among participants with a bachelor's degree than the proportion of non-users (69.2% vs. 54.0%, p = 0.009).

Conclusion:

The results of this research show that Saudi women frequently utilize topical lightening products. Therefore, regulation and controlling the use of bleaching products is essential, as is educating women about the risks involved with this practice. The misuse of bleaching products should decline with greater awareness.

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Abstract N°: 2324

Chilblain lupus erythematosus induced by TNF-alpha inhibitors in a patient with Crohn's disease

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Introduction & Objectives: Tumor necrosis factor-alpha (TNF-α) inhibitors are often used to treat various immune-mediated inflammatory diseases. The cutaneous adverse events in patients treated with TNF-α inhibitors is various, while cutaneous lupus erythematosus is relatively rare. Chilblain Lupus erythematosus (CHLE) is a rare and chronic form of cutaneous lupus erythematosus, characterized by erythematous to violaceous nodules and plaques on the acral areas. TNF-α inhibitor induced CHLE is diagnosed when there is no prior history of other autoimmune diseases, temporal relationship with drug use, and subsequent resolution after discontinuation. This report aims to present a rare case of TNF-α inhibitor-induced CHLE in a patient with Crohn's disease, highlighting the diagnostic criteria and clinical course of the condition.

Materials & Methods: We retrospectively review the case of a patient diagnosed with Crohn's disease who developed CHLE following treatment with the TNF-α inhibitor adalimumab. Relevant clinical data, including patient history, physical examination findings, histopathologic findings, and laboratory findings, were collected and analysed.

Results: A 50-year-old woman presented with recurrent episodes of painful and pruritic erythematous patches and plaques on both palms and fingers that lasted for 2 months. She had a history of Crohn's disease and had been treated with adalimumab for 1 year. Physical examination revealed several annular erythematous scaly patches on the auricle of the right ear and forehead. The biopsy specimen of palm showed focal vacuolar degeneration of basal layer, moderate perivascular lymphocytic infiltration with dilated vessels, and extravasated erythrocyte in the dermis. Laboratory findings showed increased titer of ANA from 1:80 to 1:640, compared to before the treatment of adalimumab. Topical and systemic corticosteroids were administered. However, the patient showed no or minimal improvement, adalimumab was withdrawn and switched to ustekinumab. Skin lesions were resolved 3 months after discontinuation of adalimumab. Considering the clinical and histologic findings, the final diagnosis of CHLE induced by adalimumab was made.

Conclusion: CHLE can be associated with coexisting discoid lupus erythematosus lesions or other forms of cutaneous lupus erythematosus. Patients with drug-induced CHLE, particularly those presenting with systemic lupus erythematosus (SLE)-typical symptoms like malar rash or arthralgia, require close monitoring due to the potential progression to SLE. Although TNF-a inhibitors-induced CHLE is uncommon, clinicians should exercise caution to avoid overlooking this diagnosis by maintaining a high index of suspicion for the condition.

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Abstract N°: 2361

Triggers, Clinical Manifestations, and Assessment of Pediatric Fixed Drug Eruptions: A Systematic Review of the Literature

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Introduction & Objectives:

Fixed drug eruption (FDE) is a cutaneous drug reaction characterized by recurrent skin lesions occurring at the same site after each exposure to a causative agent. There is currently limited evidence on the characteristics of FDE in the pediatric population. The objective of this systematic review is to investigate the clinical features, causative agents, and management of pediatric FDE.

Materials & Methods:

A systematic search of the English and French literature on pediatric FDE was conducted using the Medline and Embase databases.

Results:

After full-text article review, 94 articles were included, representing a total of 233 pediatric FDE patients. (Table 1). Antibiotics were the most frequently reported triggering agents: sulfonamides (61.4% of antibiotics), followed by beta-lactams (18.8%). Patients with multiple lesions (mean age 6.2 years) were significantly younger than patients with single lesions (mean age 8.7 years), p=0.02. Mucosal lesions were more frequently found in younger patient (mean age of 5.7 years with mucosal lesions versus 8.8 without, p=0,0001). When comparing antibiotics to NSAIDs and paracetamol, no significant difference was found in the rate of development of mucosal lesions (p=0.12), nor bullous lesions (p=0.46). Systemic symptoms were rare in pediatric FDE (n=12). Thirty-three patients only received supportive therapy, 20 topical corticosteroids and 12 systemic corticosteroids. The only sequalae reported was hyperpigmentation. One hundred and six patients had test to confirm the causative agent. Of these, 72.6% had oral provocation tests and 28.3% had patch tests. Oral provocation tests were performed with one full dose, half dose or quarter dose of the suspected culprit drug. When comparing tested to untested patients, no statistically significant difference was found between the patients age (7.2 years vs 8 years, p=0.72), the presence of multiple lesions (46% vs 52%, p=0.67) nor the presence of mucosal lesions (39% vs 29%, p=0.06). Therefore, the patient age, extent of lesions and mucosal involvement did not affect the decision to perform drug testing, including oral provocation tests.

Conclusion:

Pediatric FDE is a non-severe skin drug reaction with limited systemic involvement as in adults. Younger patients presented with a more extensive disease and mucosal involvement. Antibiotics were the most reported triggering agents in the pediatric population. Oral provocation test was the preferred method for confirming the causative agent regardless of patient age, presence of bullae or extent of lesions.

Table 1. Summary of clinical characteristics of pediatric FDE patients

Variable	Result
Number of patients(n)	233
Mean age (years) [range]	7.7 [0.25-17.0]
Male gender, n (%)	114 (60.3)
Patients with relapsing FDE (n)	93
Mean time until onset (hours)	42.9
Culprit drug (n)	
Antibiotic	101
Acetaminophen	37
Nonsteroidal anti-inflammatory drug	32
Antiepileptic drug	11
Other	53
Patients with multiple lesions (%)	75.6
Distribution (%)	
Face	23.5
Trunk	38.9
Upper limbs	31.5
Lower limbs	29.5
Mucosal involvement (%)	46.3
Type of mucosal involvement (%)	
Oral involvement	25.0
Genital involvement	66.2
Other*	2.9
Presence of bullous lesions (%)	29.1
Confirmation test performed (n)	106
Type of test performed (%)	
Oral provocation test	72.6
Patch test	28.3
Other**	25.5

*Other include ocular, nose or throat

**Other include prick test, intradermal provocation test, lymphocyte stimulation and macrophage migration inhibitory factor.

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Abstract N°: 2382

Combined Use of Cyclosporine, Corticosteroids, and Intravenous Immunoglobulin in Toxic Epidermal Necrolysis

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Combined Use of Cyclosporine, Corticosteroids, and Intravenous Immunoglobulin in Toxic Epidermal Necrolysis

Amanda T. Chung, MD, Ysabel H. Ortiz, MD, Arunee H. Siripunvarapon, MD, DPDS

Introduction & Objective:

Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN) are acute life-threatening mucocutaneous drug reactions characterized by extensive epidermal detachment and oral mucosal erosions. The mainstay of treatment is withdrawal of the offending agent and supportive care. The role of immunosuppressants in treatment remains controversial.

We present a case and clinical outcomes of TEN in a 24-year-old-female treated with combination therapy of oral corticosteroids, cyclosporine, and low-dose IVIg.

Materials & Methods:

A 24-year-old female presented with a 3-day history of multiple, dusky red, tender macules evolving into flaccid bullae on the trunk and proximal extremities following lamotrigine intake 2 weeks prior to onset of cutaneous lesions. On physical examination, the patient was tachycardic, non-tachypneic, and afebrile. There were multiple, fairly defined, round, confluent dusky red macules with overlying flaccid, serous fluid-filled bullae located on the face, trunk, upper and lower extremities, with sparing of the dorsum and soles of the feet. The patient also had periorbital swelling, hyperemic conjunctivae and matting of the eyelashes as well as erosions with hemorrhagic crusting on the lips and labia minora. Punch biopsy of the margin of a fresh vesicle on the left upper back showed full thickness epidermal necrosis and extensive vacuolar interface change, consistent with SJS/TEN. Patient was managed as a case of SJS-TEN overlap, BSA 20%, SCORTEN 1. Lamotrigine was discontinued, supportive care was instituted, and the patient was started on cyclosporine 100 mg 1 tab every 8 hours (4 mg/kg/day) and hydrocortisone 100 mg IV (1.1 mg/kg/day) on her first hospital day. During the first 4 days of cyclosporine and hydrocortisone, there was noted further development of bullae and increase in the total body surface area involved to 40%. IVIg was then administered at 0.8 g/kg for the next 3 days, which halted progression of bullae into erosions and prompted evolution of bullae into thin erythematous plaques.

Results:

On the 7th day of cyclosporine and hydrocortisone, s/p IVIg 0.8 g/kg, complete reepithelialization was noted, which prompted tapering of systemic corticosteroids. Cyclosporine was given until the 10th day, then discontinued. There were no reported side effects during treatment. On 1 month follow-up, only post-inflammatory hyperpigmentation and mild pruritus were reported.

Conclusion:

The combination of the medications facilitated rapid arrest in progression of the patient's blisters to erosions,

while timely tapering and discontinuation of the treatments prevented development of complications frequently associated with their use.

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EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY

Abstract N°: 2434

DRESS syndrome secondary to the use of Imatinib in a patient with dermatofibrosarcoma protuberans

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Introduction & Objectives:

Drug reaction with eosinophilia and systemic symptoms (DRESS) is a severe skin reaction with systemic involvement secondary to drug exposure, generally after 2 to 8 weeks, mostly associated with the use of anticonvulsants, allopurinol, sulfonamides, minocycline and vancomycin. It has been proposed that genetically predisposed patients may develop a cross-immune response to the drug, triggering activation of CD4+ and CD8+ T lymphocytes with subsequent production of TNF-α and IFN-γ. Clinically, patients present with symptoms of fever, lymph node enlargement, abnormal liver and kidney function tests, and the presence of a characteristic maculopapular rash that usually expands and coalesces to form large edematous plaques.

Diagnostic criteria (RegiSCAR) have been established to facilitate establishing the disease, since it is not possible to adequately establish the diagnosis by means of skin biopsy due to the lack of specific findings.

Materials & Methods:

We present a 34-year-old female, with 2-year history of dermatofibrosarcoma protuberans of the knee initially treated with tumor resection but one year later, the patient presented back with fast growing mass on the same knee, histological confirmation of recurrence was made. To reduce the size of the tumor and be able to surgically remove it, biological treatment with Imatinib was start a month later.

Four weeks after initiated the treatment with imatinib, patient complained of 39°C fever therefore, two weeks later, patient exhibited facial edema and a disseminated slightly pruritic disseminated skin rash that affected the trunk and upper and lower extremities conformed by multiple well-defined erythematous and edematous plaques, ranging from 3 to 5 cm in diameter some with desquamation on their surface. Cervical and axillar lymph nodes enlargement were detected at the clinical examination. Laboratory tests revealed leukocytosis of 12,110, eosinophil count of 2,100, altered liver function tests with transaminase lever increased twice the upper limit and elevated creatinine serum levels. Skin biopsy revealed acanthosis, focal exocytosis in the epidermis, dilatated blood vessels and red blood cell extravasation with lymphocytic infiltrate in the dermis.

Results:

Conclusively a diagnose of DRESS secondary to imatinib was made. Treatment with imatinib was immediately suspended and systemic steroid treatment was established at 50 mg per day, with presented clinical improvement by demonstrating a decrease in the erythema of the plaques thereby a progressive steroid reduction of 5mg per week was initiated.

Conclusion:

This is a peculiarly special case, due to the fact that the association of a biological treatment in the development of DRESS has been reported with very little incidence. The importance of the physician’s duty to know as much as possible regarding the adverse effects of multiple drugs is reflected, especially those that are involved in pathologies that are considered emergency. A challenge is imposed in the development of this type of pathologies, due to lack of information and therapeutic options. Fortunately, in this patient, the problem was

remitted by immediate discontinuation of the biologic and the use of steroids. On the other hand, it was possible to make a modification of the oncological treatment, allowing up to now an optimal response.

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Abstract N°: 2498

Is It Erlotinib Associated Acneiform Eruption or Pustular Psoriasis? Dramatic Improvement With Acitretin

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Is It Erlotinib Associated Acneiform Eruption or Pustular Psoriasis? Dramatic Improvement With Acitretin

Introduction & Objectives:

Epidermal growth factor receptor (EGFR) tyrosine kinase is inhibited by the drug erlotinib, which is effective in the treatment of lung cancer.(1) It is used to treat non-small cell lung cancer, pancreatic cancer, and several other forms of cancer.(2) The four main skin adverse effects of EGFRs are pruritus, xerosis, paronychia, and acneiform rash, in decreasing order of incidence. (3) This case report highlights the uncommon side effect of erlotinib, which is psoriasis.

Materials & Methods:

A 44-year-old man presented with fever, erythema and pustules on his body and scalp. He had a past medical history of stage 4 lung adenocarcinoma in September 2021 and had received first-line radiochemotherapy with cisplatin and gemcitabine. Following the detection of the EGFR mutation, treatment with 100 mg of erlotinib was initiated. Three weeks after beginning this therapy, erythema with pustules occurred in his whole body including his face and scalp. He was treated with doxycycline and he had a remission. In November 2022 he was admitted to our clinic with fever, erythema and pustules throughout his body. He had been using terbinafine for a month, along with erlotinib and fluoksetin. On dermatologic examination, he had erythematous papules, pustules with crusts in his trunk, back, upper and lower extremities. He had papules and pustules with scales and drainig on his face and scalp. He had a fever of 38 degrees, systemic findings weren't observed. Laboratory studies revealed only mild elevation of C-reactive protein and neutrophilic leukocytosis.

Results:

He was started on treatment with 25 mg of acitretine, topical corticosteroid and moisturized. A skin biopsy of the abdomen showed skin tissue with subcorneal-intraepidermal monoloculer pustule formation suggestive of psoriasis. His scalp skin biopsy revealed acneiform drug reactions. After 14 days of treatment, fluconazole was stopped and the skin changes had started to resolve and he is still remission for 5 months.

Conclusion:

Even though there are only a few reports of situations where retinoids were successfully used to treat the skin toxicities associated with EGFR inhibitors. In this case we showed that acitretin can be used to treat erlotinib associated pustular psoriasis and acneiform eruptions.

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Abstract N°: 2554

Hashimoto's thyroiditis and Gougerot syndrome as a long-term complication of Lyell syndrome

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Introduction & Objectives:

Toxic epidermal necrolysis (TEN) is a serious adverse drug reaction inflicting a potentially fatal mucocutaneous bullous rash and epithelial detachment.

It is known nowadays that patients may additionally develop long-term complications, the most common is mucocutaneous and ocular complications though other internal organs complications, such as the respiratory tract and gastrointestinal tract can also be seen.

Few studies have stated autoimmune diseases as a long-term complication of toxic epidermal necrolysis

Materials & Methods:

Results:

A 38-year-old patient with no preceding records became hospitalized in our health facility for histologically showed LYELL syndrome following the consumption of coffee combined with traditional plants. The affected person did not file any precise symptoms or perception of photosensitivity, all evolving in a context of feverish sensation and alteration of the general state. A general exam discovered a hemodynamically stable conscious patient with a fever of 38,3.

Dermatological examination found a couple of erythematous macules and papules, purpuric in places, diffuse over the whole frame with wet linen detachment on the back with the presence of more than one confluent vesicles in flaccid bubbles with clear and purulent contents on the trunk and the anterior face of the forearms with a positive Nikolsky sign.

The affected skin surface was estimated to be 63%.

The mucosal exam found the presence of erosive cheilitis, with a couple of clean surface erosions at the genital and anal areas. The rest of the examination was unremarkable.

The patient was hospitalized and placed under local care with Chlorhexidine, flammazine on the erosions and oral preparation, eye drops, a mini bolus of methylprednisolone at the dose of 500mg per day for three days, and Immunoglobulins IV 2g/kg/d three days in a row.

The evolution was marked by a complete epidermization with dyschromic areas, moderate conjunctival hyperemia, and trichiasis. Regarding the nails, there has been diffuse onychomadesis, with a decrease in scalp density and a positive traction signal.

However, in the long term, the patient reported photosensitivity, and arthralgia of the large joints, with a sensation of sand inside the eyes and a dry mouth.

A sugar test was carried out with a positive result, completed by biopsy of the accessory salivary glands which showed a stage four chronic sialadenitis. The ophthalmic examination showed xerophthalmia with a positive

Schirmer test.

A biological check-up showed positive antinuclear antibodies with a mottled appearance and negative native DNA antibodies, positive anti-SSA, and anti-SSB antibodies in favor of Gougerot Sjogren's syndrome, and positive anti-thyroglobulin and anti-thyroperoxidase antibodies with an elevated TSH and normal T3 and T4, in favor of Hashimoto's thyroiditis.

The patient was put, therefore on levothyroxine.

Conclusion:

A prolonged multidisciplinary follow-up is necessary for toxic epidermal necrolysis.

The interest in a rigorous systemic examination at each consultation: screening for complications and evaluating the function of the salivary glands and asking for a serological assessment in any symptomatic patient after the episode of SJS/NET.

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Abstract N°: 2666

Lichenoid drug reaction due to Imatinib in a patient with chronic Lichenoid leukemia

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Introduction & Objectives:

Imatinib mesylate is a tyrosine kinase inhibitor with high hematological and cytogenetic response in human malignancies, initially approved as a first line treatment for chronic myeloid leukemia. The drug is both orally available and well tolerated. However Related cutaneous reactions exist.

We report a case of imatinib-induced lichenoid drug eruption, a rare cutaneous side effect of imatinib use.

Materials & Methods:

A 68 years old man -without any history of previous drug allergy or taking any medication - was diagnosed to have Philadelphia chromosome positive chronic myeloid in February 2022. He has been initially treated with allopurinol and hydroxyurea for cytoreduction without any dermatological side effect. Then a treatment with imatinib at a dose of 600 mg per day was started.

He presented 2 months later a generalized itchy papulosquamous eruption, covering around 70% of body surface area and varying in color from bright to bluish red. The eruption was made of multiple erythematous and violaceous papules, confluent into multiple plaques symmetrically involving the whole body. He also presented a diffuse longitudinal nail ridging. Mucosal involvement was confined to the upper labial mucosa. the oral and genital mucosa were spared.

Histology revealed hyperkeratosis with hyper granulosis, a lichenoid infiltration and multiple melanophages in the upper dermis.

Therefore, given on the clinicopathologic aspect, the diagnosis of imatinib-induced lichenoid drug eruption was retained. The patient presented an unsatisfying evolution with topical corticosteroids plus imatinib 600mg.

The decision was to decrease the dose of imatinib from 600 mg to 400mg per day and continue the same topical treatment. The clinical response was good without any relapse during the decrease.

Results:

The literature revealed around ten cases with lichenoid skin rash. Only few cases reported the association of mucocutaneous an nail involvement as it is described with our patient.

Also, the cases of Lichenoid rash generally appear after 2 to 15 months of imatinib therapy and our patient was in this range (3months).

Our patient’s rash regressed well after decreasing the dose from 600 mg to 400 mg. Reports exist of several patients responding well to dose reduction with subsequent recurrence on dose reescalation.

The use of a systemic or topical corticosteroid as well as Imatinib may be a practical approach to allow the perduration of treatment for the patients who needs a higher dose of Imatinib.

Conclusion:

In general, the majority of skin reactions are self- limiting or easily managed. Nevertheless, caution must be given when rashes occur.

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Abstract N°: 2671

Prevalence of mucocutaneous toxicity in cancer patients treated with chemotherapy treated in the dermatology outpatient clinic of the "Lic. Adolfo López Mateos" Hospital in Mexico from January 1, 2016 to March 31, 2022".

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Introduction & Objectives:

Introduction: Antineoplastic agents inhibit tumor proliferation, have a predilection to the skin, mucous membranes and annexes; for this reason, the skin is an organ susceptible to toxicities.

Objectives: To determine the frequency and characteristics of mucocutaneous lesions secondary to toxicity in cancer patients treated with chemotherapy assessed in the dermatology service of the Regional Hospital "Lic. Adolfo López Mateos", of the ISSSTE, México City, during 2016 to 2022.

Materials & Methods:

A descriptive and retrospective study was designed in which patients who were treated for skin reactions to chemotherapy in the dermatology service from January 1, 2016 to March 31, 2022 were included.

Demographic data, dermatoses secondary to chemotherapy and oncological diagnosis were collected from the records. The results were reported with descriptive statistics, for the qualitative variables simple frequencies and percentages were used; for the quantitative ones, mean and standard deviation were calculated.

Results:

A total of 61 patients were analyzed. The median age was 60 years (SD 10.77). The predominant sex was female (67.21%). The most frequent type of cancer was breast cancer (36.07%). The most frequently used chemotherapy was standard (57.38%), 54.09% of patients had some comorbidity.

The most frequent mucocutaneous reaction to standard chemotherapy was palmoplantar erythrodysesthesia (22.86%), to targeted chemotherapy were hypersensitivity reactions (36.36%) and to the use of hormone therapy was xerosis (50%). The most frequently found infection associated with the use of different chemotherapeutic drugs was Herpes Zoster (9.84%).

The time between initiation of standard chemotherapy and the development of mucocutaneous toxicity ranged from 1 to 60 days. With targeted chemotherapy it ranged from 1 to 30 days and with hormone therapy it ranged from 2 to 60 days.

Conclusion:

It is important that before starting chemotherapy, patients should receive detailed information about skin adverse reactions that may occur during the administration of different chemotherapy groups, so it is suggested that patients under chemotherapy treatment should be evaluated by the dermatologist, to allow early diagnosis and prevent comorbidities that may have repercussions on patient prognosis and quality of life. Herpes zoster was the most documented skin infection in this study, so it is important to provide prevention measures such as

vaccinationand thus avoid disabling sequelae secondary to infection by the virus.

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Abstract N°: 2697

Iopamidol induced acute generalised exanthematous pustulosis (AGEP): a case report and literature review

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Introduction & Objectives:

Acute generalised exanthematous pustulosis (AGEP) is a cutaneous drug eruption characterized by the acute onset of nonfollicular, sterile pustules on an oedematous erythematous base associated with fever, leuckocytosis with neutrophilia. We present a case of AGEP following administration of intravenous (IV) iopamidol.

Materials & Methods:

A 62-year old Chinese lady with multiple comorbidities was seen for generalized erythematous rash which started from the neck and spread to trunk and limbs. Examination showed erythematous macules and papules over the trunk and limbs during the initial review. She developed crops of minute pustules at the groin, axillae and back the next day.

A drug chart was done and showed that she received IV iopamiro 370 (iopamidol) for computed tomography (CT) scan of the thorax five days before the onset of the rash and IV omnipaque 350 (iohexol) contrast for CT brain 3 days after the onset of the rash.

She was febrile on admission with a temperature of 38.5°c. A septic workup was performed and she was started on intravenous co-amoxiclav on her second day of admission which was 4 days after the onset of the rash. She was on IV co-amoxiclav for 2 days which was then oralised and she completed a course of five days. Her rashes continued to improve despite being on co-amoxiclav.

Investigation showed raised total white cell count of 10.32 (x109/L) with an absolute neutrophil count of 7.67 (x109/L). Other investigations including anti-streptolysin O titre (ASOT), cytomegalovirus (CMV) PCR, ebstein-barr virus (EBV) PCR, mycoplasma pneumoniae, respiratory viral nasopharyngeal swab, and culture of pustule were negative.

As rashes were clinically improving after two days, a skin biopsy was not performed.

Based on the clinical picture, timeline and morphology, she was diagnosed with progressive exanthem with pustules, likely AGEP with the probable causative drug being IV contrast media.

She also tolerated another course of oral co-amoxiclav for 5 days 2 months after the index reaction without any rashes which ruled out co-amoxiclav as a causative drug.

She underwent further evaluation at the allergy unit. Skin prick test (SPT) and immediate intradermal test (IDT) for iohexol, iodixanol, iopamidol, and iopromide were negative.

Delayed intradermal reading was positive for iopamidol. Patch test was positive to omnipaque 350 (iohexol), visipaque 320 (iodixanol), iopamiro 370 (iopamidol), ultravist 370 (iopromide).

Results:

We describe a case of AGEP to iopamidol with positive delayed IDT and patch test which demonstrated cross

reactivity with other contrast media.

Our literature search showed that AGEP has been reported following administration of iohexol, ioversol, iodixanol, iomeprol, iobitridol, iopromide, and iopimadol. Delayed IDTs and patch tests were frequently positive and contrast media cross-reactivity were also common.

Conclusion:

Skin testing can be done together with patch test in the evaluation of contrast media induced AGEP to improve the sensitivity. As cross-reactivity between contrast medias are frequently observed, evaluation should be performed before further contrast media administration.

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Abstract N°: 2866

Ibrutinib-induced pyoderma gangrenosum

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Introduction & Objectives:

Pyoderma gangrenosum (PG) is a rare inflammatory neutrophilic dermatosis. Drug-induced PG is a rare cutaneous reaction with no specific clinical or histopathologic features. Herein, we report a new case of ibrutinib-induced PG in a patient with B-cell chronic lymphocytic leukemia.

Materials & Methods:

Results:

A 64-year-old man with a history of B-cell chronic lymphocytic leukemia (B-CLL) diagnosed 3 years earlier, treated with chemotherapy for 2 years, and achieved an incomplete remission. Thus, he started on the Bruton tyrosine kinase inhibitor (BTK) ibrutinib at the recommended dose of 420 mg/d with significant improvements. After 8 months, the patient consulted for several painful, palpable red to violaceous skin lesions in the lower limbs and feet. The lesions started one month after ibrutinib initiation with a vesicular appearance and evolved into nodules and painful ulcers with violaceous borders, sometimes associated with pustules. He also presented dyschromic and cribriform scars on his right leg. A biopsy of the ulcer margin and pustules revealed massive lymphocyte and neutrophil infiltration with few apoptotic bodies. No histopathologic signs of vasculitis were observed. The complete blood count did not reveal any leukocytosis, and the bacterial and fungal cultures were negative. After consultation with hematologists and pharmacologists, PG was diagnosed, and ibrutinib was suspected as the causative agent. In addition to ibrutinib discontinuation, the patient received topical corticosteroids, and improvement of the skin lesions was observed.

Conclusion:

PG is a neutrophilic dermatosis clinically characterized by a single or multiple painful ulcerations with a violaceous border, usually located in the lower limbs. Histopathology is not specific, it frequently mimics an abscess or cellulitis by exhibiting significant neutrophilic infiltration, bleeding, and epidermal necrosis. The therapy landscape for B-cell malignancies is being rapidly improved by new therapies that target B-cell receptors (BCRs) and their signaling pathways. One such medication is ibrutinib, which is now approved for the treatment of malignant hematologic diseases. It acts by inhibiting Bruton tyrosine kinase (BTK), which is essential for the survival and multiplication of B cells. The most commonly reported side effects are cytopenia, diarrhea, fatigue, bruising, and upper respiratory tract infections. Only a few cases of ibrutinib-induced neutrophilic dermatosis, including two cases of PG, have been reported in the literature. Ibrutinib has BTK receptor specificity, which gives it a good safety profile and fewer side effects. Moreover, it also acts on the epidermal growth factor receptor (EGFR), which is expressed in the basal layer of the epidermis. Inhibition of this receptor has a negative effect on tissue regeneration, responsible for pro-inflammatory activity that can explain the occurrence of PG, mainly in areas exposed to frequent trauma. Treatment of B-CLL with ibrutinib can lead in some cases to the development of neutrophilic dermatosis, which may be caused by the drug-induced immune process.

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Abstract N°: 2872

Acute exanthematic pustulosis associated with cocaine use

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Introduction & Objectives:

Acute generalized exanthematic pustulosis (AGEP) is an acute eruption characterized by numerous small sterile pustules, mainly non-follicular, that start on the face or in intertriginous areas (armpit and groin), followed by rapid dissemination within a few hours. More than 90% of cases are attributed to drug use, primarily antibiotics, viral infectious agents, mercury exposure, among others.

Although 5.3% of the population between 12 and 65 years old in Argentina has reported using cocaine at some point, we could not find any literature reporting the incidence of AGEP associated with cocaine use.

Materials & Methods:

We present the case of a female patient who developed acute generalized exanthematic pustulosis induced by cocaine.

Results:

A 20-year-old female patient with no relevant medical history presented with a dermatosis that had been present for five days. She reported the onset of a generalized eruption 48 hours after inhaling cocaine.

Upon physical examination, erythematous annular plaques covered by numerous pustules over the trunk, upper and lower extremities, with no involvement of mucous membranes, face, palms or soles.

Laboratory tests and a chest X-ray were performed, which showed an elevated level of C-reactive protein (CRP). Two skin biopsies were taken from the patient's left forearm, and histological examination revealing an intraepidermal pustule and papillary dermis edema with the presence of neutrophils, eosinophils, and histiocytes, consistent with AGEP.

We decided to initiate systemic corticosteroid treatment, which resulted in adequate control of the condition.

Conclusion:

AGEP is a severe cutaneous adverse reaction of rapid onset. It may present systemic involvement, mainly affecting the liver, kidney, or lungs in 20% of cases.

The primary treatment is to discontinue the use of the causative drug. Topical corticosteroids can be used to manage symptoms such as pruritus and inflammation in cases that last longer. Treatment with systemic corticosteroids has been shown to reduce the duration of hospitalization.

There are no statistics in the literature reflecting the incidence of this event related to cocaine use or other recreational drugs. We emphasize the importance of reporting our case as it constitutes a rare complication associated with cocaine use.

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Abstract N°: 2883

Management and Outcomes of Toxic Epidermal Necrolysis Treated in Burns Centres: A Systematic Review

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Introduction & Objectives:

Toxic epidermal necrolysis (TEN) is a rare, potentially life-threatening dermatological condition characterised by mucocutaneous detachment of greater than 30% total body surface area (%TBSA). With a high mortality rate, TEN is often managed at burns centres with evidence suggesting better survival rates.

Materials & Methods:

A systematic review was conducted using PubMed, MEDLINE, EMBASE, ScienceDirect and The Cochrane Library from 2012 -2022. The primary objective was to analyse the clinical outcomes, management and mortality of TEN in burns centres.

Results:

A total of 12 papers, reporting outcomes in 273 patients were identified. Variations in treatment options including supportive therapy or systemic treatments that were utilised either individually or in combination, such as intravenous immunoglobulin, intravenous corticosteroids, cyclosporine, granulocyte colony-stimulating factor (G-CSF), and etanercept. The calculated cumulative mortality rate was 37%. Intravenous corticosteroids and intravenous immunoglobulin showed limited mortality improvement. Etanercept and cyclosporine demonstrated encouraging results, however this was observed in a relatively small subset of patients.

Conclusion:

This systematic review demonstrates the variation in management and mortality outcomes across management of TEN in burns centres with prospects for emerging immunomodulatory therapy. Our findings emphasise the importance of standardised protocols and evidenced-based interventions to optimise the management and improve prognosis of TEN patients within the burns centre setting.

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Abstract N°: 2990

DRESS syndrome induced by Imatinib.

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Introduction & Objectives:

Drug reaction with eosinophilia and systemic symptoms (DRESS) is a potentially life-threatening toxidermia, reported in association with several drugs. Imatinib is the preferred first line therapy for CML with a long-term survival exceeding 90%. It is known to be associated with several mild dermatologic reactions. However, DRESS occurring as a result of imatinib is rare.

Materials & Methods:

We here report a patient who presented with an atypical DRESS syndrome following imatinib.

Results:

A 61-year-old woman with chronic myeloid leukemia (CML) was admitted to our department for management of a diffuse pruritic rash occurring one month after initiation of Allopurinol and Imatinib for treatment of her leukemia. Clinical examination revealed a fever of 39.1°C, polyadenopathy, bilateral palpebral edema and edema of all 4 limbs. The skin rash was polymorphic and associated maculopapular morbiliform exanthema, erythematous infiltrated placard on the forearms with vesiculo-bubbles, purpura and non-follicular pinhead pustules on the upper chest and folds. Mucosal lesions were represented by desquamative cheilitis and petechiae of the soft palate. On the fifth day of hospitalization, a palmoplantar dyshidrotic eczema appeared. The blood count showed normocytic normochromic anemia, with eosinophils at 450/µl, the rest of the biological workup was normal. The histological examination confirmed the diagnosis of DRESS syndrome suspected clinically. The pharmacovigilance retained the imputability of these two molecules. The patient was put on prednisone 0.5 mg/Kg/day with good clinical evolution. As the patient had complete resolution of skin rash and eosinophilia, imatinib rechallenge was considered but it resulted in recurrence of rash. As the patient was already on tapering dose of prednisone, its dose was increased back to 0.5 mg/kg/day. Imatinib was stopped and the patient was subsequently switched to Hydroxycarbamide.

Conclusion:

To the best of our knowledge, it is the tenth case ever reported. For any patient presenting with rash and eosinophilia, any new drug should be discontinued, and low-dose steroids considered. A rechallenge with a lower dose is reasonable, failing which an alternative medication should be started.

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Abstract N°: 3181

Carbamazepine-Induced Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis: A Cost Effectiveness Analysis of HLA-B*15:02 Genotyping in Asian Australians

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Introduction & Objectives:

The HLA-B*15:02 allele has been associated with an increased risk of carbamazepine-induced Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN) in specific Asian populations. Whilst HLA-B*15:02 genotype testing in Asian populations is recommended within several international prescribing guidelines, it is not Medicare Benefits Scheme (MBS) subsidised in Australia. There is a paucity of health economic data regarding the cost-effectiveness of genotyping within the Australian setting. As such, we sought to provide economic justification for HLA-B*15:02 screening for Asian Australian epilepsy patients being considered for carbamazepine.

Materials & Methods:

A cost-utility analysis over a twenty-year time horizon was conducted from the perspective of the Australian healthcare sector using a modelled cohort of adult Asian Australian patients with epilepsy being considered for carbamazepine treatment. A hybrid model with components of a decision tree and Markov model was developed to simulate clinical trajectories in two alternative strategies: (1) No HLA-B*15:02 genotyping and the empirical commencement of carbamazepine versus (2) HLA-B*15:02 genotyping and the commencement of valproate in allele carriers. The simulated cohort transitioned between controlled epilepsy, uncontrolled epilepsy, and death. Efficacy, cost, and utility data were obtained from available published literature. One-way and probabilistic sensitivity analyses were performed to assess uncertainty. Primary outcomes were the incremental cost and quality-adjusted life-years (QALYs), and incremental cost-effectiveness ratio (ICER). All analyses were completed using TreeAge Pro Healthcare Version 2023.

Results:

The simulated cohort of newly diagnosed epilepsy patients had a mean age of 38 years and a male-to-female ratio of 0.985. HLA-B*15:02 screening was associated with a cost reduction of AU$58.14 and an improvement of 0.00553 QALYs compared with no screening, resulting in an ICER of -AU$10,519.84/QALY. Universal genotyping for Asian Australians was therefore more effective and less costly compared with current standards of practice. Sensitivity analyses demonstrated that screening remained cost-effective across a range of values for cost, utility and transition probability input parameters and willingness-to-pay thresholds. Relative to the AU$50,000/QALY willingness-to-pay threshold, universal screening was the preferred strategy in 98.56% of iterations.

Conclusion:

In this cost-utility analysis, HLA-B*15:02 screening represents a cost-effective option for Asian Australian epilepsy patients being considered for carbamazepine. Genotyping was the dominant option over a twenty-year time horizon with reduced costs and increased effectiveness. As such, MBS subsidisation should be considered in Australia.

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Abstract N°: 3197

Pazopanib-Induced Cutaneous Leukocytoclastic Vasculitis, a case report.

Carol Marquez Maldonado[1], Andrea González Cázares[2], María Luisa Montes de Oca Loyola[2], Jorge Cazarin Barrientos[2], Mario Magaña[2]

[1]Universidad de Cuenca, Facultad de Medicina, Cuenca, Ecuador, [2]General Hospital of Mexico Dr. Eduardo Liceaga, Ciudad de México, Mexico

Introduction & Objectives: Pazopanib is an oral small-molecule multi-kinase inhibitor. It is currently approved for the treatment of advanced renal cell carcinoma (RCC). Vasculitis as consequence of pazopanib therapy, has been rarely reported, which is not reported in previous phase III clinical trials. We present our case report to contribute to the medical community's knowledge regarding early recognition and treatment of pazopanib-induced vasculitis.

Results: A 55-year-old female with a past medical history of a 1-year metastatic clear cell renal cell carcinoma consulted for ulcers on her extremities associated with severe and disabling pain that appeared 3 months after pazopanib therapy (800 mg/day). Physical examination revealed a disseminated, symmetrical dermatosis involving the extremities, compound by multiple oval necrotic ulcers, predominantly on the knees, some on the elbows and hands, with irregular and defined edges; purpuric macules and livedo reticularis on the forearms, thighs and feet, associated with significant symmetrical edema. Further blood work was ordered to rule out other causes, including connective tissue disease and infection. Labs included antinuclear, antineutrophil cytoplasmic and anticardiolipin antibodies, rheumatoid factor, C3, hepatitis B and C serologies; all were unremarkable. A urinalysis did not show early proteinuria. A skin biopsy reported leukocytoclastic vasculitis (LCV). Pazopanib was discontinued and she showed improvement of skin lesions. The diagnosis of LCV pazopanib-induced was concluded. Pazopanib is a tyrosine kinase inhibitors (TKIs) drug that primarily inhibits vascular endothelial growth factor receptor, platelet endothelial growth factor receptor and the stem-cell factor receptor c-kit, approved as the first-line treatment for metastatic RCC, demonstrating superiority to placebo and proven to be noninferior to sunitinib with a more favorable safety profile. However, cutaneous adverse effects are very common with TKIs. The most frequently reported were rash, hand-foot and acneiform eruption. LCV refers to a histopathologic description of a small vessel vasculitis. According to the revised International Chapel Hill Consensus Conference, LCV can be found in several diseases and is a diagnosis of exclusion. The leading clinical presentation is palpable purpura, involve primarily the lower legs. Our patient developed ulcers and purpura 3 months after pazopanib therapy. Histologically it is characterized by neutrophils invading the vessel wall, fibrinoid necrosis, nuclear dust and extravagated erythrocytes. The histopathological pattern is not specific for any particular entity. Clinical features, laboratory and the histopathological should be correlated to have a definite diagnosis. In our case, a probable causal correlation was established based on the chronological relationship, the laboratory exclusion of other entities, and the report of a similar case in the literature. The mainstay of treatment is withdrawal of the offending drug and initiation of symptomatic treatment. Therefore, pazopanib was permanently discontinued. Topical emollients and corticosteroid were given and her lesions improved.

Conclusion: We consider it is important for dermatologists to have a high index of suspicion for vasculitis in the setting of pazopanib therapy like an adverse effect to assess the need to withdrawal this drug for preventing severe complications.

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Abstract N°: 3227

Bullous toxic erythema of chemotherapy to doxorubicin and a review of the literature

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Introduction & Objectives:

Chemotherapy agents cause a wide range of cutaneous side effects, ranging from mild exanthems to severe cutaneous drug reactions. Toxic erythema of chemotherapy (TEC) is a term used to describe a constellation of overlapping toxic reactions. TEC is characterised by painful erythema affecting the hands and feet, knees, ears and intertriginous areas. Bullous TEC is a rare variant, and has been reported in patients after receiving cytarabine, methotrexate and bleomycin. Here, we report a patient who presented with bullous TEC following administration of liposomal doxorubicin.

Materials & Methods:

Not applicable.

Results:

A 49-year-old female with stage 3 granulosa cell tumour presented with a three-week history of erythema and blistering over her finger web spaces, associated with erosions over her bilateral axilla. The skin lesions developed one week after her second dose of liposomal doxorubicin. She was given topical 0.1% mometasone furoate cream by her oncologist with minimal improvement, and received a third dose of liposomal doxorubicin three weeks after the second dose. One week after the third dose of doxorubicin, she developed increased erythema and bullae over her hands and presented to dermatology. On examination, she had erythematous fissured plaques over the web spaces of bilateral hands, with few tense blisters over her wrists, lateral aspects of her hands and left hand third web space. There were reticular red-brown patches over bilateral axilla, with overlying small shallow erosions. Her groin folds and toe web spaces were clear, and there were no blisters elsewhere. Differential diagnoses considered included acral bullous pemphigoid, bullous symmetrical drug-related intertriginous and flexural exanthem (SDRIFE), hand-foot skin reaction and bullous TEC. Skin biopsy of her blisters showed a subepidermal blister with a vacuolar interface reaction and focal epidermal necrosis. Direct immunofluorescence was negative. Serology for BP180, BP230 and indirect immunofluorescence on salt split skin were negative. Review of her drug chart did not implicate any other medications. A diagnosis of bullous TEC was thus made. In view of her poor tolerance with recurrent worsening severity seen with the continued doses of chemotherapy, a decision was made by her oncologist for expectant management. She was given topical 0.1% clobetasol cream to her hands and 0.1% mometasone furoate cream to her axilla, with resolution of her skin lesions.

Conclusion:

In this case report, we review and summarize existing literature on bullous TEC. Previous reports of bullous TEC have implicated cytarabine, methotrexate and bleomycin as the causative agents. Although reports of patients with bullous TEC have included a few patients on doxorubicin, all patients also received cytarabine concurrently. Here, we report a patient with bullous TEC following administration of doxorubicin in the absence of other chemotherapy agents. Hence, it is important for clinicians to be aware of this potential side effect of liposomal doxorubicin.

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Abstract N°: 3260

Cutaneous Toxicities with Amivantamab for Non-small Cell Lung Cancer (NSCLC) with Exon 20 Insertion Mutation (ex20ins): A Practical Guide and Best Practices for Management

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Cutaneous Toxicities with Amivantamab for Non-small Cell Lung Cancer (NSCLC) with Exon 20 Insertion Mutation (ex20ins): A Practical Guide and Best Practices for Management

Introduction & Objectives:

Amivantamab, an EGFR-MET bispecific antibody, is approved for patients with ex20ins advanced NSCLC post platinum chemotherapy. Cutaneous toxicities (i.e., rash and paronychia) are known on-target effects of EGFR inhibition. Rash is a grouped term for various types of skin inflammation that can occur during treatment with amivantamab. Here we present data from the CHRYSALIS trial on the incidence, severity, time to first onset, and management of rash and paronychia.

Materials & Methods:

This post hoc analysis evaluated incidence, severity, and time to first onset of rash and paronychia with descriptive summary statistics (mean, median, interquartile range, range).

Results:

In patients receiving amivantamab at the recommended phase 2 dose in the CHRYSALIS trial ([N=380], data cutoff March 2021 with 9.9-month median follow-up), rash and paronychia were reported in 75.8% (2.9% Grade 3) and 43.2% (1.8% Grade 3), respectively. No Grade 4 events occurred. Median first onset of rash was 14 days and 67 days for paronychia. Many patients experienced multiple dermatologic toxicities during treatment varying in type and severity. Rash and paronychia infrequently required treatment modifications (dose reductions in 5.5% and 2.6%; treatment discontinuation in 0.3% and 0.5% of patients, respectively). To mitigate rash, patients received ≥1 of the following medications: topical or systemic antibiotics (13.2%; 64.9%), topical or systemic corticosteroids (41.3%; 45.8%), emollients (8.0%), anti-acne preparations (5.9%), and others.

Nurses and advanced practice providers (APPs) provide comprehensive support and play critical roles in the education of patients and caregivers in the prevention and management of cutaneous toxicities. Rash and paronychia can cause physical discomfort and emotional distress for patients. However, these may not be prioritized by patients among other concerns regarding their cancer treatment. Since cutaneous toxicities can occur soon after treatment initiation, preventive measures include referring patients to a dermatologist specialized in cutaneous toxicities, advising patients to inform their dermatologist that they will start an EGFR inhibitor, educating on minimizing sun exposure, and administering antibiotics. Rash may be mitigated during treatment by advising patients on methods to prevent dry skin and nail bed infections along with topical treatments. Treatment can be escalated to oral antibiotics and/or systemic steroids when necessary, and dermatology consultation is strongly recommended for patients not responding to initial treatments. Scalp rashes can also occur during treatment with amivantamab but are managed differently than other cutaneous toxicities with various topical treatments.

Conclusion:

In summary, cutaneous toxicities are commonly observed adverse events with EGFR inhibitors including amivantamab and can be effectively managed with the support and guidance of nurses and APPs throughout the treatment journey.

Trial registration: NCT02609776

Acknowledgements: The authors thank Mary Kate Weber and Ashley O'Donnell for contributing best practices for rash management from an oncology nursing perspective, and Claire Brady for Medical writing support.

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Abstract N°: 3310

Pembrolizumab-Induced Acquired Reactive Perforating Collagenosis

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Introduction & Objectives

Nearly half of patients treated with pembrolizumab will develop a cutaneous toxicity. Reported cutaneous adverse effects associated with PD-1 inhibitor therapy include lichenoid reactions, eczema, vitiligo, and bullous dermatoses. To the best of our knowledge, we report the first case of acquired reactive perforating collagenosis (ARPC) following treatment with pembrolizumab.

Materials and Methods

A 71-year-old male was diagnosed with metastatic non-small cell lung cancer (NSCLC) and treated with carboplatin, pemetrexed and pembrolizumab cycles every 21 days. His past medical history was remarkable for type II diabetes mellitus with no known renal disease. He developed autoimmune thyroiditis and psoriasis with a PASI of 26.4 following his fourth cycle and was commenced on thyroxine and prednisolone 60mg daily by medical oncology. Chemotherapy was ceased, primarily due to his cutaneous toxicity. Dermatology was consulted and recommended a tapering regime of prednisolone and commenced the patient on betamethasone diproprionate-calciprotriene and UVB phototherapy, later transitioned to acitretin. Six weeks after the cessation of prednisolone, he developed a distinct rash composed of well-circumscribed maroon plaques, studded with hard brown papules. Punch biopsy demonstrated a cup-shaped ulcer containing a plug of necrotic inflammatory debris with hyperkeratosis, acanthosis and granular layer thickening (Figure 1). Within the necrotic plug was degenerate collagen fibres, mixed with basophilic necrotic material and neutrophils, characteristic of transepidermal elimination phenomenon. Direct immunofluorescence was negative. His presentation was in keeping with ARPC, postulated to be secondary to pembrolizumab (Naranjo Score = 3). The importance of general measures (such as avoiding scratching) was reiterated to him and his dose of acitretin was increased to 30mg daily. His ARPC remitted, and he continues acitretin 20mg daily with no evidence of relapse of his NSCLC for 18 months since ceasing chemotherapy.

Results & Conclusion:

ARPC has rarely been reported in PD-1 inhibitor therapy: once with terepril and once with nivolumab. To the best of our knowledge, we report the first case of pembrolizumab-induced ARPC. In patients with malignancy and psoriasis, topical therapy, phototherapy, and acitretin are recommended as the first-line options as they are not significantly immunosuppressive, though biologics are beginning to play an evolving role in this setting. Immunotherapy is being increasingly employed in the management of several different solid organ malignancies and accordingly, dermatologists are likely to encounter patients with cutaneous toxicities to these agents. It should be noted for patients with severe PD-1 induced psoriasis, biologics against TNF-alpha, IL-17, IL-23, and IL-12 do not appear to carry increased risk of malignancy recurrence nor disease progression.

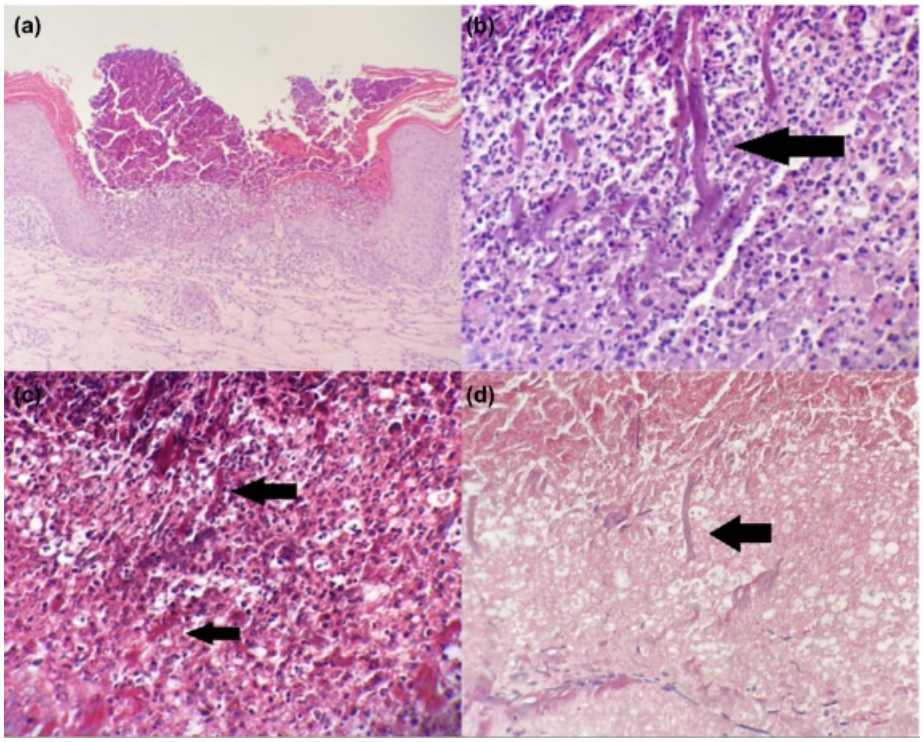

Figure 1: Acquired reactive perforating collagenosis with (a) low power H&E stain of cup-shaped ulcer with adjacent acanthotic, hyperkeratosis (100x), (b) high power H&E stain showing the ulcer plug with elimination of degenerate collagen fibres (400x), (c) Masson's trichrome stain (400x) demonstrating degenerate collagen fibres and (d) Verhoeff-Van Gieson elastic stain (400x) showing extruded elastin fibres.

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Abstract N°: 3449

Lichenoid drug eruption triggered by Diphtheria-Tetanus vaccination

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Introduction:

Lichenoid drug eruption is a rare drug reaction that can affect the skin and mucous membranes, similar to typical lichen planus. The agents most frequently accused in the etiology are ACE inhibitors, thiazide diuretics, antimalarials and beta blockers and have been reported rarely after vaccination.

Case report:

A 13-year-old male patient presented at our clinic with a pruritic rash affecting the lip mucosa and both legs, hands, and ankles, which had been persistent for approximately four months. Upon dermatological examination, white reticular plaques measuring 5 mm in diameter were observed on the inner surface of the left oral commissure. Polygonal shaped and flat-surfaced, with a tendency to merge, diameters vary between 5 mm and 2 cm, with a thin scaly purple papule and plaques seen on the bilateral wrist flexor surface, legs and the dorsum of the ankle. Given the clinical findings, a punch biopsy was performed on the lesion, considering a preliminary diagnosis of lichen planus and lichenoid drug reaction. Histopathological analysis demonstrated mild orthohyperkeratosis, acanthosis, vacuolar degeneration in the basal layer, lymphocyte infiltration, colloid bodies, and band-like lymphohistiocytic cell infiltration in the superficial dermis. Additionally, melanin incontinence was observed, along with mild lymphocytic cell infiltration accompanied by eosinophils in the middle and deep dermis. There was no previous history of drug use, but it was learned that the patient had received a booster dose of the tetanus-diphtheria vaccine a few days before the onset of the rash. Therefore, lichenoid drug reaction was established considering the vaccination history and histopathological features. Laboratory tests revealed negative HBsAg and Anti-HCV results, while Anti-HBs were positive. Treatment involved the application of medium and low-potency topical corticosteroid creams for several months. Remarkably, all lesions were entirely resolved by the fourth month of follow-up.

Conclusion:

Vaccination-associated lichenoid drug eruption has been predominantly documented with Hepatitis B Virus (HBV), Influenza, and Herpes Zoster vaccines. Conversely, instances of lichenoid drug eruption resulting from a booster dose of the diphtheria-tetanus vaccine remain limited, with only a few reported cases available in the literature. In our particular case, the affected areas exhibited similarities to classical lichen planus, but the histopathological examination revealed the presence of eosinophils in the middle and deep dermis. Furthermore, considering the patient's vaccination history underscores the significance of establishing a clinicopathological correlation in the diagnostic process.

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Abstract N°: 3518

Vasculitis leucocitoclástica cutánea inducida por pazopanib, reporte de un caso.

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Introduction & Objectives:

Pazopanib is an oral small-molecule multi-kinase inhibitor. It is currently approved for the treatment of advanced renal cell carcinoma (RCC). Vasculitis, as a consequence of pazopanib therapy, has been rarely reported, which is not reported in previous phase III clinical trials. We present our case report to contribute to the medical community's knowledge regarding early recognition and treatment of pazopanib-induced vasculitis.

Results:

A 55-year-old female with a past medical history of a 1-year metastatic clear cell renal cell carcinoma consulted for ulcers on her extremities associated with severe and disabling pain that appeared 3 months after pazopanib therapy (800 mg/day). Physical examination revealed a disseminated, symmetrical dermatosis involving the extremities, compound by multiple oval necrotic ulcers, predominantly on the knees, some on the elbows and hands, with irregular and defined edges; purpuric macules and livedo reticularis on the forearms, thighs and feet, associated with significant symmetrical edema.

Further blood work was ordered to rule out other causes, including connective tissue disease and infection. Labs included antinuclear, antineutrophil cytoplasmic and anticardiolipin antibodies, rheumatoid factor, C3, hepatitis B and C serologies; all were unremarkable. A urinalysis did not show early proteinuria. A skin biopsy reported leukocytoclastic vasculitis (LCV). Pazopanib was discontinued and she showed improvement of skin lesions. The diagnosis of LCV pazopanib-induced was concluded. Pazopanib is a tyrosine kinase inhibitors (TKIs) drug that primarily inhibits vascular endothelial growth factor receptor, platelet endothelial growth factor receptor and the stem-cell factor receptor c-kit, approved as the first-line treatment for metastatic RCC, demonstrating superiority to placebo and proven to be noninferior to sunitinib with a more favorable safety profile. However, cutaneous adverse effects are very common with TKIs. The most frequently reported were rash, hand-foot and acneiform eruption. LCV refers to a histopathologic description of a small vessel vasculitis. According to the revised International Chapel Hill Consensus Conference, LCV can be found in several diseases and is a diagnosis of exclusion. The leading clinical presentation is palpable purpura, involve primarily the lower legs. Our patient developed ulcers and purpura 3 months after pazopanib therapy. Histologically it is characterized by neutrophils invading the vessel wall, fibrinoid necrosis, nuclear dust and extravagated erythrocytes. The histopathological pattern is not specific for any particular entity. Clinical features, laboratory and the histopathological should be correlated to have a definite diagnosis. In our case, a probable causal correlation was established based on the chronological relationship, the laboratory exclusion of other entities, and the report of a similar case in the literature. The mainstay of treatment is withdrawal of the offending drug and initiation of symptomatic treatment. Therefore, pazopanib was permanently discontinued. Topical emollients and corticosteroid was given and her lesions improved.

Conclusion:

We consider it is important for dermatologists to have a high index of suspicion for vasculitis in the setting of pazopanib therapy like an adverse effect to assess the need to withdrawal this drug for preventing severe

complications.

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Abstract N°: 3559

Assessing liver damage in DRESS Syndrome: A clinical study of 61 Cases

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Introduction & Objectives:

DRESS syndrome (Drug reaction with eosinophilia and systemic symptoms syndrome) is an acute and severe idiosyncratic drug reaction that poses a life-threatening risk to patients due to visceral damage, particularly the liver. The objective of this study is to investigate the frequency and type of liver damage in patients with DRESS syndrome and identify factors that contribute to this damage.

Materials & Methods:

This is a retrospective and descriptive study conducted from 2014 to January 2023 at the dermatology department. The study includes all patients with DRESS syndrome who were diagnosed based on Regiscar criteria. Data were analyzed using Excel operating system and SPSS v26 statistics. Liver damage was evaluated according to the classification of drug-induced hepatitis based on the level of alkaline phosphatases (ALP), alanine aminotransferases (ALT), and the ALT/ALP ratio (R), defining three clinical forms: cytolysis (ALP >2 or R >5), cholestasis (PAL>2 or R<2), and mixed form (2<R<5).

Results:

The study included 61 patients with a male to female ratio of 0.4 and an average age of 57.3 years. Liver damage was observed in 34.4% of patients, with cytolysis being the most common form (52.4%), followed by cholestasis (33.3%) and the mixed form (14.3%). Patients with liver dysfunction were found to have mucosal involvement in 36.8% of cases and a maculo-papular rash in 50% of cases. Liver involvement was observed in 43.8% of patients with impaired renal function, 34% of patients with hypereosinophilia, and 21.4% of patients with lymphopenia. Allopurinol and carbamazepine were the most common drugs incriminated in 33.3% of cases, followed by anti-inflammatory drugs in 20%. Therapeutic management included the application of dermocorticoids in 71% of patients, initiation of oral corticosteroids in 54.5% of patients, and injectable corticosteroids in 37.5%. The mortality rate among patients with hepatic impairment was 40%.

Conclusion:

The study findings indicate that liver damage is a common complication of DRESS syndrome and can be life-threatening. Further studies with larger sample sizes are required to identify the main characteristics of liver dysfunction in DRESS syndrome, such as the clinical form, incriminating drug, associated visceral disorders, skin phenotype, and biological anomalies.

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Abstract N°: 3632

Lichenoid Drug Eruptions: A Series of 17 cases

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Introduction & Objectives:

Lichenoid drug eruptions (LDE) are an uncommon and rare cutaneous adverse drug reaction. The list of drugs that can cause them is long and growing steadily. We report a first series of 17 cases.

Materials & Methods:

The present retrospective study included 17 cases who were diagnosed as cutaneous lichenoid drug eruptions over a period of 5 years from January 2018 to January 2023. The diagnosis was based on clinical manifestations, the latency period between drug intake and the onset of the skin eruption, exclusion of differential diagnoses, and histopathological findings.

Results:

Of 407 drug eruption, 17 individual cases with LDE were identified (4, 17%). The median age was 51.8 years (range: 28 years to 67 years). Of these, 10 (58.82%) were female, and 7 (41.17%) were male patients.

A total of 11 different drugs were identified as a cause of LDE. Psychotropic drugs were the most frequently reported culprit drugs (6 cases; 35, 29%), followed by vaccines in 5 (29.41%) cases (COVID-19 vaccine (n=4), Tetanus vaccine (n=1). Anti-infectious treatments were associated with LDE in 2 (11.76%) cases (Metronidazol (n=1), terbinafine(n=1). Two cases were caused by Allopurinol (11, 76%). Single cases for each of the following drugs were identified: ibuprofen (n=1), angiotensin-converting enzyme inhibitor (n=1).

On average, the latency between the initiation of the drug and the first manifestation of LDE was 35 days (range: one – 60 days). After discontinuation of the drug, the median time to resolution was 16 weeks. Generalized LDE was described in 13 patients (76, 47%). No patient had mucosal involvement. Hyper-eosinophilia was found in seven cases (41, 17%).

All our patients were treated with topical glucocorticosteroids and only 3 with systemic glucocorticosteroids (17, 64%). Other frequent treatment options were antihistamines (14 cases; 82%), phototherapy (9 cases; 53%). The drug imputability was likely for all 17 cases. Histopathological analysis showed in all cases histological signs in favor of a lichenoid drug eruption. The outcome upon discontinuation of the responsible drug was completely favorable with regression of the eruption and improvement of pruritus.

Conclusion:

Our case series highlights a rare and generally benign form of drug reaction for which reporting in the literature has increased in frequency in the last decade. Physicians should be aware of this type of reaction. Early detection of these cases has practical importance since the identification and elimination of the causative drug is essential for therapy success.

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Abstract N°: 3647

Tamoxifen induced folliculitis: a case report

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Introduction & Objectives:

Tamoxifen has been the standard endocrine therapy in breast cancer for several years. Tamoxifen is overall well tolerated, with little known side effects. Cutaneous reactions are well known but still rarely reported.We report a case of a tamoxifen-induced folliculitis.

Results:

A 44-year-old woman, with a history of left breast adenocarcinoma treated 2 years previously by mastectomy and left axillary staging, completed by adjuvant radiotherapy and chemotherapy with complete remission. She was diagnosed 2 months ago with cutaneous lymphangitis carcinomatosis for which she had been treated with Tamoxifen 20mg/day. Two months following the start of tamoxifen therapy, she developed papulo-pustular lesions on her abdomen, chest and arms. Investigations including complete blood count, renal and liver function tests, blood sugar, and lipid profile were normal. A skin biopsy showed a mainly neutrophilic infiltrate of follicular epithelial structures. Fungi were not detected. The pharmacovigilance investigation had incriminated tamoxifen. The tamoxifen dose was reduced to 10mg/day and she had been treated with doxycycline and topical corticosteroids with a slight improvement.

Conclusion:

Given the frequent use of Tamoxifen, this case has been presented in view of its rarity as well as to broaden the discussion of various tamoxifen-related skin changes documented in patients with breast cancer.

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Abstract N°: 3653

Postchemotherapy acneiform rash : a usual reaction to an unusual molecule

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Introduction & Objectives:

Cancer therapies often induce cutaneous side effects, which vary according to the therapeutic class involved. Acneiform eruptions, known to be associated with certain therapeutic families in particular, may occur following the administration of other agents, making it necessary to be familiar with them for appropriate management.

Patient & Observation:

We report the case of a 31 year old female patient, treated for a right breast carcinoma by tumorectomy with lymph node resection, and chemotherapy consisting of Paclitaxel and Carboplatin ; who presented with follicular papulo-pustular lesions of the neck, trunk and upper limbs that appeared 1 week after her first course of chemotherapy and spread after the second. Clinical examination found a stable patient presenting with total alopecia and pigmented lesions of scarring appearance without any other associated mucocutaneous or phanerial sign. Bacteriological and mycological samples were negative. Skin biopsy revealed a subacute and chronic dermatitis rich in eosinophilic polynuclei with subcorneal pustules without histological evidence of folliculitis, in favor of a toxidermic origin. The patient received tetracyclines 300 mg/d and local treatment containing glycolic acid, salicylic acid and niacinamide; with favorable outcome.

Discussion :

The originality of our work lies in the rarity of the occurrence of acneiform toxidermia with paclitaxel and carboplatin.

Toxic manifestations of anti-cancer therapies are multiple and well known. They vary in presentation and range from simple pigmentary disorders to more serious, life-threatening reactions.

The “acne-like” eruptions present as follicular papules or papulo-pustules leading to pigmented scars, without comedones, located mainly on the head and trunk and occurring 1 to 2 weeks after initiation of the involved treatment. Mainly due to EGF receptor inhibitors (anti-EGFR), they can also result from the administration of BRAF inhibitors and less frequently, MEK inhibitors.

Taxanes (paclitaxel), usually responsible for hand-foot syndromes, nail toxicity and hair loss ; and platinum salts (carboplatin), responsible for mucocutaneous hyperpigmentation, hypersensitivity reactions and transient alopecia ; are much less known to cause acneiform toxidermia, and our case is one of the rare observations.

Regarding treatment, local or oral antibiotherapy, local corticosteroids or retinoids usually lead to resolution of the lesions, and discontinuation of treatment is not necessary given the benign nature of the disease and its usual improvement with time.

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Abstract N°: 3658

Demographic features of a contemporary cohort of Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis patients: An 8-year Australian burn centre experience

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Introduction & Objectives:

Stevens-Johnson Syndrome (SJS) and Toxic Epidermal Necrolysis (TEN) are dermatological emergencies characterised by epidermal desquamation and are associated with significant mortality. We aim to review the demographic features of patients with SJS, SJS/TEN overlap and TEN admitted to a quaternary burns centre in Australia.

Materials & Methods:

A retrospective cohort study was performed at a metropolitan burns centre in Australia. All patients diagnosed with SJS, SJS/TEN overlap and TEN from 01/07/2013 to 30/10/2021 were included.

Results:

83 patients were identified (15 SJS, 26 SJS/TEN overlap, 42 TEN). 47 patients were female (56.6%). The mean age was 52.1 years (SJS 45.0, SJS/TEN 61.0, TEN 53.5). The majority of patients were Caucasian (51, 61.4%) or Asian (26, 31.3%). Inpatient mortality was 15.7% (13/83).

The majority of patients resided at postcodes <50km from the burns centre (64, 77.1%). The measure of 50km was used as all metropolitan hospitals in this Australian state are within 50km of the burns centre. In contrast to the general consensus that non-metropolitan residents have poorer health outcomes compared to their metropolitan counterparts, patients from postcodes of residence ≥50km from the burns centre had a lower mortality rate than those residing <50km from the burns centre (10.5% and 17.2% respectively, OR 0.57, p=0.723) despite similar disease severity (mean SCORTEN 2.63 and 2.58 respectively).

Patients who presented with or developed SJS, SJS/TEN overlap or TEN whilst at the burns centre had lower mortality than those who initially presented or developed this at another hospital (5.6% and 18.5% respectively, OR 0.37, p=0.280). Notably, patients that developed SJS, SJS/TEN overlap or TEN during inpatient admission at a hospital other than the burns centre had a statistically significantly higher mortality rate than those who presented directly to an Emergency Department (ED) or developed this during admission at the burns centre (OR 3.64, p=0.045).

Those who developed SJS, SJS/TEN overlap or TEN during an admission for another illness had a higher mortality rate than those presenting with this as their primary complaint (26.7% and 9.4% respectively) (OR 3.49, p=0.058).

Conclusion:

The data from this cohort demonstrates the characteristics of patients who developed SJS, TEN and SJS/TEN overlap in the Australian population.

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Abstract N°: 3696

Dupilumab as an Effective Therapy for Corticosteroid-Resistant Type 2 Inflammation-Related Cutaneous Adverse Reactions

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Dupilumab as an Effective Therapy for Corticosteroid-Resistant Type 2 Inflammation-Related Cutaneous Adverse Reactions

Keywords: Drug-induced cutaneous reactions; Corticosteroid-resistant; Dupilumab; Th2 cell-mediated immune pathway; DRESS syndrome

Introduction & Objectives:

High-grade cutaneous adverse effects during drug administration are important concerns for clinicians. Although systemic corticosteroids are commonly used and generally effective, in certain cases, steroid treatment is resistant or contraindicated. As many drug hypersensitivity reactions manifest with maculopapular rashes and severe pruritus, which indicates Type 2 inflammatory response, thus targeting IL-4Ra with dupilumab promises to be a safe alternative.

Materials & Methods:

We applied dupilumab in a drug rash with eosinophilia and systemic symptoms (DRESS) patient who had persistent itching and skin eruption. Additionally, we reviewed literature on the use of dupilumab in controlling steroid-resistant or contraindicated drug rashes showing Type 2 inflammation.

Results:

An 18-year-old female patient was diagnosed with DRESS with a a score of 6, according to RegiSCAR criteria. After the treatment with potent prednisone and high-dose immunoglobulin, most of the symptoms improved, but the rash and itching persisted. Moreover, the patient developed moon face when admitted to our hospital. Upon admission, the rash was prominent and the pruritus numerical rating scale (NRS) score remained at 9. In the immunological evaluation, the total IgE level was obviously elevated. The total T-cell count in the serum was increased, with an increase in CD4+ T cells as the main change. Notably, CD4+ T cells that generate IL-4 and IL-13 cytokines were significantly while the levels of IL-5 and IL-31 were normal. Due to the evidence of Type 2 inflammation activation, we administered dupilumab (600 mg loading dose followed by 300 mg every two weeks). With the help of the biologics, systemic steroids were smoothly discontinued. She received a total of 16 weeks of dupilumab injections. And during the 5-month follow-up period, there was no relapse. Laboratory examination showed that the patient's IgE level and the IL-4+ and IL-13+ Th2 subsets rapidly declined since the second week.

We reviewed literatures on the successful treatment of corticosteroid-resistant drug eruptions using dupilumab. In our case and these studies, corticosteroid-resistant drug eruptions were defined as recurrent maculopapular rash with pruritus that did not resolve with systemic corticosteroids or recurred at least once during corticosteroid tapering. To our surprise, culprit drugs involve many immune-modulating agents, represented by immune checkpoint inhibitors, IL-17 and IL-23 molecular inhibitors. The rash generally manifested as widespread pruritic maculopapular rash or bullous pemphigoid-like lesions. Consistent with our case, eosinophil involvement and

increase in Th2-related molecules such as IL-4 are commonly seen in skin lesions or peripheral blood. In all 15 reported cases, corticosteroid use was smoothly reduced or stopped with dupilumab, and some even began to resume the culprit drug use. Of note, no safety issues were reported in all reviewed cases.

Conclusion:

Therefore, we propose that for treating steroid-resistant drug eruptions primarily characterized by Type 2 inflammation, dupilumab has dual advantages in terms of both efficacy and safety.

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Abstract N°: 3722

Severe acute localized pustulosis of the face (ALEP)

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Introduction & Objectives:

Acute localized exanthematous pustulosis (ALEP) is a rare entity, considered as a localized atypical variant of acute generalized exanthematous pustulosis (AGEP). It is characterized by the acute appearance of multiple sterile non-follicular pustules developed on an erythematous and edematous background, generally localized on the face, neck or chest. We report a case of a severe acute localized pustulosis due to amoxicillin/clavulanic acid.

Case report:

A 40-year-old woman, with no personal or family history of dermatological disease, was admitted to the emergency department with an acute eruption of multiple small, nonfollicular, millimetric, lactescent, superficial, and locally confluent pustules. Developed on erythematous, oedematous plaques affecting the face, scalp, neck; with the presence of erosion of the oral and genital mucosa without other associated signs, all evolving in a context of fever of 38.2° as well as skin burning sensations.

The rash was preceded by a pharyngotonsillitis for which the patient had taken amoxicillin/clavulanic acid (3 g/day) 4 days before the eruption.

The patient had a frank hyperleukocytosis (20170/mm3) with neutrophilic hyperpolynucleosis (16770/mm3). Eosinophilia was not present. The sedimentation rate was 116, and the C-reactive protein (CRP) 96.7 g/L. Liver and kidney function were within normal limits. Serologies were negative and bacterial and fungal cultures were negative.

In addition, a skin biopsy of a pustular lesion on the back of the neck was performed, showing a subhorned pustule with keratinocytic necrosis and vasculitis with a dense diffuse lymphoplasmacytic and polynuclear infiltrate.

The evolution was favourable after we stopped amoxicillin/clavulanic acid, with progressive disappearance of the pustules within 10 days of discontinuation with persistent post-inflammatory hyperpigmented macules.

Given the temporal relationship between antibiotic administration and skin eruption and the histological findings, our case can be considered an unusual type of acute generalized exanthematous pustulosis (AGEP), defined as amoxicillin/clavulanic acid-induced ALEP of the face.

Discussion

Acute localized exanthematous pustulosis (ALEP), first described in 2005 by B. Prange et al, is a rare entity with about 30 cases published in the literature, confirming that it is a severe skin eruption. It consists of the sudden and localised appearance of numerous pustules less than 5 mm in diameter, non-follicular, sterile, on an oedematous erythematous background involving only the face, neck and/or trunk; 3 to 5 days after the start of a culprit drug, disappearing shortly after the latter is withdrawn. Accompanied by pruritus or sometimes burning sensations. Mucosal involvement is rare, mild and usually limited to one site, mainly the oral mucosa. Fever and leukocytosis may be present. More than 80% of described cases of PEAL are drug-induced, with antibiotics, particularly b-

lactams and macrolides, being the most common triggers. In particular cases it can be induced by bacterial, viral or parasitic infection or exposure to airborne substances of plant origin [Contact with a plant has been identified in one case induced by Thapsia garganica and another case induced by field mustard (Sinapis arvensis).

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Abstract N°: 3749

overlapping dress and toxic epidermal necrolysis - case report-

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Introduction & Objectives:

Drug-induced severe cutaneous adverse reactions (SCARs) include acute generalized exanthematous pustulosis, drug reaction with eosinophilia and systemic symptoms (DRESS), and epidermal necrolysis (Stevens-Johnson syndrome [SJS], toxic epidermal necrolysis [TEN]).

Diagnosis of these syndromes is based on strict diagnostic criteria (described by the RegiSCAR group). Sometimes the distinction between 2 SCARs can be extremely challenging, and overlapping conditions could therefore be taken into consideration. We report here a case of overlapping SCAR, meeting the RegiSCAR criteria for both DRESS and TEN.

Materials & Methods:

A 59-year-old woman, with a history of recent high-grade glioma surgery, presented a diffuse maculopapular rash with a fever up to 40°C. There was no skin detachment, and the Nikolsky sign was negative. She also had an erosive cheilitis. Anamnesis revealed phenobarbital has been introduced 3 weeks earlier, just after surgery.

The laboratory routine revealed hypereosinophilia (1,230/mm3) and a three-fold increase in transaminases levels. The use of RegiSCAR scoring system made a diagnosis of “probable” phenobarbital-induced DRESS. The drug was discontinued and the patient started oral prednisone (1 mg/kg/d). Two days later, the patient has had targetoid lesions on the former sites of the initial rash, which extended to the full body, with a skin detachment occurring on the back and a positive Nikolsky sign only on this location. She also presented oral, genital and ocular mucosal involvement. The blood test showed an increase of eosinophilia up to 1,490/mm3 and eight-fold increase in transaminase levels. Four days later, the skin detachment exceeded 30% of body surface area. The histopathological examination was compatible with a TEN. Within 2 weeks, we observed a complete skin healing and eosinophilia rate returning to normal. According to the RegiSCAR criteria, the clinical picture of our patient was compatible with both DRESS and TEN. Therefore, our final diagnosis was overlapping DRESS/TEN.

Results:

The SCARs are defined by clinical features associated more or less with specific biological and histological findings. The differential diagnosis between the different types of SCARs is usually easy since these conditions frequently have a distinctive, typical presentation. In rare cases, though, the initial presentation of SCAR can be ambiguous leading to the suspicion of overlapping SCARs, which are defined as cases fulfilling the criteria for definite or probable diagnosis of at least 2 SCARs according to RegiSCAR scoring system. Only a few cases of overlapping SCARs have been reported, with all combinations being possible, including DRESS/TEN.

In our patient, the initial clinical presentation would suggest the diagnosis of DRESS because of the presence of hypereosinophilia and liver abnormalities. The subsequent occurrence of extensive skin detachments, the involvement of several mucous membranes and the histopathological examination were then consistent with the diagnosis of TEN. According to the RegiSCAR scoring system, our patient fulfilled the criteria for DRESS and TEN, which led us to consider an overlapping DRESS/TEN.

Conclusion:

Despite ambiguities among SCARs, confirmed overlap cases are rare. Differentiating different SCARs may lead to quicker diagnosis and more effective disease management.

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Abstract N°: 3853

Generalized bullous fixed drug eruption caused by iodinated contrast media: a case report

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Introduction & Objectives:

Contrast media (CM) are an indispensable part of modern medical imaging. Adverse reactions to CM are uncommon but frequently involve cutaneous symptoms. Delayed hypersensitivity reactions to intravenous CM (ICM) commonly present as maculopapular exanthems, but rarely, they can manifest as fixed drug eruptions (FDE) and Stevens–Johnson syndrome (SJS).

Materials & Methods: We present the rare case of generalized bullous fixed drug eruption (GBFDE) induced by radiocontrast media (ioversol).

Results:

A 63-year-old woman, Fitzpatrick phototype V, with end-stage renal disease on hemodialysis presented to our emergency department with a disseminated dermatosis characterized by erosions and hemorrhagic crusts localized on both lips and along the arteriovenous fistula on the left arm, a large hypopigmented macule on the peri labial area, hyperpigmented macules on the dorsum and palm of the left hand and hypopigmented macules on the genital area. Two days prior, the patient underwent a cardiac catheterization. During the radiocontrast (ioversol) administration, she experienced discomfort and pruritus. That evening, she noticed bullous lesions on her lips and left arm. Upon chart review, we discovered that the patient had two previous episodes of a bullous eruption within 12 hours of contrast administration after arteriovenous fistula revisions, which had been associated with anti-inflammatories. Skin biopsy was unspecific. Treatment consisted of 1 mg/kg/day of prednisolone and betamethasone dipropionate cream. Two months later, we performed patch tests with undiluted iodinated contrast media (ioversol) on lesional skin, which were negative. Prick tests and intradermal tests with delayed readings to iomeprol, iopromide, ioversol, iodixanol, ioxithalamate, and amidotrizoate were also negative. Nevertheless, we recommended a prevention protocol for allergic reactions to CM. Six months later, the patient returned to the emergency department with the same clinical picture. Two days prior, the patient had undergone an arteriovenous fistula revision with contrast administration. The prevention protocol was not administered as recommended. Based on the clinical appearance, the time frame of the eruption, and the positive drug provocation test, the patient was diagnosed with GBFDE due to radiocontrast.

Conclusion:

The burden of adverse drug reactions is high in patients with moderate to advanced chronic kidney disease. Delayed hypersensitivity reactions, like FDE, to ICM may be underdiagnosed, as cutaneous symptoms may be attributed to oral medications, mainly if patients are on multiple drugs. GBFDE, the rarest variant of FDE, can be misdiagnosed as SJS due to its overlapping features. However, clinically GBFDE is similar to conventional FDE, with a short latent period and less mucosal involvement than SJS. Skin tests can be used to identify the suspected culprit agent that has caused a drug hypersensitivity drug eruption to ICM. In the context of FDE, patch tests are positive up to 40 % of cases. If skin tests are negative, a drug provocation test may confirm the diagnosis. Although drug provocation tests are not recommended in severe cases, our patient performed an unexpected and unadvised drug provocation test which confirmed the diagnosis.

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Abstract N°: 3943

Paracetamol-induced generalized fixed drug eruption

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Introduction & Objectives:

Paracetamol is a widely used over-the-counter analgesic-antipyretic agent and known to have a safety profile. Its cutaneous adverse effects are rare, varying from mild pruritis to Stevens–Johnson syndrome/toxic epidermal necrolysis. Fixed drug eruption (FDE) due to paracetamol is reported in the literature. Cutaneous or mucosal lesions characterize FDE and re-exposure to the eliciting drug evokes a similar lesion at the same body site, possibly accompanied by additional lesions at other locations.

Materials & Methods: We report a case of a 53-year-old female with generalized fixed drug eruption (GFDE) due to paracetamol.

Results:

A 53-year-old female, Fitzpatrick phototype VI, with end-stage renal disease on hemodialysis, presented with a history of three recurrent episodes of pruritic skin lesions. Those lesions always had developed at the same sites and healed with hyperpigmentation. The patient also reported additional skin lesions at each episode. After careful drug intake history, the symptoms always occurred after intake of paracetamol. The last acute episode was two weeks before the consult. Cutaneous examination revealed disseminated scaly hyperpigmented macules and patches with no mucosal involvement. Skin biopsy was compatible with post-inflammatory hyperpigmentation. The patient was treated with emollients. We also recommended eviction of the paracetamol based on a 6-point Naranjo scale score. Two months later, patch tests with paracetamol 10 % pet. on lesional skin yielded no reaction after 24 and 48 hours. One month later, the patient returned to the emergency department with a similar clinical picture after taking paracetamol in the context of an upper respiratory infection. Based on the clinical appearance, the time frame of the eruption and the positive drug provocation test, the patient was diagnosed with GFDE due to paracetamol.

Conclusion:

FDE is a cutaneous drug eruption that heals with residual hyperpigmentation and can lead to undesirable cosmetic embarrassments. Rarely, FDE may manifest as a generalized eruption characterized by multiple disseminated lesions, like in our case. Patients are often ignorant of the drugs consumed and do not accept it as an etiologic factor. Discontinuation of the culprit drug is the central issue of managing FDE. Detailed drug history and complaints are crucial to identify the culprit drug. The typical clinical presentation and the history, including a close chronological link between drug intake and skin symptoms, remission after drug withdrawal, and relapse after re-administration, strongly supported the diagnosis of GFDE. Patch tests and oral provocation tests represent the gold standard in the diagnostic work-up of FDE. Patch tests in our patient were negative, which can be explained by their sensitivity of only up to 40% in the context of FDE.

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Abstract N°: 3951

Hydroxyzin- induced Acute Generalized Exanthematous Pustulosis in psoriatic patient treated with Guselkumab

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Introduction & Objectives: Bullous pemphigoid (BP) is the most common autoantibody-mediated autoimmune subepidermal blistering disorder, mostly affecting elderly patients. The etiology of this abnormal immune response is still unknown, although it sometimes can be induced by several drugs. In the recent years dipeptidyl peptidase 4 inhibitors (DPP-4i) have increasingly been identified as causative agents of bullous pemphigoid and the association between them has been demonstrated in several studies. We report a case of a 72-year old- male patient with type II diabetes mellitus, diabetic nephropathy and chronic kidney disease (CKD) that developed BP after linagliptin introduction into the antidiabetic therapy. The patient came to the dermatological department with a history of a itchy, erythematous rash since 1 year with slow progression and since 5 mounts appearance of gerealis blisters with different size. He was treated with different types of antihistamine drugs and topical emollients, with no improvement. The misdiagnosis for that period of time was critical for the patient.

Materials & Methods: Clinical features, laboratory results and dermatohistopathological examination of a lesional skin biopsy and direct immunofluorescence of perilesional skin were analyzed.

Results: Clinical diagnosis of BP was confirmed by histological examination of a lesional skin biopsy and direct immunofluorescence of perilesional skin. At the time of hospitalization, the ongoing antidiabetic therapy was discontinued and replaced by Acarbose, whereas Dexamethasone 8mg and Ceftriaxone 2g were started and both administered: bullous lesions healed in 1 week without any recurrence until the end of the therapy.

Conclusion: It is evident from this report that gliptins might be related to bullosius pemphigoid.** Physicians should be aware of the possible reaction to** Dipeptidyl peptidase-4 (DPP4) inhibitors (gliptins) and always keep it in mind as a potential trigger factor for bullous pemphigoid.

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Abstract N°: 4145

Systemic Immunomodulatory Interventions for Stevens-Johnson Syndrome / Toxic Epidermal Necrolysis: A Systematic Review and Meta-Analysis in the Context of the German Evidence-Based Guideline

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Introduction & Objectives: At present, German health care provision for Stevens-Johnson syndrome / toxic epidermal necrolysis (SJS/TEN) is highly heterogeneous. This also applies to systemic immunomodulatory treatments administered in the acute phase, on the use of which no consensus exists and which might play a critical role in patient survival. An interdisciplinary expert committee is currently developing a government-funded guideline aiming to establish evidence-based therapeutic standards and to reduce the risk of inadequate care. In this context, we are conducting a systematic review to inform treatment recommendations made by the guideline committee. Our review is designed to account for the methodological requirements of a predominantly retrospective and observational body of research.

Materials & Methods: Systematic review of following outcomes: mortality, length of hospital stay, time to reepithelialization and resulting sequelae. Inclusion criteria: randomized controlled trials (RCT) or comparative observational studies with at least 5 patients per treatment arm, prospective or retrospective studies. Search of the databases MEDLINE and Embase for studies published between 1993 and the 2023 using a pre-specified search strategy without language restrictions. Independent screening and data extraction by two reviewers followed by risk of bias assesment using the ROB-2 and ROBINS-I tool for RCTs and observational studies, respectively. If methodological and statistical heterogeneity of the included studies permit calculation of common effect estimates, meta-analysis and reporting of results in accordance with PRISMA recommendations. Consideration of individual patient data for meta-analysis in case no pre-calculated measures of effectiveness are reported.

Results: Study results will be available at time of presentation. A preliminary piloting of our search strategy and abstract screening revealed abiding interest in the subject and methodological diversity.

Conclusion: Heterogeneity in systemic immunomodulatory treatment of acute SJS/TEN suggests a prevalence of substandard care for this condition. A systematic review conducted by our group will provide an up-to-date assessment of treatment effectiveness considering patient-relevant outcomes. By identifying methodological deficiencies in the analyzed studies, it will also help facilitate the development of research standards for the study of rare diseases.

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Abstract N°: 4153

Effect of Pharmacological Treatment Modalities on Mortality in Stevens-Johnson Syndrome and Toxic Epidermal Necrolysis: An Australian Burn Center Experience.

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Introduction & Objectives:

Stevens-Johnson Syndrome (SJS) and Toxic Epidermal Necrolysis (TEN) are a spectrum of rare and severe mucocutaneous adverse reactions. Despite the condition's high mortality rate, there remains a paucity of data on the effectiveness of pharmacological therapies.

Materials & Methods:

All patients diagnosed with SJS, TEN or SJS/TEN overlap syndrome at the Alfred Hospital, a burns referral center in Victoria, Australia, between June 2013 and July 2021 were identified. Treatment and mortality data were extracted via retrospective chart review. Fisher's exact test was used to compare the mortality of those who received treatment to those who did not.

Results:

A total of 83 patients were identified (15 SJS, 26 SJS/TEN overlap, 42 TEN), of which 13 (15.7%) did not survive to discharge. Most patients (63.9%) were admitted to the intensive care unit, staying for a median of 7 days.

The majority (81/83, 97.6%) received pharmacologic therapy. The most common agents were intravenous immunoglobulins (IVIG) (68/83, 81.9%), systemic corticosteroids (52/83, 62.7%), cyclosporin (6/83, 7.2%), and etanercept (6/83, 7.2%). Corticosteroids were used in combination with IVIG in 40 patients (58.8%), with cyclosporin in 4 patients (66.7%), and with etanercept in 5 patients (83.3%). However, the addition of corticosteroids did not significantly reduce mortality compared to IVIG ($p=0.50$), cyclosporin ($p>0.99$) or etanercept alone ($p>0.99$).

Renal dialysis treatment at the time of diagnosis was associated with greater mortality (OR=10.31, $p<0.01$). Surgical debridement and wound closure using biosynthetic skin substitute was performed in 35 patients (42.2%), however this did not significantly reduce mortality compared to the non-surgical group (OR=0.68, $p=0.36$).

Conclusion:

We found no sufficient evidence for mortality benefits of combination therapy with corticosteroids. Surgical debridement and dressing change were not associated with improved mortality outcomes. We reaffirmed renal dialysis as a risk factor for in-hospital mortality.

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Abstract N°: 4161

Prevalence and Mortality Risks of Organ-Related Complications in Stevens-Johnson Syndrome and Toxic Epidermal Necrolysis: A Retrospective Cohort Study

Zhao Feng Liu*[1], Chris Chew[1], Adithya Shastry[1], Dale Jobson[1], Miki Wada[2], Zhengyang Liu[3], Lawrence Lin[4], Leon Zhang[4], Sarah Smithson[1], Michelle Goh[1], Johannes Kern[1, 4], Douglas Gin[1, 4]

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Introduction & Objectives:

Stevens-Johnson Syndrome (SJS) and Toxic Epidermal Necrolysis (TEN) are a spectrum of rare and severe mucocutaneous adverse reactions associated with various life-threatening complications. We aimed to evaluate the prevelence and mortality risks of various organ-related complications.

Materials & Methods:

All patients diagnosed with SJS, TEN or SJS/TEN overlap syndrome at the Alfred Hospital, a burns referral center in Victoria, Australia, between June 2013 and July 2021 were identified. Complications were identified from patient records.

Results:

A total of 83 patients were identified (15 SJS, 26 SJS/TEN overlap, 42 TEN). The skin was universally involved, followed by the oral mucosa (77.8%), genital mucosa (40.4%) and eyes (33.3%). The most common acute complications were hepatic enzyme derangement (48.0%), bacteremia (33.7%), acute renal failure (22.9%), thromboembolic event (8.4%), disseminated intravascular coagulopathy (6.0%), myocarditis (4.8%) and acute respiratory distress syndrome (1.2%). Mortality rate was significantly higher in those with acute renal failure (OR=12.9, $p<0.001$) and bacteremia (OR=5.9, $p<0.01$). Rates of bacteremia were higher in TEN (OR=6.3, $p<0.001$), however systemic steroid therapy did not significantly increase the risk of infection ($p=0.81$).

Conclusion:

Multiorgan involvement is common in SJS/TEN. Renal failure and bacteremia were associated with an increased risk of mortality. Reassuringly, systemic steroid therapy is not associated with an increased risk of developing bacteremia.

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Abstract N°: 4163

Systemic contact dermatitis to cobalt in a patient using multivitamin supplementation

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Introduction & Objectives:

We present a challenging case of systemic contact dermatitis, during the COVID-19 pandemic, in which self-medication was increasing and the use of multivitamins is seen as free of adverse events and most of the time it is not reported by patients. The objective of this report is to show the importance of anamnesis and to warn about self-medication and its possible side effects.

Materials & Methods:

All information was collected from assessments during hospitalization and subsequent outpatient visits. Manuscripts were reviewed by all cited authors.

Results:

Non-atopic female, 19 years old, with three months of evolution of well-defined, pruritic erythematous-scaly plaques in the malar regions, chin, forehead and anterior cervical region, associated with scaling on the scalp. Treated with systemic corticosteroids and antihistamines without improvement. Among the diagnostic hypotheses: contact dermatitis, seborrheic dermatitis and subacute cutaneous lupus erythematosus. General laboratory tests, autoantibodies and serology for infectious diseases were normal or negative. Patch test reagent for potassium bichromate and cobalt chloride. Even avoiding materials that could contain such metals, there was persistence and refractoriness. Submitted to a biopsy of the skin, showing psoriasiform dermatitis with spongiotic foci, exocytosis of small lymphocytes, favoring eczematous process.

We directed anamnesis to our main diagnostic hypothesis, systemic contact dermatitis, although the patient denied the use of medication, she remembered to use a vitamin complex recently. After discontinuing use there was improvement.

Conclusion:

Systemic contact dermatitis occurs in patients previously sensitized topically, after systemic re-exposure to the same agent or by cross-reaction to the hapten. The location of skin lesions may be in the area of initial contact with the substance or generalized and commonly present as erythematous lesions or with features of eczema.

The difference between systemic contact dermatitis and pharmacodermia lies in the induction of the immune reaction: topically and systemic, respectively.

There are numerous substances inducing systemic contact dermatitis already reported, among them are metals such as nickel, chromium and cobalt, the last two being present in the formulation used by the patient.

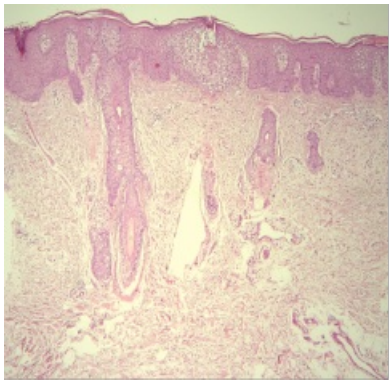
The main substance involved was cobalt, which is an example of a topical sensitizer and a component of cobalamin, present in the formulation used by the patient.

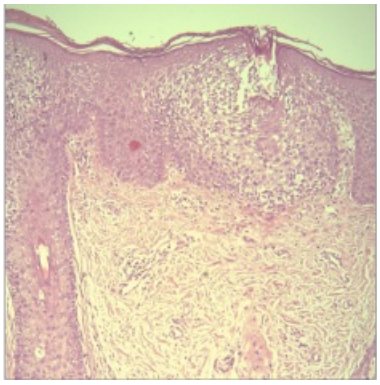
Several cutaneous manifestations have been reported in patients with cobalt allergic contact dermatitis undergoing oral cobalamin replacement, including atopic dermatitis, chronic vesicular dermatitis of the hands,

cheilitis, and stomatitis.

The exact mechanism of how cobalt induces systemic contact dermatitis remains unknown, but there is one study that reported the increased prevalence of cobalt allergy in the general population and the high popularity of dietary supplements containing cobalt, for example in the form of vitamin B12.

We concluded that it was systemic contact dermatitis after compiling the clinical and laboratory data, in addition to the positive patch test for cobalt, biopsy compatible with an eczematous process, in addition to complete clinical resolution after removal of the substance involved.





Left infra-auricular incisional biopsy, showing psoriasiform dermatitis with spongiotic foci and exocytosis of small lymphocytes.

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Abstract N°: 4209

The characteristics of dermatological adverse events related to epidermal growth factor receptor tyrosine kinase inhibitors in non-small cell lung cancer patients

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Introduction & Objectives:

Epidermal growth factor receptor (EGFR) tyrosine kinase inhibitors (TKIs) have become a standard treatment for advanced non-small cell lung cancer (NSCLC). However, EGFR-TKIs frequently cause dermatological adverse events (dAEs) which can affect the quality of life and cause dose reduction. This study aimed to investigate the profile of dAE and the influence of dAE on dose interruption in the use of 3 generations of EGFR-TKIs in NSCLC patients.

Materials & Methods:

NSCLC patients under treatment with EGFR-TKIs (erlotinib, gefitinib, afatinib, dacomitinib, and osimertinib) who visited the department of dermatology or Chemotherapy skin care center of Seoul National University Hospital between 2015 and 2021 were included. The data on the treatment history of NSCLC, 4 most common dAEs related to EGFR-TKIs (papulopustular rash, xerosis, paronychia, and pruritus), and dermatological intervention to control the dAEs were collected.

Results:

Among 3 generations of EGFR-TKIs, the number of dAEs was highest in the 2nd generation EGFR-TKI ($p = 0.002$). Papulopustular rash was frequent in males (OR 2.05, 95% CI 1.08-3.89, $p = 0.028$) and longer treatment duration (OR 1.02, 95% CI 1.01-1.04, $p = 0.011$). Papulopustular rash was common in 1st generation EGFR-TKI (OR 23.47, 95% CI 6.57-83.82, $p = 0.000$), and 2nd generation EGFR-TKI (OR 10.542, 95% CI 2.15-51.63, $p = 0.004$). Paronychia was common in 2nd generation EGFR-TKI (OR 24.00, 95% CI 2.68-214.73, $p = 0.004$). When it comes to factors related to dose interruption due to dAEs, the presence of papulopustular rash (OR 2.56, 95% CI 1.10-5.97, $p = 0.030$) and paronychia (OR 2.05, 95% CI 1.06-4.00, $p = 0.034$) were positively related with dose interruption. More severe papulopustular rash is more likely to cause dose interruption (OR 7.67, 95% CI 3.03-19.41, $p = 0.000$), while, the severity of paronychia was not related to dose interruption.

Conclusion:

This study revealed the characteristics of dAEs due to EGFR-TKIs in real world. The 2nd generation EGFR-TKI has the highest risk of dAEs. Among dAEs, especially papulopustular rash and paronychia are the main cause of dose interruption due to dAEs. Papulopustular rash is common in males, with longer treatment duration, and 1st and 2nd generation EGFR-TKIs. The higher the severity of papulopustular rash, the higher the likelihood of drug interruption. Paronychia is frequent in 2nd generation EGFR-TKI. Regardless of the severity of paronychia, it causes dose interruption even in low severity. Understanding the characteristics of dAE of EGFR-TKIs can be helpful in planning the administration of EGFR-TKIs.

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Abstract N°: 4315

Pemetrexed-Induced Pseudocellulitis: A case series.

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Introduction & Objectives: Pseudocellulitis is an uncommon clinical entity characterized by painful erythema and edema of the lower extremities, clinically resembling infectious cellulitis. We present a series of three clinical cases of pemetrexed-induced pseudocellulitis, a multi-targeted antifolate drug that inhibits DNA synthesis.

Materials & Methods: Description of three clinical cases. Review of the existing literature on similar cases.

Clinical Cases: Three patients (two males and one female), aged 66 to 76 years, with lung adenocarcinoma, developed pseudocellulitis after receiving pemetrexed as part of their oncological treatment. All patients presented with erythema, edema, and induration, accompanied by localized pain. Initially, two patients were diagnosed with cellulitis and received hospital-based antibiotic therapy without improvement. The third patient was evaluated and diagnosed early in the outpatient dermatology clinic. Through further investigation, including microbiological cultures, other etiologies, primarily infectious causes, were ruled out, and a favorable clinical response was demonstrated after discontinuation of pemetrexed, implementation of anti-edema measures, and administration of topical and/or systemic corticosteroid treatment.

Conclusion: Pemetrexed-induced pseudocellulitis should be considered a complication in patients undergoing treatment with this drug. Differential diagnosis of infectious cellulitis is crucial to avoid hospital admissions and inappropriate antibiotic treatments. Early assessment by dermatology has proven to be a cost-effective intervention. Further studies are necessary to understand the underlying pathophysiological mechanisms and establish prevention strategies.

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Abstract N°: 4318

tadalafil as agep culprit

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Introduction & Objectives:

Acute generalized exanthematous pustulosis (AGEP) is a rare cutaneous adverse reaction, characterized by the rapid onset of sterile pustules over erythematous skin. Drugs are the most common etiological agents, with antibiotics and antiepileptics being the most frequently implicated. Tadalafil, a phosphodiesterase type 5 inhibitor, is a relatively new medication, and AGEP associated with tadalafil is rarely reported in the literature.

Materials & Methods:

Case report

Results:

A 40-year-old male patient presented with a 3-day history of a painful, itchy rash over his trunk, extremities, and face and fever. He had started taking tadalafil for erectile dysfunction 2 days previoulsy das quiexas. There was no history of joint pain, or familial cutaneous diseases. Physical examination revealed multiple, small, non-follicular, sterile pustules on a background of diffuse erythema, involving more than 50% of his body surface area. Mucous membranes were not involved. Analises, biopsia A clinical and histologic diagnosis of AGEP was made, and tadalafil was discontinued. The patient was started on oral prednisolone 40mg daily, and his symptoms gradually improved over the next few days. Follow-up after two weeks revealed complete resolution of his rash.

Conclusion:

The Naranjo score, a validated tool to assess the causality of adverse drug reactions, was applied to our case, and the score was 7, indicating a probable association between tadalafil and AGEP. The EUROSCAR study group score, an european project dedicated to severe cutaneous adverse reactions was also applied. Our case was classified as 10 points. It is estimated that an overall score between 8-12 indicates definite acute generalized exanthematous pustulosis

Tadalafil, a commonly used medication for erectile dysfunction, has been associated with several cutaneous adverse reactions, including urticaria, angioedema, and Stevens-Johnson syndrome. However, reports of AGEP are rare. The mechanism of AGEP associated with tadalafil is not well understood, but it is thought to be an immune-mediated hypersensitivity reaction.

In conclusion, our case highlights the rare occurrence of AGEP associated with tadalafil and emphasizes the importance of considering AGEP in the differential diagnosis of patients presenting with a rash after taking tadalafil. Prompt recognition, discontinuation of the offending agent, and appropriate treatment can result in a good prognosis for patients with AGEP.

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Abstract N°: 4406

Adverse Cutaneous Reactions to psychotropic drugs

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Introduction & Objectives:

Psychotropic drugs are not without side effects, in particular skin reactions which can sometimes be serious, thus jeopardising the functional and vital prognosis

The aim of this study is to highlight the epidemiological and clinical characteristics of severe skin reactions due to psychotropic drugs.

Materials & Methods:

This is a retrospective study conducted over a period of 10 years .

It concerned all patients followed for a skin reaction due to a psychotropic drug. The imputability of the psychotropic drug was confirmed by the French methodology of Bégaud et al.

Mild skin reactions managed on an outpatient basis were excluded.

Results:

41cases were collected, the mean age was 28.64 years (9-74). 18cases (43.9%) were taking a psychotropic drug for the first time. The most common psychotropic drugs were: Carbamazepine (n=16) , phenobarbital (n=8) , lamotrigine (n=5) , chlorpromazine (n=4)

The average time between drug intake and onset of symptoms was 14 days (5 days - 60 days) for Dress syndrome, 21 days (2-90 days) for STJ, 7 days for vasculitis.

8 patients developed a side effect after increasing the dose of the psychotropic drug

Clinical forms were: DRESS syndrome (n=30) SJS (n=4), overlap syndrome (n=1), drug-induced vasculitis (n=4), SDRIFE (n=1), photosensitivity (n=1).

Complications were: functional renal failure (43%), hepatic cytolysis (75%), biological cholestasis (60%), Eosinophilia >1500 was found in 11 patients and was significantly associated with liver damage (p=0.021), carbamazepine was statistically correlated with renal damage and cholestasis (p=0.013); phenobarbital was associated with a risk of hepatic cytolysis (p=0.027)

Conclusion:

The cutaneous side effects of psychotropic drugs are the second most common in our context, after allopurinol. Although they are rare and most often benign, and rarely require interruption of treatment, some effects are serious and threaten the functional and vital prognosis. We found in our study that anticonvulsants, particularly carbamazepine, were the psychotropic drugs most likely to cause adverse cutaneous reactions, essentially in the cases of high doses (> 400 mg for carbamazepine), rapid increase in doses, or association of several psychotropic drugs, especially lamotrigine with Valproate. We also noticed that carbamazepine was more prone to renal injury

and cholestasis, and that phenobarbital was statically correlated with cystolysis hepatitis .

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Abstract N°: 4453

Vitiligo-like lesions induced by Ribociclib*

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Introduction & Objectives:

Ribociclib* is a cyclin-dependent kinase 4/6 inhibitor used in the treatment of metastatic breast cancer with a status of positive hormone receptor and negative HER2. This innovative therapy improves survival but may also be associated with potential adverse effects, including cutaneous manifestations.

We report a case of vitiligo-like lesions that appeared during treatment with Ribociclib*.

Materials & Methods:

A 70-year-old female patient, who has been undergoing treatment for breast cancer with bone metastasis for the past 3 years and has been on Ribociclib* for two years, presented with bilateral pruritic hypochromic macules on the face and forearms, which started 6 months ago and progressively worsened. The appearance of white fluorescence under Wood's light suggested vitiligo. The patient was prescribed oral corticosteroids 2 days a week and topical calcineurin inhibitor. A follow-up evaluation of her neoplasia revealed resistance to Ribociclib*, justifying its discontinuation.

Results:

Vitiligo-like lesions associated with Ribociclib* have been described in rare cases. Some authors have explained this effect by a disruption of intercellular signals leading to premature apoptosis of melanocytes. Patients have been treated with calcineurin inhibitors, resulting in mild improvement. Discontinuation of the antitumor treatment has not been proposed in any case. Switching to another molecule within the same drug class has been attempted without success. This could be due to a shared effect of the drug class or the irreversibility of the lesion process. After the cessation of treatment, no regression has been observed. This aspect needs to be monitored in our patient's case.

In all cases, psychological support is recommended due to the aesthetic impact, especially considering that alopecia may also be associated.

Conclusion:

We report a rare adverse effect of Ribociclib*, characterized by hypomelanosis. Although not severe, this hypopigmentation does not seem to respond completely to standard vitiligo treatments. Psychological support for patients remains an important aspect of management.

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Abstract N°: 4501

a new case of stevens-johnson syndrome induced by salazopyrin treatment

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Introduction:

Salazopyrin is a Disease-Modifying Antirheumatic Drug (DMARD), widely used in the treatment of chronic Inflammatory Bowel Disease (IBD) as well as some rheumatic conditions including rheumatoid arthritis. The incidence of toxidermia related to Salazopyrin remains rare, represented essentially by cases of DRESS Syndrome and Stevens-Johnson and Lyell overlap syndrome. We report a new case of Steven Johnson syndrome.

Case description:

A 38-year-old woman, treated for rheumatoid arthritis since 2009, was put on multiple treatments with a progression of relapses and remissions.

One month after taking Salazopyrin, the patient presented an extensive skin rash for which she was hospitalized in the dermatology department.

On clinical examination, the patient presented with pruritic maculo-papular lesions reaching 50% of the skin surface, associated with purpuric lesions of the lower limbs, facial erythema, conjunctival hyperemia, erosive cheilitis, and cervical adenopathy evolving in a febrile context (38.8°C) and with an altered general state.

Two days after hospitalization, the patient presented with epidermal detachments <10% of the body surface with a positive Nikolsky sign and erosions of the palate.

The laboratory test was without anomalies, particularly no infectious syndrome or hydro electrolytic disorders and no signs of visceral involvement. Histopathological examination was in favor of toxidermia. The Pharmacological investigation incriminated SALAZOPYRIN with a score of I6B4 in the imputability study.

The evolution was satisfactory after the discontinuation of Salazopyrin and the introduction of a symptomatic treatment based on local skin and mucous membrane care and dermocorticoids.

Discussion:

The Stevens-Johnson syndrome is a severe toxidermia that can be life threatening.

To our knowledge, there are only 3 cases of SJS with Salazopyrin: the first 2 cases were reported by Lydjie Tremblay and the 3rd by Borras-Blasco.

In our case, the symptoms appeared 28 days after the beginning of the drug administration, which is consistent with the literature results. The same delay was reported in all three cases.

As reported in the literature, fever, lymphadenopathy, and dysphagia were the first symptoms observed and preceded the mucocutaneous lesions. Characteristic mucosal involvement and skin detachment <10% of body surface area with a positive Nikolsky sign were present in our case as well as the other 3 cases, which is consistent with SJS.

Systemic corticosteroids are the mainstay of management of SJS. In our case, the patient was started on dermocorticoids, whereas the other patients were treated with oral and local corticosteroids. The patient had a favorable response and was discharged 14 days later.

The main interventions in case of suspected SJS are early recognition and immediate discontinuation of the medication that could be responsible reducing mortality.

Indeed, in our case the discontinuation of Salazopyrin was followed by a progressive disappearance of the lesions and a complete recovery without any sequelae.

Conclusion:

In medical professionals and patients should be aware of severe mucocutaneous side effects associated with specific drugs. The prognosis is considerably improved by early treatment at the disease's creation and prescription of any medication that has caused severe toxidemia together with patient education and awareness.

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Abstract N°: 4538

Sirolimus-induced DRESS syndrome

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Introduction & Objectives: Sirolimus is an immunosuppressive drug that inhibits the mTOR pathway. It is commonly used in organ transplants to prevent rejection. While no sirolimus-induced DRESS cases have been reported, allergic reactions with everolimus, a similar drug, have been documented. DRESS syndrome is a severe drug reaction characterized by fever, rash, and organ involvement. Diagnosis is based on clinical findings and laboratory tests. Early recognition, discontinuation of the drug, and supportive care are crucial in managing DRESS syndrome, often involving systemic corticosteroids.

Case Report: A 24-year-old man who had undergone haplo-TESE transplantation for acute lymphatic leukaemia presented with diffuse itchy eczematous lesions. Initially diagnosed as atopic dermatitis, he received topical steroid therapy and NB-UVB phototherapy, but his condition worsened. Two months later, he returned to the emergency department with eczematous patches, xerosis, fever, chills, and generalized edema. His medical history included relapses of leukaemia, acute cutaneous graft-versus-host disease (GVHD), and Evans syndrome. He had been on sirolimus immunosuppressive therapy before the onset of symptoms. A skin biopsy revealed spongiotic dermatitis with dermal eosinophils, suggestive of drug reaction or atopic reaction. Based on the severity of the symptoms and histological findings, the patient was diagnosed with sirolimus-induced DRESS syndrome. Sirolimus was discontinued, and oral steroid therapy was initiated, leading to significant improvement. At the one-month follow-up, the patient was symptom-free and had lost the gained weight.**

Conclusion: Although no cases of sirolimus-induced DRESS syndrome have been reported, allergic reactions with eosinophilia induced by everolimus have been documented. And since sirolimus and everolimus, both mTOR inhibitors, share a common mechanism of action, therapeutic indications, pharmacokinetics, adverse effects and drug interactions, it cannot be ruled out that sirolimus may trigger DRESS syndrome in patients with risk factors. In our case, the patient's history characterized by stem cell transplantation and multiple immunosuppressive therapies may have contributed to the development of DRESS syndrome after beginning sirolimus therapy. This case may be the first evidence of sirolimus-induced DRESS syndrome in a stem cell transplant patient and highlights how early diagnosis, discontinuation of the culprit drug and appropriate management are crucial for a favourable outcome.

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Abstract N°: 4563

Cutaneous toxicity of long-term hydroxyurea treatment: a case report

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Introduction & Objectives:

Mieloproliferative syndromes (MPS) encompass a group of hematological disorders characterized by abnormal proliferation of myeloid cells. Hydroxyurea has been widely used as a therapeutic agent for MPS due to its cytoreductive properties. However, long-term hydroxyurea treatment has been associated with cutaneous toxicity, including the development of squamous cell tumors (SCTs) and basal cell carcinomas (BCC). We hereby report a case of a 75-year-old patient with MPS, who experienced significant cutaneous toxicity following prolonged hydroxyurea use.

Materials & Methods:

A retrospective analysis was conducted on medical records of the patient, focusing on the clinical history, treatment regimen, and cutaneous manifestations. Pathology reports and imaging studies were reviewed to assess the nature and extent of the skin lesions. Relevant literature was also reviewed to provide additional context.

Results:

The patient had been receiving hydroxyurea for the last 10 years. The emergence of multiple SCTs and BCCs was observed after the seventh year of treatment. The skin lesions were primarily located on sun-exposed areas, such as the face, arms and fingers. Histopathological examination confirmed the diagnosis of SCTs and BCCs. The patient underwent surgical excision for several lesions, while others were managed with electrochemotherapy and topical treatments.

Conclusion:

This case highlights the significant cutaneous toxicity associated with long-term hydroxyurea use in MPS patients. The development of multiple SCTs and BCCs in this patient emphasizes the importance of regular dermatological surveillance in individuals undergoing hydroxyurea treatment. Physicians should be aware of this potential adverse effect and consider appropriate preventive measures and close monitoring to mitigate the risk associated with the emergence of cutaneous malignancies in MPS patients receiving long-term hydroxyurea therapy.

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Abstract N°: 4569

Dyshidrotic eczema as an adverse effect of intravenous immunoglobulin therapy

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Introduction & Objectives:

Materials & Methods:

Results:

Intravenous immunoglobulin (IVIg) is an effective therapy for a wide variety of immune-mediated diseases, including dermatologic and neurologic conditions. Adverse events occur in less than 5% of cases and are usually minor and transitory. Flu-like symptoms are the most described, with cutaneous adverse events affecting 0.4 to 6% of patients. Although rare, dyshidrotic eczema has been reported, especially in patients with neurologic disorders.

We describe a case of a 41-year-old male, with Guillain-Barré syndrome, following an*Influenza A* infection, treated with a 5 day course of IVIg 40 g daily (0.4 g/Kg), with progressive improvement of the neurologic status. Six days after treatment conclusion, the patient suddenly developed a symmetric and pruritic dermatosis of the hands. The physical examination revealed numerous papules and tense vesicles, with 1-2 mm of diameter and serous content, in an erythematous base, on the palms, dorsal and lateral aspects of the fingers. There were no cutaneous lesions in other locations or mucous membrane involvement. The patient had no relevant past medical history and denied previous dermatological diseases and allergies. Thus, the diagnosis of dyshidrotic eczema secondary to IVIg was established. Topical betamethasone ointment 1 mg/g twice daily and loratadine 10 mg for symptomatic relief was prescribed. The lesions subsided with superficial desquamation in 1 week, without recurrence.

The pathophysiologic mechanism of dyshidrotic eczema induction by IVIg remains unclear. However, a delayed-type hypersensitivity reaction or IVIg action as a B-cell superantigen are possible explanations. Furthermore, neurologic disorders often have an immune-mediated mechanism related to viral infections, which may predispose to hypersensitivity reactions. The dyshidrotic eczematous eruption usually begins between 5 to 10 days after IVIg administration, and is often limited to the palms and soles, extending to the trunk and limbs only in severe cases. In this clinical case, the fact of being the first episode of dyshidrotic eczema, the temporal relationship with the IVIg infusion and the association with a neurologic disease contributed to establish the diagnosis.

Conclusion:

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Abstract N°: 4579

Hand-foot syndrome induced by Pembrolizumab for non-small cell lung cancer

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Introduction & Objectives:

Hand-foot syndrome (HFS), also known as palmar-plantar erythrodysesthesia, is a cutaneous adverse effect of several drugs used in cancer treatment. In HFS the skin lesions include irritation, erythema, swelling, and discomfort of the palmar region of the hands and bottom of the feet. We present the case report of a 73-years-old male, former smoker (120 pack years), initially affected by chronic obstructive pulmonary disease who also received diagnosis of non-small cell lung cancer. He underwent surgery and radiotherapy but because of the progressing of the disease, he received pembrolizumab in monotherapy. The latter is a humanized monoclonal antibody against programmed death cell protein-1 human cell surface receptor. It is used as potent immunotherapy for several disorders such as melanoma, lung cancer, Hodgkin lymphoma, urothelial carcinoma, and other solid malignancies with good results. After accomplishing 6 cycles of treatment, in a period of 4 months, he developed bilateral erythema, edema, vesiculation, scaling and crusting of the palms of the hands and soles of the feet. Our purpose is to describe the skin reaction after monotherapy administration of pembrolizumab, to study the features of the lesions of the palms and soles by anatomic pathology investigations and to achieve the resolution of the clinical presentation using topical therapy.

Materials & Methods:

To meet the peculiar histopathological marks of HFS, it was performed a skin biopsy of the plantar lesions. It entailed the use of local anesthetics and punch biopsy 6mm blade to obtain a skin sample from the patient sole.

Results:

We stopped the immunotherapeutic drug and applied topical corticosteroid and salicylic acid cream obtaining the complete remission of the clinical picture in 3 weeks.

Conclusion:

HFS has been described in the literature as an uncommon side effect of many anti-tumor drugs including pembrolizumab but always in combination with other drugs such as capecitabine, lenvatinib and anlotinib. There are no reports in literature concerning the development of HFS as side effect of pembrolizumab in monotherapy, thus our report may help researcher to improve the side effect profile of the immunotherapeutic agent that is nowadays considered a novel and encouraging tool against cancer.

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Abstract N°: 4694

scleroderma after therapy with immune chekpoint inhibitors

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Introduction & Objectives: Immune checkpoint inhibitors (ICIs) are increasingly used in Oncology and new onset of scleroderma after these drugs is described in only a few published cases. Dermatologists must be aware of this rare immune-related adverse event, since it can lead to discontinuation of effective cancer treatments.

Materials & Methods: We report a 59-year-old male patient that developed scleroderma localized to the lower limbs and lower abdomen one month after initiation of treatment with pembrolizumab for metastatic lung adenocarcinoma.

Results: The skin biopsy of the left thigh was compatible with scleroderma and no other organ beyond the skin were involved. Raynaud´s phenomenon and pulmonary hypertension were also not present.

Since the tumour was responding to pembrolizumab, the patient had no other complains beside skin tightening and the scleroderma did not evolve into other body areas in the last three months, the therapy with ICIs was maintained after case discussion with the patient oncologist.

Skin lesions were treated with topical steroids and close follow up was established, to check for evolvement into another body areas or systemic symptoms.

Conclusion: New onset of scleroderma after ICIs represents less than 1% of the immune-related adverse events associated with these antibodies. There are no current treatment guidelines for this adverse event and in severe cases, cessation of these drugs is the favoured option in most published cases. If the scleroderma is localized and not evolving, as in our patient, close follow-up and topical immunosuppression can be option that allows the patient to maintain his effective cancer therapy.

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Abstract N°: 4707

Sweet's syndrome following therapy with Hydroxychloroquine

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Introduction & Objectives:

Sweet's syndrome is an uncommon skin disease characterized by painful polymorphic lesions associated with fever and neutrophilia. Several drugs can induce Sweet's syndrome, called drug-induced Sweet's syndrome (DISS), however reports of DISS associated with hydroxychloroquine (HCQ) are exceptionally limited to 3 cases to date.

Herein, we report a case of Sweet's Syndrome Following Therapy with Hydroxychloroquine in a patient with systemic lupus erythematous.

Materials & Methods:

A female patient aged 45 years old was treated with HCQ for systemic lupus erythematous. Two weeks after starting treatment, she presented, purple and erythematous papulonodular lesions of the trunk and limbs. The patient had a fever of 39 °C.There was a biological inflammatory syndrome and skin biopsy revealed an infiltrate of the dermis rich in neutrophils. Sweet's syndrome was diagnosed and therapy with prednisone 30 mg/day was proposed. Since HCQ was recently used by the patient, we hypothesized that HCQ may be involved and advised the patient to withdraw it. The cutaneous lesions disappeared completely, and the patient stopped the prednisone.

2 months later, the patient was admitted with a lupus flare and the rheumatologist reintroduced therapy with HCQ 200 mg twice daily. In a few days, the same skin lesions reappeared. Withdrawal of HCQ and a new cycle of prednisone allowed the permanent disappearance of the skin lesions.

Results:

Sweet's syndrome is an uncommon skin disease with a challenging diagnosis. As already highlighted, Sweet's syndrome may be drug-induced. The most commonly reported drugs are GCSF and anticancer agents, such as imatinib and lenalidomide. Walker and Cohen proposed five diagnostic criteria for DISS:

Acute onset of painful erythematous skin disease, dermal neutrophilic infiltrate on histopathological examination, fever, temporal relationship between drug and clinical manifestations or temporal-related recurrence after drug introduction; temporal-related resolution of skin lesions after drug withdrawal or treatment with systemic corticosteroids. Our observation matches all of the diagnostic criteria mentioned above.

Among the most common cutaneous side effects of HCQ, hyperpigmentation, urticaria and maculopapular rash. The association of HCQ with DISS has only been reported in 3 cases.

Conclusion:

Through this case, we tried to show an unusual side effect that must be kept in mind which is DISS, when dealing with a patient recently receiving HCQ.

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Abstract N°: 4729

Prevalence of everolimus-induced isolated eyelid edema in a study population of 308 solid organ transplant patients

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Prevalence of everolimus-induced isolated eyelid edema in a study population of 308 solid organ transplant patients

Introduction & Objectives: Everolimus is an inhibitor of the mammalian target of rapamycin (mTOR) commonly used as an immunosuppressive agent to prevent rejection after solid organ transplantation. Although eyelid edema is a recognised adverse event, only two cases cases of everolimus-induced palpebral edema (EIIEE) are reported in the Literature.

Materials & Methods: The aim of our study was to determine the prevalence of EIIEE in solid organ transplant patients from January 2022 to December 2022, referring to our Dermatology Unit for periodical dermatological screening. Inclusion criteria were: (i) patients who received a solid organ transplant and (ii) were on everolimus as part of their immunosuppressive therapy. Exclusion criteria were: (i) patients with preexisting eyelid edema; (ii) patients with non-isolated eyelid edema; (iii) patients with comorbidities potentially causing isolated periorbital edema. Relevant data were retrieved from the patient electronic database of our center, identifying patients prescribed everolimus who reported isolated eyelid edema during follow-up dermatologic visits. A descriptive analysis was performed to determine the prevalence of EIIEE in the study population.

Results: Among the 308 transplanted patients included in our study, isolated eyelid edema was observed in 10 (3.2%) patients. The demographic and clinical data are listed in Table 1. Two patients were female and eight were male, with an average age of 67.2 years. Seven patients (70%) had undergone kidney transplantation, 2 (20%) had undergone liver transplantation, and 1 (10%) had undergone heart transplantation. The onset of isolated periorbital edema varied from 1 to 24 months (mean of 11.8 months or median of 12 months) from the beginning of anti-rejection therapy with everolimus.

Conclusion: Isolated eyelid edema can manifest as a clinical feature of several conditions. In our study, we thoroughly investigated and ruled out potential causes of eyelid edema such as renal dysfunction, liver dysfunction, thyroid dysfunction, autoimmune diseases, complement deficiencies, hypersensitivity disorders, infectious states, and iatrogenic procedures. After conducting an accurate pharmacological history, we ruled out medications that could potentially cause eyelid edema, including angioedema induced by ACE inhibitors. Among the drugs considered, everolimus emerged as the only potential inducer of isolated periorbital edema.

To the best of our knowledge, this is the first study to assess the prevalence of EIIEE. With a prevalence of 3%, our findings suggest that isolated eyelid edema should not be considered a rare adverse event during everolimus therapy. Isolated periorbital edema induced by everolimus is a not negligible side effect in transplant recipients. Clinicians should be aware of this potential complication and consider it in the differential diagnosis of periorbital edema. Further research is needed to identify risk factors and underlying mechanisms.

PATIENT	AGE	SEX	ORGAN	CAUSE OF TRASPLANT	IMMUNOSOPPRESSIVE THERAPY	ONSET OF EDEMA AFTER INITIATION OF EVEROLIMUS TREATMENT	SYMPTOMS RELATED TO EDEMA	COMORBIDITIES	EDEMA THERAPY
1	62	M	Kidney	ADPKD	Everolimus, tacrolimus, steroids	1 month	Decreased vision	Diabetes, hypertension, cerebral aneurysm, BPH, recurrent herpes simplex	Blepharoplasty
2	72	M	Kidney	ADPKD	Everolimus, cyclosporine	13 months	No	Diabetes, hypertension, neuropatia, colorectal cancer, EBV+	none
3	61	M	Kidney	ADPKD	Everolimus, tacrolimus, steroids	12 months	Decreased vision	Hypertension, fatty liver disease, dyslipidemia	none
4	73	F	Kidney	ADPKD	Everolimus, tacrolimus, steroids	12 months	No	Hypertension, hepatitis C, IPMN-BD, osteoporosis, polycystic liver disease	none
5	71	M	Kidney	Obstructive acute kidney injury	Everolimus, tacrolimus, steroids	12 months	No	Hypertension, dyslipidemia	none
6	53	M	Kidney	Anomalies of the kidney and urinary tract	Everolimus, steroids, cyclosporine	12 months	No	NMSCs	none
7	71	M	Kidney	Berger's disease	Everolimus, tacrolimus, steroids	6 months	No	Hepatitis B, NMSCs	none
8	73	F	Liver	Liver cirrhosis	Everolimus, tacrolimus	12 months	No	Diabetes, hypertension, hypercholesterolemia	none
9	68	M	Liver	Liver cirrhosis	Everolimus, steroids	14 months	No	Hypertension, psoriasis, psoriatic arthritis	none
10	68	M	Heart	Dilated cardiomyopathy	Everolimus, cyclosporine	24 months	No	Breast cancer	none

Table 1.

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Abstract N°: 4817

Reactional nodule caused by the use of botulinum toxin and resulting in atrophic scars

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Introduction & Objectives: Botulinum toxin is an injectable neuromodulator derived from neurotoxins produced by Clostridium botulinum. Initially used for medical indications, botulinum toxin has become one of the most requested procedures in facial rejuvenation. Despite high success rates in the procedures, complications can occur either immediately or late. Careful patient selection as well as thorough understanding of head and neck anatomy and proper injection technique are critical to achieving desired results and minimizing adverse effects. Common complications of botulinum toxin injection include transient swelling, bruising, and headache, and the reactional nodule is uncommon.

Results: Patient 50 years old, female, rural worker, worked all her life in sun exposure, without adequate protection. Due to the action of the sun's rays, it presented early photoaging. Dissatisfied with his appearance, he sought out a dentist to improve facial wrinkles with botulinum toxin application. The botulinum toxin chosen was Nabota (ultra purified toxin from the Hall strain of clostridium botulinum type A), being applied in the frontal, glabellar and periocular regions. After 48 hours, painful erythematous nodular lesions appeared on the application points. Considering an infectious process, Ciprofloxacin 1g/day was administered associated with Clindamycin 900mg/day, without regression of the lesions. Culture was performed, considering atypical mycobacteria, with a negative result. After the biopsy of one of the nodules, a nodule reacting to botulinum toxin was diagnosed, with subsequent resolution associated with the use of oral corticosteroids, but leaving atrophic scars.

Conclusion: Reactional nodules are rarely identified as a side effect of treatment with botulinum toxins, with few cases reported in the literature. However, they are responsible for causing significant suffering, especially because they do not have a known cause, and there is no consensus on their management.

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Abstract N°: 4997

Late Onset Coetaneous Lupus in a Patient with History of Polyacrylamide Hydrogel Injection: A case report

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Introduction & Objectives:

Soft-tissue filler injections have been of high and increasing popularity during the recent years. Polyacrylamide Hydrogel (PAAG), as a type of permanent filler injection, has been proved to be safe in short-term, while is associated with serious adverse events in long-term mainly including infection, immune-mediated reactions and gel migration.

Materials & Methods:

This paper reports the case of a 60-year-old female, who developed discoid lupus erythematosus (DLE) associated several years after the injection of PAAG filler.

Case presentation:

A 60-year-old woman presented to our dermatology clinic complaining of violaceous patches and plaques on her left thigh and groin, both axillaries and sub-mammary. The lesions appeared three weeks before the current presentation with sharp borders and without any induration. The lesions were following Blaschko's lines and resembled Morphea skin manifestation.

Except for the skin lesions, physical examination and lab tests were normal. After microscopic investigation of the punch biopsy, lichenoid interface reaction, superficial and deep dermal as well as perivascular and peri-eccrine lymphocytic inflammation, mild epidermal atrophy and mild basement membrane thickening were reported. The findings were mostly in favor of a collagen vascular disease including lupus erythematosus. PAS staining showed mild basement membrane thickening. In Alcian blue staining, no dermal mucin deposition was detected. Histopathological findings confirmed a diagnosis of DLE and the patient was successfully treated with Hydroxychloroquine and the gel was successfully removed to prevent further reactions.

Results:

Earlier, immune-mediated reactions such as SLE following the injection of polyalkylimide dermal filler and systemic sclerosis, SLE and arthritis following the injection of silicon compounds were reported, while similar reports were rarely available in cases of PAAG filler injection. To the best of our knowledge, this is the first case of DLE developed following the injection of PAAG in long-term to be reported in the literature.

Conclusion:

This case highlights a rarely reported long-term reaction to PAAG injection and highlights the importance of obtaining a comprehensive medical history and timely consideration and management of such cases to prevent further complications.

Conclusion:

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Abstract N°: 5057

Rituximab induced serum sickness in a pemphigus vulgaris patient: a case report and review of literature

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Serum sickness is a rare hypersensitivity reaction characterized by fever, rash, and arthralgia. Although serum sickness has been discussed in people with various autoimmune diseases, only four cases of this side effect in pemphigus vulgaris (PV) patients receiving rituximab have been published.

We report a case of rituximab-induced serum sickness in a female patient and review the available literature on this side effect.

A 42-year-old female patient diagnosed with pemphigus vulgaris was treated with rituximab (500 mg weekly IV, slow infusion). **Premedication with acetaminophen 500 mg single dose, hydrocortisone 100 mg IV, and chlorpheniramine 10 mg IV was administered. Seven day**s** after her second dose of rituximab malaise, myalgia, and mild arthralgia started to develop which was controlled with antihistamines and NSAIDs. Due to a lack of suspicion; after symptomatic relief of the patient, the third dose of rituximab was administered leading to a hemodynamic collapse. The infusion was held and treatment with 100 mg/daily hydrocortisone was initiated.

As in this patient and other case reports, the rarity of RISS and its various presentations often leads to a delayed diagnosis. While rituximab is being more popularly used as a first-line therapy in PV patients, its adverse reactions are becoming more common. We believe increasing awareness of this potentially life-threatening condition can increase suspicion and enhance the diagnosis and management of the patients.

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Abstract N°: 5080

Enfortumab vedotin induce rapidly progressive hypertrophic Lichen planus

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Enfortumab vedotin induce rapidly progressive hypertrophic Lichen planus

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 a 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 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, 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 EV. 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.

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Abstract N°: 5093

Scleroderma-like reaction induced by Nivolumab

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Scleroderma-like reaction induced by Nivolumab

Charlotte Sophie Gunnemann, Sarah Alharbi, Dr. med Rose Moritz *

Introduction & Objectives:

Immune checkpoint inhibitors have contributed to a change in overall survival of patients with advanced melanoma. They are an inherent part of today`s therapy regimes. However, inhibition of CTLA-4, PD-1 and/or PD-L1 may lead to severe adverse events, including dermatologic side effects.

Case report:

A 76-year-old woman, previously treated with nivolumab over 15 cycles for stage IIB mucosal melanoma, was referred to our department with progressive skin stiffness and swelling of the lower legs, feet and lower arms over the last six months. The patient suffered from burning pain in the extremities and general fatigue, as well as a dry mouth, perioral stiffness, and dysphagia. The nivolumab treatment was interrupted and the patient started taking prednisolone 100mg over 9 days, continuing with 50mg over 4 days. The stiffness and pain improved under prednisolone but increased again after dose tapering.

On physical examination the skin of the forearms, backs of the feet, lower legs to inner thighs showed strong induration. Acral skin of the fingers and toes was not involved. On pressure a prolonged dent persisted. The skin showed isolated pressure-related blisters on the forearms and superficial ulcerations on both sides of the malleoli.

Except for Hep2-cells positivity and mildly elevated leucocytes, thrombocytes, as well as C-reactive protein level, the blood cell count and further laboratory test results showed no anomalies. Antinuclear antibodies, extractable nuclear antigen, anti-single-stranded DNA, anti-double-stranded DNA, and scl-70-antibody were not detected. Lung function tests and esophageal manometry showed no pathologic results. A biopsy showed plump, eosinophilic collagen bundles in the deep corium with only discrete inflammatory infiltrates. A CT body scan and MRI of the head excluded signs of progression of the malignant melanoma.

The patient was diagnosed with scleroderma-like reaction to nivolumab.

The oedema improved with initial antidiuretic therapy. The skin stiffness showed a slight improvement under 250mg of methylprednisolone over three days and UVA-therapy. The Rodnan skin score was initially calculated at 34 points and after therapy at 24 points.

Discussion:

Cutaneous adverse events are common, occurring in up to 34% in PD-1 targeted inhibitors and about 44% in CTL-4 targeted inhibitors. Most commonly, the skin shows maculopapular eruptions, pruritus and vitiligo-like lesions. Sclerotic skin changes are very rare and have only been described for pembrolizumab. The pathophysiologic mechanisms are unclear. If refractory to steroids, an immunosuppressive or immunomodulatory therapy should be

discussed. Further evidence needs to be collected for a more specific treatment of immune related sclerodermic skin changes.

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Abstract N°: 5158

Hair repigmentation in a patient treating secondary Sezary syndrome.

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Hair repigmentation in a patient treating secondary Sezary syndrome.

Introduction & Objectives:

Some medications have been associated with hair repigmentation, such as ciclosporin, brentuximab, anti PD1/PDL1 immunotherapy, targeted therapies for cancer, thalidomide, immunobiologics for psoriasis and second-generation retinoids. There is a case report of hair repigmentation during treatment with interferon alfa2a and ribavirin for hepatitis C. We describe a case of hair repigmentation in a patient with secondary Sezary syndrome during his treatment with pegylated interferon alfa2a and photopheresis.

Materials & Methods:

Our study was conducted at the department of dermatology in a tertiary care center.

Results:

An 88-year-old patient, with secondary Sezary syndrome T4N0M0B2, monoclonal gammopathy of undetermined significancy, renal insufficiency and high blood pressure was referred to our dermatology department in October 2020. He was previously treated with oral corticosteroids and PUVA, without success. He started treatment with photopheresis (cycles of consecutive two days every two weeks) and PUVA. For his comorbidities and pruritus, he was taking allopurinol, esomeprazole, olmesartan, lercanidipine (only if he had blood pressure higher than 150/90mmHg), mirtazapine and gabapentin. During his follow-up, it was seen on PET/CT pathologic lymph nodes enlargement (axillary, iliac and inguinal). Because of pruritus and disease progression, it was added aprepitant, suspended PUVA and gabapentin, and started pegylated interferon alfa2a, at a subcutaneous dose of 90 mcg weekly, for Sezary syndrome T4N3M0B2, in October 2021. In July 2022, he presented a cleared skin, mSWAT0 and was decided to reduce the frequency of photopheresis to one cycle per month, aprepitant was stopped, with maintenance of pegylated interferon. In February 2023, the patient referred that his white hair has been progressively turning grey for the past year. In the last visit, in May 2023, as he continued with good disease control, pegylated interferon was suspended and he stays on photopheresis 1 cycle per month.

Conclusion:

We described hair repigmentation in a patient with Sezary syndrome during treatment with pegylated interferon alfa2a and photopheresis, to which he had a very good response, with clinical control. Pegylated interferon alfa2a may cause hair changes, as hair loss, hair thinning, and debatable, grey hair. Photopheresis has an immunomodulatory effect however its therapeutic mechanism is not well known. No cases of hair colour changes were found related to photopheresis. The mechanism underlying repigmentation in our case needs to be further investigated.

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Abstract N°: 5162

Building Patient Representation for the German Guideline on Stevens-Johnson Syndrome / Toxic Epidermal Necrolysis: A Qualitative Study on the Illness Experience and Care Needs of Survivors

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Introduction & Objectives: In response to a pronounced heterogeneity in German health care provision for patients with Stevens-Johnson syndrome / toxic epidermal necrolysis (SJS/TEN), a national guideline is currently under development. Guideline committees commonly involve members of patient initiatives to advocate for patient preferences otherwise underrepresented. Unfortunately, no such initiatives could be identified, and preferences have not yet been systematically evaluated for a German patient population. For this reason, we decided to conduct a qualitative study on the experience of survivors of SJS/TEN to collect contextualized data on patient preferences and determine potential shortcomings and untapped potentials in routine care.

Materials & Methods: We contacted 14 participants who were either survivors of SJS/TEN or family members of survivors. Upon recruitment and obtaining informed consent, we conducted individual and dyadic interviews using a semi-structured interview guide developed in a precedent focus group with the same patient collective. Following principles of the grounded theory method, succesive recruitment was contingent on themes emerging during data collection. In our analysis, we sequentially coded the interview data into thematic categories of increasing levels of abstraction, resulting in a conceptual framework intended to account for universal features of the illness experience.

Results: From the survivor's perspective, SJS/TEN represents a profound transgression or destabilization of personal and interpersonal boundaries. This violation of boundaries touches on several fundamental areas of human experience and is often accompanied by a near-complete loss of autonomy. Even after returning to domestic life, survivors report physical limitations that, despite their perceived invisibility to a social environment unfamiliar with the illness, can lead to permanent changes in self-concept and personal values. Conversely, many participants reflected on the crucial role of restoring lost boundaries in leading a self-determined life and counteracting social alienation. The study identifies four key dimensions of boundary violations caused by SJS/TEN and four areas in which health care providers can help restore boundaries to facilitate successful coping.

Conclusion: Already in the acute phase, health care providers should be mindful of the condition's life-altering implications and how debilitating illness sequelae can affect survivors beyond a transient emergency. Aside from optimal medical treatment, successful management of SJS/TEN may also involve stabilizing lost boundaries, communicating important skills of daily living, and establishing long-term care relationships. As a means of indirect patient representation, our results provide guideline authors with concrete points of reference on the topics of patient communication, psychological interventions, the composition of interdisciplinary care teams, and outpatient care.

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Abstract N°: 5480

A clinico-epidemiological study of fixed drug eruption with a special focus on causative agent and clinical patterns

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Introduction & Objectives: Fixed drug reaction is characterized by the development of well-circumscribed, round, erythematous macules and plaques on cutaneous or mucosal surfaces following ingestion of the offending drug. The aim was to study the etiological agents responsible for fixed drug eruptions and to study the clinical patterns of FDE due to different drugs.

Materials & Methods:: It was a hospital-based observational cross-sectional clinical study. The given period was for 12 months. 50 patients were included. We could not enroll more patients due to the ongoing COVID-19 pandemic. The study was done after a literature search, hypothesis generation, protocol write-up, ethical submission, ethical clearance, patient enrolment, data collection, data analysis, and research. The patients were selected on the basis of the Naranjo scoring system.

Results: In the mentioned year, 0.11% of patients presented with FDE. 53% of the patients belonged to the 20-39 age having a sex ratio of 1.6:1. 64% of the patients presented with multiple lesions whereas 36% had a single lesion. 46% of patients presented with the first episode and 54% had recurrent episodes. The mean time interval of the first and subsequent episodes are 6.5 days and 4.3 hours respectively. 16% of patients had a history of herpes infection. Extremities were more affected followed by trunk and mucosa. Fluoroquinolones were the most common etiological agent found in 56% of patients having cutaneous (48%) and mucosal lesions (14%) followed by NSAIDs. The most common drug was Norfloxacin (36%%) followed by both paracetamol (12%) and metronidazole(12%).

Conclusion:: Fluoroquinolones were the most common drugs after NSAIDS and both contributed to bullous lesions and generalized bullous fixed drug eruption.

Table.1:Drug Specific morphology

|GROUP OF THE DRUGS|
CLASSIC

FDE

MUCOSAL FDE	BULLOUS FDE	GENERALIZED FDE		
Antibacterial	22	7	2	0
Anti amoebic	4	4	0	1
NSAIDS	5	3	2	0

GROUP OF DRUGS	BULLOUS LESION(n=4)	NON-BULLOUS LESION(n=46)
Antibacterial	2	29
Antiamoebic	0	9
NSAIDS	2	8

Table.2:According to distribution of lesions

PATTERN OF DISTRIBUTION	NO. OF CASES
Localized solitary	18(36%)
Localized multiple	8(16%)
Multifocal	23(46%)
Generalized	1(2%)

Table.3:Drug specific distribution

NAME OF DRUGS	LOCALIZED SOLITARY	LOCALIZED MULTIPLE	MULTIFOCAL	GENERALIZED
Antibacterial	8(16%)	2(4%)	21(42%)	0
Anti amoebic	2(4%)	1(2%)	5(10%)	1(2%)
NSAIDS	5(10%)	2(4%)	3(6%)	0

NAME OF DRUGS	LOCALIZED(n=20)	GENERALIZED(n=30)
Antibacterial	10(20%)	21(42%)
Anti amoebic	3(6%)	6(12%)
NSAIDS	7(14%)	3(6%)

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Abstract N°: 5488

Drug-induced subacute cutaneous lupus erythematosus by pembrolizumab - a case report

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Introduction & Objectives:

Lung cancer is one of the most common cancers worldwide. In Poland, a modern form of treatment with chemoimmunotherapy has recently become available. Immunotherapy, more often than chemotherapy, causes cutaneous toxicity. Skin lesions are reported by 49% of patients treated with humanized monoclonal antibodies directed against programmed cell death receptor 1 (anti-PD1).**

Materials & Methods:

Case report

Results:

A 36-year-old male patient was admitted to the Department of Dermatology with disseminated, ring-shaped erythematous lesions, which appeared 3 months ago, after the 4th cycle of chemoimmunotherapy (carboplatin and paclitaxel with pembrolizumab) against squamous cell carcinoma of the right lung. In addition, he had a history of chronic hepatitis B, chronic obstructive pulmonary disease, and nicotinism. The patient's laboratory tests showed SS-A (+++), the histopathological findings revealed features of lupus erythematosus and direct immunofluorescence (DIF) demonstrated no deposits of IgG, IgA, IgM or C1. Based on the clinicopathological correlation, a diagnosis of drug-induced subacute cutaneous lupus erythematosus (SCLE) was made. Patient's skin lesions gradually improved after prednisone and hydroxychloroquine therapy.**

Conclusion:

Cutaneous side effects associated with anti-PD-1 treatment have a significant impact on the quality of life of cancer patients. Spectrum can range from pigmentation disorders to Stevens Johnson syndrome. Cutaneous toxicities require specialized and multidisciplinary management. Early diagnosis and treatment of dermal lesions has a huge influence on a course of oncology treatment.

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Abstract N°: 5576

Incidence of Conjunctivitis Adverse Event in Patients Treated with Biologics for Atopic Dermatitis: A Systematic Review and Meta-analysis

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic inflammatory skin disorder. Biologics that have been approved for AD include dupilumab (anti IL4/13) and recently a new anti-IL13 namely tralokinumb was included. (1) Conjunctivitis was the most common adverse event from dupilumab from clinical trials and real-world experience.

Conjunctivitis is an inflammation or infection of the transparent membrane (conjunctiva) that lines the eyelid. It's caused by allergens, irritants, bacteria, and viral infections. Symptoms can vary depending on etiology, it can include redness, itching, burning, discharge, and eyelid edema.(2) In dupilumab clinical trials, conjunctivitis is not observed for other indications, namely asthma and nasal polyps. (2,3)

We aimed at providing pooled incidence estimates using meta-analysis for the incidence of any conjunctivitis with dupilumab and other new agents namely, lebrikizumab and tralokinumab.

Materials & Methods:

We systematically review the randomized controlled trials pertaining to the incidence of any conjunctivitis subtype with dupilumab, lebrikizumab and tralokinumab. A thorough search in Medline (PubMed), Directory of Open Access Journals, and ClinicalTrials.gov using the terms "Atopic dermatitis" and "biologics" or "Dupilumab" or "IL4/13" or "Tralokinumab" or "IL13" or "Lebrikizumab"

Results:

Out of 263 titles and abstracts, a total of 17 studies with a cumulative sample size of 5830 participants, reported the incidence conjunctivitis among atopic dermatitis patients undergoing biological therapies. Out of 17 studies, 12 evaluated the efficacy of Dupilumab and 2 tested Lebrikizumab and 3 assessed Tralokinumab. Extent of heterogeneity across the studies was minimal (Q= 15.81, I2= 0%).

Among 4197 patients undergoing biological therapies, 213reported suffering from conjunctivitis. While only 32 out of 1633 participants in the control group reported conjunctivitis. Pooled MH Odds ratio was 3.11 (95% CI: 2.13 to 4.50) with no significant outlier effects (Figure 1). There was no publication bias (Egger's regression p= 0.59) (Figure 2). No subgroup differences were found between different agents (Q= 0.23, p= 0.89)

Conclusion:

The finding of this systematic review and meta-analysis demonstrated no statistical difference between the incidence of conjunctivitis between dupilumab and the included newly approved and in trial

agents. Patients need to be counseled aboutthe incidence of conjunctivitis and its occurrence with these new agents. The high incidence of conjunctivitis with the AD indication of these medication in contrast to the other indications of these drugs raise the possibility of an association related to AD itself. Sources of limitation could be the presence of minimal heterogeneity and the inability to portray causal relation between conjunctivitis and biologic agents.

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Abstract N°: 5620

Generalized pustular psoriasis due to terbinafine: an uncommon skin side effect.

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Introduction & Objectives:

Cutaneous side effects of terbinafine are rare. Terbinafine-induced pustular psoriasis (PP) is a serious and rarely reported adverse reaction in the literature. We report a case of generalized pustular psoriasis induced by Terbinafine.

Materials & Methods:

A 55-year-old woman with no personal or family history of psoriasis was referred to our dermatology department for a generalized erythematous eruption that had been evolving for a few days. The patient had been treated with oral terbinafine for a month for an intertriginous dermatitis in the submammary fold. The dermatological examination objectified an erythematous and annular eruption of the trunk and extremities associated with non-follicular pustules. There were no palpable adenopathies and the mucous membranes were spared. The patient was afebrile. Biology showed hyperleukocytosis 14,000/mm3 with neutrophilic predominance, an increase in sedimentation rate and C-reactive protein associated with an increase in gamma glutamyl transferase (230 IU/L) and alkaline phosphatase. In addition, the renal function was correct and the bacteriological samples of the pustules were negative. Histology showed acanthosis of the epidermis, hyperkeratosis, focal parakeratosis, spongiosis and focal interruption of the granular layer. The underlying dermis was edematous and showed a slight perivascular lympho-histiocytic inflammatory infiltrate. Based on the clinical appearance and histological findings, the diagnosis of terbinafine-induced PP was retained. Terbinafine was stopped and the patient was treated with topical corticosteroids. Complete regression of the rash and liver test abnormalities were obtained after 3 weeks.

Results:

Generalized pustular psoriasis is a rare and severe form of psoriasis that can be triggered by a variety of factors. Terbinafine is an antifungal medication commonly used for yeast infections. Although it is known for its good tolerance, cases of serious reactions have been described. Terbinafine-induced generalized pustular psoriasis is rarely reported in the literature. Terbinafine can cause either a flare-up in patients with pre-existing lesions of psoriasis or de novo development of psoriasis. The onset of symptoms usually occurs within the first few weeks of starting treatment. In our case, the patient developed a rash after 30 days of treatment. Acute generalized exanthematous pustulosis (AGEP) usually occurs as an adverse reaction to certain medications, including Terbinafine. AGEP usually has a short latency period. This is the main differential diagnosis. The distinction between the two diagnoses remains difficult. In our case, the chronology, the clinical presentation and the histology were suggestive of PP rather than AGEP.

Conclusion:

Terbinafine-induced generalized pustular psoriasis is a rare but serious side effect that should be considered when faced with a pustular rash on Terbinafine.

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Abstract N°: 5636

Tenofovir induced Lupus – A Rarity

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Introduction:

Drug-induced lupus erythematosus (DILE) is a rare adverse reaction characterized by lupus-like syndrome which is temporally related to continuous drug exposure and resolves after discontinuation of the offending drug. We hereby report a case of Tenofovir induced lupus erythematosus in a known Human immunodeficiency virus (HIV) affected patient which is a rarely described entity in literature.

Case Report:

A 34 years old female known case of HIV infection on Tenofovir, Lamivudine, and Efavirenz (TLE) presented to the outpatient department with thickening and hyperpigmentation of skin over the face and body of six months duration along with photosensitivity, oral and digital ulcerations, joint pain and weight loss.

Dermatological examination revealed multiple polysized well defined thick scaly hyperpigmented plaques over erythematous base with few lesions showing crusts. Scalp examination revealed a 3 x 3 cm scaly plaque with nonscarring alopecia over the left parietal region.

Antinuclear antibody was positive (1:80) with speckled pattern. Extractable nuclear antigen profile revealed Strong positive Anti ribosomal P antibodies, positive Anti SSA and SSB antibodies and Anti U1 snRNP antibodies and borderline positive Anti Smith antibodies.

Skin biopsy showed features suggestive of Drug induced lupus. She was managed with oral Hydroxychloroquine and Tenofovir was stopped. After 2 weeks, lesions started healing along with resolution of constitutional symptoms. Presently patient is on Lamivudine, Efavirenz and Dolutegravir with resolution of LE lesions.

Discussion:

DILE can be divided into systemic (SLE), subacute cutaneous lupus erythematosus (SCLE), and chronic cutaneous lupus erythematosus (CCLE).

Drug-induced SCLE presents usually on sun-exposed areas with typical photosensitive symmetric, nonscarring annular polycyclic papulosquamous psoriasiform, lichenoid, vesiculobullous or erythema multiforme like lesions and necrotizing vasculitis. The cutaneous involvement in drug-induced SCLE is often widespread with the frequent involvement of the lower legs which is rare in idiopathic SCLE.

Recognizing and discontinuation of the offending drug is the mainstay of treatment. Symptoms resolve within a few weeks, although complete resolution may take several months making pharmacological treatment mandatory. Mild cases can be treated with NSAIDs, low dose corticosteroids and Hydroxychloroquine whereas high dose steroids and immunosuppressive agents such as Thalidomide, Azathioprine or Cyclophosphamide are reserved for refractory cases.

Conclusion:

Nearly 100 drugs have been implicated as a causative factor for DILE. But antiretroviral therapy (ART) causing DILE

is rarely described in literature. In this case though initially some of the features mimicked idiopathic lupus, the suspicion of ART as the causative agent helped to stop the offending drug which resulted in resolution of the DILE lesions and early management of this condition. **

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Abstract N°: 5638

Lichenoid drug eruption – a case report

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Introduction & Objectives:

Drugs can cause many cutaneous adverse reactions, can range from fixed pigmented erythema, exanthemas to severe reactions like DRESS syndrome, Stevens Johnson syndrome and toxic epidermal necrolysis.

We report a case of lichenoid drug eruption with a extensive manifestation.

Materials & Methods:

Case report

Results:

A 64-years-old man, who presented to clinical care for evaluation of skin lesions all over his body, with significant itching and skin darkening that developed 6 months before. The patient has diabetes, hypertension, hypothyroidism, a convulsive crisis eight months before and hepatopathy secondary to alcoholism. About medications, he was in use: metformin, insulin, losartan, amlodipine, vitamin B complex and carbamazepine. Physical examination revealed multiple coalescing erythematous-violet plaques interspersed with healthy skin with fine scaling affecting the entire body and palmoplantar hyperkeratotic plaques. A punch biopsy was obtained and the result was lichenoid interface dermatitis with intense pigmentary effusion

Due the hypothesis of pharmacodermy, in addition to normal electroencephalogram, carbamazepine was suspended by neurologist. The patient returns one month later reporting improvement, but maintaining brownish macules. We concluded that the diagnosis was lichenoid drug eruption secondary to carbamazepine

Conclusion:

Carbamazepine is the most common anticonvulsant causing adverse skin drug reactions and may be cross-reactive with other anticonvulsants. Anticonvulsants are responsible for 20% of all cutaneous adverse drug reactions. Lichenoid drug eruption can be induced by ingestion, contact or inhalation and It's an uncommon effect of several drugs. The use of multiple drugs difficult to recognize the causative agent. It can happen weeks or months after use, indicating delayed hypersensitivity. The mechanism is unknown, it is believed to be associated with activation of cytotoxic T lymphocytes against epidermal cells. Clinically it presents as violaceous papules/plaques usually in photoexposed areas, resembling lichen planus and usually spares oral mucosa. Treatment includes removal of medication and the resolution of lesions after discontinuing favors the diagnosis. The period of resolution has a wide range from a few weeks to years. In a few weeks, almost all lesions heal with residual post-inflammatory hyperpigmentation

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Abstract N°: 5644

Hydroxyzin- induced Acute Generalized Exanthematous Pustulosis in psoriatic patient.

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Introduction & Objectives: Acute generalized exanthematous pustolosis (AGEP) is rear, severe cutaneos reaction usually triggered by taking certain medications. Clinical manifestations of AGEP are characterized by systemic symptoms and typical generalized skin lesions. Hydroxyzine is first-generation antihistamine of the piperazine class and is used for symptomatic relief of anxiety and tension associated with psychoneurosis. In the dermatology practice is used for managing of pruritus due to different allergic conditions. We report the case of a 69-year-old Bulgarian female who developed numerous small, superficial, sterile pustules within large areas of edematous erythema, shortly after taking orally hydroxyzine . The patient was diagnosed with psoriasis in 2015, and well controlled for 6 years with Ustekinumab. In 2022 due to relapse, the monoclonal antibody, was replaced with Guselkumab in order to refine the therapy.

Materials & Methods: Clinical features, laboratory results and dermatohistopathological findings

Results: Clinical features, laboratory results and dermatohistopathological findings corresponded to the diagnosis AGEP secondary to hydroxyzin. The symptoms resolved within 12 days after hydrozyin discontinuation.

Conclusion: AGEP is characterized by a severe skin eruption that occurs within two days of the offending medication being taken. After two weeks of withdrawal from medication, the condition usually resolves spontaneously. When the initial diagnosis is unclear or symptomatic control does not provide satisfactory results, subsequent management attempts to resolve the more serious illness. Desquamation may cause severe pruritus and skin irritation after the acute phase. In our patient because of the chronic disease and the acute one, the treatment focuses on removal of the causative drug and multimodal approach to symptomatic management. Analgesics, antihistamines, topical corticosteroids, and barrier ointments are common methods of treatment

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Abstract N°: 5723

Acute adrenal insufficiency following prolonged use of topical corticosteroids

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Introduction & Objectives:

Corticosteroids have important anti-inflammatory and immunosuppressive activities. They are commonly used to treat a wide variety of diseases, especially dermatologic diseases, and in some cases, they are given in excessive doses. Quick or unexpected withdrawal is the most frequent cause of secondary adrenal insufficiency, especially when using systemic corticosteroids. Herein, we report one case of acute adrenal insufficiency following the use of topical corticosteroids for pustular psoriasis.

Materials & Methods:

Results:

A 35-year-old female patient with a history of pustular psoriasis evolving for 6 years and treated with topical corticosteroids and acitretin was admitted to the department of dermatology for a psoriasis flare-up. During her hospitalization, the patient developed a fever of 38.5°C, digestive disorders with vomiting and abdominal pain, and hypotension. An infectious workup was performed, which was negative, and cortisol levels were 1.3 mcg/dL. The patient denied any past or recent use of systemic corticosteroids. However, she had been using betamethasone dipropionate 0.05% twice a day for two years, which she had stopped several weeks before her admission. The patient was diagnosed with secondary adrenal insufficiency due to the withdrawal of prolonged topical treatment with corticosteroids, and a significant improvement of symptoms was observed once substitution treatment with intravenous hydrocortisone was initiated.

Conclusion:

Administration of corticosteroids may inhibit the synthesis and secretion of corticotropin hormone, leading to a decrease in the synthesis of proopiomelanocortin and, consequently, a deterioration in ACTH secretion, which causes adrenal cortex degeneration and disrupts cortisol production. Despite the fact that topical administration of corticosteroids reduces the incidence of adverse effects, they cannot be neglected. Several studies agree that the hypothalamic-pituitary-adrenal axis may be affected when high-potency topical steroids are used at weekly doses of 50g. Steroid absorption may be increased depending on several factors, such as the area in which they are applied, the associated compound used (urea or salicylic acid), area occlusion, impaired skin integrity, and younger age. Before discontinuing corticosteroid treatment, several factors must be considered: firstly, the possibility that the disease may reappear; secondly, that secondary adrenal insufficiency may develop, even when physiologic doses are used; also, that the HPA axis may remain suppressed for prolonged periods of time; and finally, that cases of psychological dependence have been described.

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Abstract N°: 5727

Leukocytoclastic vasculitis induced by the new oral anticoagulants - juggling through medication

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Introduction & Objectives:

Cutaneous leukocytoclastic vasculitis (LCV) is a small vessels disease, histopathologically characterized by the presence of a perivascular inflammatory infiltrate, predominantly composed of neutrophils, with leukocytoclastic phenomena. It is the most common type of vasculitis and occurs more frequently in women. Etiopathogenically, this disease represents an immunological type III reaction and it can appear in association with various infections, systemic inflammatory diseases, malignant hemopathies, post-medication, but in 30-50% of cases, the etiology cannot be specified.

Materials & Methods:

Here we report the case of a female patient, known with a long history of permanent atrial fibrillation, who developed LCV secondary to repeated changes in the oral anticoagulation regimen.

Results:

A 74-year-old woman with a personal history of cardiovascular (high blood pressure, ischemic heart disease, permanent atrial fibrillation, heart failure) and neurological pathology (previous ischemic stroke) was referred to our dermatology department, presenting a maculopapular rash consisting of palpable purpuric lesions covering the lower half of the body, with onset 1 week before presentation.

The patient's history revealed recent changes in the anticoagulant medication regimen, the first purpuric lesions appearing on the thighs approximately 7 days after the initiation of Edoxaban. The woman's attending cardiologist establishes the replacement of Edoxaban with Apixaban, but the lesions continue to expand in a caudal direction. We mention that the patient used these two anticoagulants alternatively, in the past, without pathological skin changes.

The distribution, type of lesions and their rapid evolution raised the suspicion of a cutaneous LCV, a consequence of a possible cross-reactivity between class Xa inhibitors.

We performed an incisional skin biopsy, which objectified the presence of an inflammatory infiltrate in the vascular walls and perivascularly, consisting predominantly of neutrophils with pyknotic nuclei and eosinophils, patchy fibrinoid necrosis of the vascular walls and the surrounding connective tissue and endothelitis, suggestive aspects for the diagnosis of LCV.

Paraclinical investigations objectified the presence of a marked inflammatory syndrome, hypocomplementemia and the specific serologies for autoimmune diseases within normal limits, thus supporting our theory.

The treatment consisted in stopping the administration of Apixaban, opting for a low molecular weight heparin instead. Systemic corticosteroid therapy and antihistamines were associated, with a favorable outcome, with a rapid remission of the skin lesions.

Conclusion:

The temporal relation between class Xa inhibitors administration and initial symptomatic onset, lack of any other known etiologic factors and resolution of symptoms following discontinuation of the medication strongly point to novel anticoagulants as the triggers for LCV.

In the literature, few such cases were cited associated with factor Xa inhibitors, this class of drugs being responsible for delayed reactions, especially type III and IV drug hypersensitivity reactions.

The real number of cases is likely underestimated due to incomplete knowledge of this ailment and the lack of appropriate diagnostic tests. Scores such as WHO-UMC Causality categories or Naranjo score could be useful in order to assess the likelihood of developing adverse drug reactions.

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Abstract N°: 5776

Omeprazole-induced acute generalised exanthematous pustulosis

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Introduction & Objectives:

Proton pump inhibitors (PPIs) are used in the treatment of gastric ulcers but can sometimes cause toxidermia. We present a case of acute generalised exanthematous pustulosis (AGEP) induced by omeprazole.

Materials & Methods:

The patient was 82 years old and had a history of hypertension, diabetes, dyslipidaemia, obesity and a cardiac arrythmia requiring Vitamin K antagonists. She had a digestive haemorrhage treated with transfusion and IV omeprazole. Three days later, the patient presented with a pustular rash on an erythematous background, which started on the neck and then spread to the trunk and large skin folds. The oral and genital mucosa were intact. The analysis showed hyperleukocytosis and an elevated CRP of 170 mg/L. The EuroSCAR was scored at 7. Because of the suspicion of AGEP, we stopped the omeprazole. The lesions developed into superinfected erosions. One month later, the patient died of septicemia.

Results:

AGEP is usually induced by antibiotics and cases attributed to PPI administration are exceptional. Only four cases of PPI-induced AGEP have been reported in the literature. An immunological background is suggested. Treatment is based on discontinuation of the causative drug and systemic corticosteroid therapy may be indicated. The prognosis is generally good with a mortality rate of 1-2% and the skin lesions disappear within a few days with characteristic post-pustular desquamation. Our case is distinguished by the prolonged duration of the symptoms despite the discontinuation of the drug and the fatal course of the disease. This is essentially due to the fragile terrain of the patient and the superinfection of the lesions.

Conclusion:

Acute generalised exanthematous pustulosis is a severe but rare type IV drug hypersensitivity reaction. It’s exceptionally caused by omeprazole. It is necessary to suspect the imputability of this drug in the presence of AGEP because the most important pillar of treatment is the discontinuation of the causative drug.

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Abstract N°: 5783

DRESS-sydrome induced by sulfasalazine

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Introduction & Objectives: DRESS-syndrome (Drug Rash with Eosinophilia and Systemic Symptoms) is a potentially lethal adverse drug reaction. Sulfasalazine, a common triggering agent is widely used to treat ulcerative colitis, Crohn's disease and rheumatoid arthritis.

Materials & Methods: The 33-year-old male described in our case report had previously undergone gastroenterological investigations and examinations due to diarrhoea and intermittent cramping abdominal pain. Colonoscopy showed superficial mucosal erosions, and histopathology was performed. Due to the patient's severe symptoms and the typical clinical manifestation seen on colonoscopy he was stared on sulfasalazine. 3 weeks after the initiation of treatment the patient arrived at the emergency department complaining of fever, fatigue, dry cough and generalised maculopapular rash. His laboratory examinations showed elevated liver transaminases, cholestatic enzymes, and peripheral eosinophilia. Urine analysis confirmed the presence of proteinuria. Physical examination and imaging indicated diffuse hepatosplenomegaly. Enlarged, painless lymph node was present at the right postauricular area.

Results: The clinical findings and examinations supported our theory of DRESS-syndrome. After the patient was urgently admitted to our department, we performed a skin biopsy and discontinued the supposed causing drug, sulfasalazine. 1 mg/kg methylprednisolone was administered. During our care the exanthem lightened, transaminase levels decreased, and the proteinuria ceased. Repeated watery stools and the peripheral eosinophilia made a stool culture necessary, which verified an ongoing Salmonella sp. infection. While searching through our patient's anamnestic data, we discovered that two years prior to his admission he suffered a mild form of Salmonella infection. Following the appropriate infectious diseases guidelines, he did not receive antibiotic treatment at the time. The previously performed colon biopsy did not confirm ulcerative colitis or Crohn's disease, therefore our patient did not require any immunosuppressive therapy later on. A gastroenterological consult explained our patient's previous abdominal complaints by gut dysbacteriosis that was caused by the initial Salmonella infection. The patient's general condition improved; he became asymptomatic.

Conclusion: The authors of this case report aim to emphasize the importance of early diagnosis and identification of the drug causing the symptoms; thus immediate discontinuation and adequate therapy may significantly impact the disease outcome.

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Abstract N°: 5813

Chemotherapy-Induced Toxic Erythema: a case report

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Introduction & Objectives:

The term "Chemotherapy-Induced Toxic Erythema" has only recently been proposed to encompass a characteristic cutaneous reaction to chemotherapy. The main drugs known to induce toxic erythema are taxanes (docetaxel, paclitaxel), cytarabine, busulfan, and dactinomycin.

We present a case of Chemotherapy-Induced Toxic Erythema in a 55-year-old male following the administration of purinethol (6-mercaptopurine) as part of palliative treatment for refractory non-Hodgkin lymphoma.

Materials & Methods:

We report a description of a case of Chemotherapy-Induced Toxic Erythema following the administration of purinethol .

Results:

A 55-year-old male patient with a history of refractory follicular non-Hodgkin lymphoma, unresponsive to four cycles of chemotherapy, was placed on palliative treatment with purinethol (50mg/day for 21 days). The duration between treatment initiation and symptom onset was 20 days.

On examination, the patient was conscious but hypotensive, with general malaise. Cutaneous examination revealed erythematous patches with 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 axillarylymphadenopathies, as well as inguinal lymphadenopathy, were noted.

A skin biopsy revealed subepidermal cleavage with acidophilic keratinocyte necrosis. The dermal layer showed moderate inflammation consistent with Chemotherapy-Induced Toxic Erythema (TEC).

Subsequently, the patient developed bone marrow aplasia, which contraindicated the use of systemic corticosteroid treatment. Topical steroids and supportive care were provided, but the patient passed away one week later.

Conclusion:

Dermatological adverse effects of anticancer treatments are both very common and extremely diverse, including chemotherapy, immunotherapy, and targeted therapies.

The diffuse and diverse nature of cutaneous lesions in a patient undergoing chemotherapy should raise suspicion of chemotherapy-induced toxic erythema.

They often affect mucous membranes, skin, as well as its appendages (nails, hair), and can represent a significant burden in cancer patients. Clinicians must therefore learn to recognize the main dermatological manifestations observed in this context and, most importantly, know how to manage them in order to continue treatment while improving the patient’s quality of life.

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Abstract N°: 5875

osimertinib induced erythromelalgia

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Background: Epidermal growth factor receptor (EGFR) inhibitors are a class of drugs used in the treatment of advanced malignancies. These medications are known to have numerous cutaneous side effects, including follicular-pustular rash, paronychia, hair changes, dry skin and hypersensitivity reactions. This case report presents the first documented case of erythromelalgia in a patient treated with EGFR inhibitors.

Case report: The patient is a 77-year-old woman diagnosed with metastatic lung adenocarcinoma treated with Osimertinib, a third-generation EGFR inhibitor. After approximately 8 months of therapy, the patient developed painful erythema of the distal phalanges and periungual fissures in all fingers of both hands. The exposure to high temperatures increased pain, redness and warmth of the fingers. Based on the clinical presentation, a diagnosis of erythromelalgia was made.

Discussion: Erythromelalgia is a rare disorder characterized by intense burning pain in the extremities, accompanied by erythema and increased temperature of the affected skin. Symptoms typically worsen with exposure to heat. Erythromelalgia can be classified as primary or secondary. Primary erythromelalgia usually presents at a young age, which was not the case of our elderly patient. Among secondary forms, a paraneoplastic form was ruled out due to the absence of evidence of cancer progression on a contrast-enhanced CT scan. Additionally, an association with myeloproliferative disorders was excluded based on normal chemistry exam results. The patient did not have any rheumatologic conditions or connective tissue disorders that could explain the erythromelalgia. Therefore, the most probable diagnosis was an association between erythromelalgia and the use of EGFR inhibitors.

Given the significant impact on the patient's quality of life, pain relief therapy with local anesthetic drugs was prescribed. Discontinuing treatment with the EGFR inhibitor was not indicated, as this drug was essential for the patient's cancer management and was potentially life-saving.

Conclusion: Erythromelalgia is a skin condition that significantly impairs the quality of life of affected individuals. Although rare, cases of erythromelalgia can occur in patients undergoing treatment with EGFR inhibitors. In such cases, the focus of management should be on alleviating the patient's symptoms, as discontinuing EGFR inhibitor therapy is not recommended. Healthcare providers should be aware of this potential side effect and promptly address it to ensure optimal patient care. Further research is needed to better understand the underlying mechanisms of erythromelalgia associated with EGFR inhibitors and explore additional treatment options to improve patient outcomes.

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Abstract N°: 5882

A variant of Palmar-Plantar Erythrodysesthesia Syndrome Following Treatment With Methotrexate or Cytarabine affecting dorsal surfaces

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Introduction & Objectives: Palmar-plantar erythrodysesthesia, also known as hand-foot syndrome (HFS), is a well-known dermatologic adverse event that can occur Iwith a variety of cytotoxic chemotherapies including fluoropyrimidines, cytarabine, liposomal doxorubicin, and taxanes. HFS often presents as painful erythemas and desquamation of the skin involving the palms of the hands and the soles of the feet. While this is the classic presentation of HFS, there is a variant of HFS that primarily affects the dorsal hands and feet. We report a case of HFS during treatment of Mixed-phenotype acute leukemia (MPAL) with Methotrexate and Cytarabine in a five-year-old child.

Patients and methods : A five-year-old child, with no personal or family history, followed for mixed phenotype acute leukemia, having received intrathecal therapy with methotrexate, cytarabine and hydrocortisone hemisuccinate. 24 hours after receiving the treatment appeared, simultaneously on the hands and feet, a purplish red, dry, infiltrated and painful erythema located on the dorsal surfaces. The remainder of the physical examination was unremarkable. Symptoms ceased after discontinuation of therapy and application of topical corticosteroids.

Discussion : HFS, also known as PPE or acral erythema, is a cutaneous dysesthesia that mainly affects the palms and the soles. It is a common adverse event of chemotherapy drugs, such as doxorubicin, 5-fluorouracil, cytarabine, and docetaxel. The exact pathophysiology of HFS is unknown. but the most likely mechanism is a direct toxic effect of the chemotherapy agents on the skin. PSE is rare in pediatrics. Although the largest pediatric case series involves treatment with pegylated liposomal doxoribucin, earlier case reports suggest that it is more common after high-dose cytarabine or methotrexate. In our case, it was challenging to correctly define the drug implicated as both treatments were know to cause PPES.

Conclusion : In summary, we present a case of the Methotrexate or Cytarabine induced variation of the classic HFS with infiltrated, erythematous, and violaceous plaques present on the dorsal hands and feet. We raise awareness of the clinical presentation, as it can pose a diagnostic challenge and be easily misdiagnosed**

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Abstract N°: 5943

Breast necrosis induced by the use of coumadin

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Introduction & Objectives:

Skin necrosis with vitamin k antagonists are rare. They affect more frequently middle-aged

and obese women, often within 10 days after initiating of treatment. They occur most often

in a context of thrombophilia.

We present a case of total breast necrosis as a result of coumadin therapy.

Materials & Methods:

A 71-year-old patient was admitted to the emergency departement , because of pain in her right breast, swelling and darkening which had begined 2 weaks before. The symptoms started on the nipple and spread to the whole right breast. The patient was on coumarin 2mg /day forteen years for treatement of deep vein thrombosis on her left leg .

The patient was also taking Allopurinol for gout disease and insulinotherapy for

for diabetes .

Upon admission, she was in regular general condition, without fever, and blood pressure of 130x90mmHg.

Laboratory tests showed hematocrit of 21%, hemoglobin of 8.4mg/dL, white cells count of 9450 and a platelet count of 200,000/mL. International normalized ratio (INR) of 1.3 ,Her fibrinogen was normal and fibrin-split products were high.

The diagnostic hypothesis was necrosis due to coumadin use on the right breast.

After diagnosis, the patient initiated treatment with high doses of heparin and vitamin K. After four days of treatment no improvements were seen and the patient was submitted

to mastectomy. No intercurrence was observed after 7 months of fellow-up.

Results:

Coumadin-induced skin necrosis was first described by Flood et al in 1943. It has a predilection for middle-aged, perimenopausal, obese women, but can occur in men. Commonly affected sites are the breasts, buttocks, and thighs. In males, the penile skin can be affected .

Onset occurs within 1 to 10 days of initiation of therapy, most commonly between days thre and six. However, it can present longer following initiation of coumadin even fiften years like our patient

Initially, patients may complain of paresthesias, pressure, or skin discomfort in the affected area. Demarcated lesions appear that are initially erythematous or hemorrhagic and painful. Blisters and bullae develop, leading to

full-thickness skin loss and eschar formation.

Pathologic findings include microvascular injury with thrombosis and fibrin deposition in postcapillary venules and small veins.

Management of coumadin-induced skin necrosis consists of discontinuation of coumadin

replacing it with intravenous or subcutaneous heparin, and reversing the effects of the congener by administering vitamin K, fresh-frozen plasma, or both.

AVK can be resumed if necessary under cover of heparin starting with small gradually increasing doses, after control of the inflammatory syndrome.

Necrosis may require surgical debridement or amputation as in our observation.

Conclusion:

The recognition of the diagnosis is an emergency because the necrosis evolves very quickly by involving the vital prognosis with 3-month mortality of 15%.

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Abstract N°: 5946

A Clinico-Epidimiological Study Of Adverse Cutaneous Drug Reactions In Hiv Positive Patients Attending Art Centre And Dermatology Department In A Tertiary Care Hospital

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Introduction & Objectives: HIV infected patients present with complex immunological alterations. Adverse Drug Reactions occur at higher rate in HIV positive patients than general population and cause significant morbidity. Skin is most common organ involved in drug reactions. Patients can present with exanthems or erythematous maculopapular rash with constitutional symptoms. Other adverse cutaneous drug reactions commonly seen are urticaria, SJS, FDE, erythema multiforme, vasculitis, exfoliative dermatitis and photodermatitis. There are some associations between ACDRs and CD4 cell counts in HIV infected patients

Objectives

To find out the prevalence of ACDRs in HIV positive patients

To study the different morphological patterns of ACDR

To identify the culprit drug or drug group, whenever possible

To correlate ACDRs with CD4 cell count

Materials & Methods:

All the HIV infected patients fulfilling the inclusion & exclusion criteria attending Dermatology outdoor and ART centre in a period of 1 year were included. The study was an Institution based cross-sectional study. ## Inclusion criteria: HIV Seropositive patients having cutaneous drug reaction

Patients who gave informed consent. ## Exclusion criteria: Patients having other immunosuppressive disorders.

Reactions due to deliberate over dose.

Terminally ill patients.

Results:

Out of all 959 patients attending ART clinic in study period, 104 patients having ACDR were enrolled in study. So prevalence of ACDR was 10.84%

Mean age of presentation was 31.48 years. Out of total 104 cases, 60 were male and 44 were female with sex ratio of 1.36:1

Maculopapular rash was commonest seen in 37.5% patients followed by Urticaria and SJS-12.5% each. FDE-10.6% DRESS-6.7% Erythroderma-4.8% Lipodystrophy-4.8% and Melanonychia-3.9% were other common reactions seen

Among antibacterial agents, ACDRs occurred most commonly by Cotrimoxazole followed by Ciprofloxacin; while among ART, ZLN followed by TLE

Maculo-papular rash was observed after 3 to 12 days of start of drug while Lipodystophy and melanonychia after

few months of treatment

The chi-square statistic for corelation of CD4 count with ACDR is 63.2709. The p-value < .05 statistically significant.

According to Naranjo causality assessment scale, among 104 ACDR patients, majority-56.7% belonged to the possible category while rest-43.3% came under probable.

MDT-MB Adult was the culprit agent for 1 case of DRESS

2 cases of Vasculitis were observed to be associated with Efavirenz containing ZLE regimen

Conclusion:

Appropriate diagnosis and management of drug hypersensitivity reactions are essential, especially in patients with very low CD4+ T-cell count and multiple opportunistic infections. Knowledge of metabolism, recognition of the risk factors, and the ability to suggest the probability of particular drug as causative agents are also important.

In most of previously described studies, ACDRs either due to ART or non-ART drugs in HIV positive population were studied. But in present study, we made an attempt to elicit all ACDR cases attributed to any of medication patient was receiving. We also tried to establish causality association with individual drug group; but the study is limited by the following factors:

Inability to persue oral challenge test

Inability to measure drug levels in blood

This study is a small attempt in this context; further studies encompassing larger population overcoming limitations should be encouraged.

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Abstract N°: 5978

DRESS syndrome induced by antibiotics and the dermatological perspective. A Scoping review

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Introduction & Objectives:

Drug reaction with eosinophilia and systemic symptoms (DRESS) is a syndrome characterised to describe a severe reaction to a drug, presenting clinically as an extensive cutaneous rash, accompanied by fever, lymphoadenopathy, hepatitis, haematological abnormalities with eosinophilia and atypical lymphocytes, and may involve other organs with eosinophilic infiltration, especially the kidneys, heart, lungs and pancreas. Clinical risk scoring systems are available including the RegiSCAR, the DiHS by Japanese consensus group and the Bocquet et al criteria.

This syndrome has been described to be mainly induced by anticonvulsants, Allopurinol, Sulphonamides, antiretroviral therapy and some antibiotics. The latter have been hugely successful in improving health outcomes, and alongside improvements in nutrition, clean water, sanitation, and vaccination provision, have aided in the global reduction of mortality and an increase in male life expectancy. Furthermore, the use of antibiotics is used widely in the community, and almost 20% of the people had DRESS associated with antibiotics. Recognition of this syndrome is of paramount importance, since the mortality rate is about 10-20%.

Currently, there is a paucity about the current evidence about antibiotics and DRESS syndrome . This scoping review aims to map existing literature and provide a summary of the dermatological findings, and the most common antibiotics associated with DRESS syndrome. This includes risk factors, interventions and identification of research gaps in the literature.

Materials & Methods:

Electronic databases (MEDLINE, EMBASE, and, Web of Science) were systematically and independently searched following the Joanna Briggs Institute (JBI) guidelines until April 2023 in English and Spanish. Keywords and medical subject headings (MeSH) terms were used to retrieve articles. Two independent researchers assessed the literature and conducted the review according to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines for Scoping Reviews (PRISMA-ScR).

Results:

Of the 620 articles screened, 146 articles met inclusion criteria. The majority were case reports concentrated in North America and Europe. Most of them are related to anti-tuberculosis drugs, Vancomycin, Sulfonamides, and Penicillins. Cutaneous findings included urticated, maculopapular eruption. However, vesicles, bullae, pustules, cheilitis, purpura, target lesions, and erythroderma were seen. Facial oedema was also reported. Systemically, fever, eosinophilia and liver injury were the most reported hematologic and organ deranged findings. The management in most of the cases included the use of the systemic corticosteroids.

Conclusion:

DRESS syndrome is an uncommon, severe adverse reaction to drugs (e.g antibiotics), and is difficult to diagnose due to its variable clinical presentation and its late onset in relation to the period of introduction of the causative

drug. In this scoping review, the evidence evaluated used different diagnostic criteria to characterise the cases. Clearly, it is necessary to perform thorough epidemiological studies. Further investigations on the aetiologies, early detection of the dermatological features, and well-designed clinical trials may improve management of antibiotic-induced DRESS.

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Abstract N°: 5989

A case of bullous pemphigoid induced by a sodium-glucose cotransporter 2 inhibitor

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A case of bullous pemphigoid induced by a sodium-glucose cotransporter 2 inhibitor

Introduction & Objectives:

Bullous pemphigoid (BP) is an acquired autoimmune disease that affects mainly the elderly and is characterized by subepidermal blistering. Although in most cases, the causative agent remains unidentified, certain medications have been implicated in the pathogenesis of the disease.

More than 80 different drugs have been associated with the appearance of bullous pemphigoid and as new therapies emerge, this number is very likely to increase

Sodium-glucose co-transporter 2 inhibitor (SGLT2i), a novel class of anti-diabetic agents. The relationship between SGLT2i and BP is occasionally described, with only two cases reported in the literature and six cases in the pharmacovigilance database.

Consequently, we consider it relevant to describe this case to highlight that BP might be an unknown adverse event related to SGLT2i use that should be studied.

Materials & Methods:

Herein we present a case of an 83-year-old woman with type 2 diabetes treated with SGLT2i Dapagliflozin who developed BP four months after the administration of Dapagliflozin.

Results:

An 83-year-old woman with a history of hypertension for 7 years treated by beta blocker, presented with an itchy, blistering generalized rash. Four months prior, she had started Dapagliflozine used for type 2 diabetes.

on physical examination, she presented multiple tense bullae and erosions on normally appearing skin on his arms, legs, and trunk with erosion in buccal mucosa. The Nikolsky signe was negative

Histopathologic evaluation showed a subepidermal bulla with epidermal necrosis, an inflammatory infiltrate, and eosinophils. Direct immunofluorescence study of perilesional skin showed linear immunoglobulin G and C3 at the basement membrane

Indirect immunofluorescence was negative for anti-pemphigoid antibodies Ag BP 180 and AgBP230 .The findings were diagnostic for the SGLT2i-induced bullous pemphigoid

Dapagliflozin was stopped, as a potential trigger and she was switched to subcutaneous insulin as per the diabetic specialists. She has been treated with doxycycline 200 mg daily orally and as a topical treatment Clobetasol once daily. This adverse event was reported to the pharmacovigilance center.

After three weeks, the patient’s skin erosions improved on account of the systemic and topical treatment she received. Three months after stopping Dapagliflozin the patient remained asymptomatic.

Conclusion:

Sodium-glucose co-transporter 2 inhibitor a novel class of anti-diabetic agents inhibits the reabsorption of glucose in the proximal renal tubule and thus increases the excretion of urinary glucose. Besides its glucose-lowering effect, SGLT2i has been shown to improve cardiovascular and renal outcomes in recent clinical trials, thus gaining popularity in clinical practice.

The relationship between SGLT2i and BP is occasionally described, with only two cases reported in the literature and six cases in the pharmacovigilance database.

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Abstract N°: 6009

Can methotrexate surprise us? Report of a rare side effect

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Introduction & Objectives:

Methotrexate (MTX) is a drug that has been used in daily dermatological practice for the treatment of numerous dermatological diseases since the 1950s. Like any drug, in addition to its good sides, it also has side effects. The most common side effects are from the gastrointestinal, hepatological and haematological systems. We present a younger man with MTX-induced gynecomastia.

Results:

A 22-year-old patient referred for therapeutic evaluation due to disseminated psoriatic changes on the skin of the entire body. He has been suffering from psoriasis for about 10 years, treated only with a local form of therapy. After a detailed diagnostic examination, MTX therapy was started with a maximum dose of 15 mg. Two months after the start of therapy, the patient complains of breast enlargement and discrete pain in the same. Diagnostic processing was performed, which included: EHO examination of the breast (bilateral enlargement of the glandular tissue), as well as hormonal evaluation (serum values of prolactin, oestrogen, testosterone within reference values). With a consultative examination by an endocrinologist, all potential causes of gynecomastia were excluded. Bearing in mind this rare side effect of therapy, the use of MTX was discontinued. Two months after stopping the therapy, the clinical signs of gynecomastia disappeared spontaneously. In the meantime, the patient started therapy with the appropriate biological drug.

Conclusion:

So far, only nine cases of gynecomastia cases with low doses of MTX have been described in the literature. The mechanism of this side effect is not clear enough. The question remains, although MTX has been in use for more than 70 years, do we know all its unwanted effects and how often do we think about them?

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Abstract N°: 6023

Unusual case of pancytopenia and skin rash

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Introduction & Objectives: We would like to present a rare case of pancytopenia and skin changes due to overdosing of azathioprine

Materials & Methods: Case presentation

Results: 67- years old woman with 40 years history of Crohn disease was admitted to hospital due to fatigue, pancytopenia , skin rash and diarrhoea that appeared 10 days prior to admittance. She was taking azathioprine for several years without regular gastroenterological or laboratory controls. In the last year she spontaneously changed the dosage of azathioprine to 300 mg per day.

She presented with painful brownish and scaling rash on her décolleté and dorsa of both hands. There was pancytopenia and low haemoglobin levels in her laboratory tests.

After the skin examination additional tests were ordered which showed results consistent with pellagra.

Azathioprine was stopped, she was treated with blood transfusions , erythropoietin , GCSF and nicotinamide.

Conclusion:

Azathioprine can be linked to pellagra in patients with prolonged usage of high doses of this medicine. Detailed anamnesis is important in patients with rash on photo exposed sites.

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Abstract N°: 6108

Lamotrigine-induced atypical DRESS syndrome with erythema multiforme-like eruption

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Introduction & Objectives:

Drug rash with eosinophilia and systemic symptoms (DRESS) syndrome is a rare and severe cutaneous adverse reaction to medication that usually presents as maculopapular or urticated eruption with lymphadenopathy, fever and systemic involvement.

Here, we report a case of atypical DRESS syndrome with erythema multiform-like clinical features, induced by lamotrigine.

Materials & Methods:

Results:

A 27-year-old female patient diagnosed recently with bipolar depression 1,5 months before her admission, was started on lamotrigine, quetiapine and alprazolam by her psychiatrist, 3 weeks before the symptoms onset.

She presented a labial herpes followed by high grade fever and erythematous lesions on the face and extremities a week before her admission.

On physical examination, she had a diffuse erythematous and pruritic maculopapular rash involving 50% of the body surface area (BSA), multiple target and targetoid lesions affecting the trunk, arms and legs with extension to hands and feet, with no mucosal involvement nor lymphadenopathy.

Clinically, we suspected erythema multiform secondary to medication, herpes or mycoplasma infection. The rash continued to progress and the patients developed facial edema with pustules.

Laboratory investigations revealed hyperleukocytosis with eosinophilia (2010 cells/cm), raised inflammatory markers, no altered liver nor renal functions, normal urine proteinuria. Antinuclear antibody (ANA), HIV and Syphilis testing were negative.

Chest X-ray was unremarkable but echocardiography revealed pericardial effusion.

Skin biopsy was consistent with toxidermia.

According to RegiSCAR scoring system, she had a definite case of DRESS syndrome and the offending medication was Lamotrigine. The suspected drugs were discontinued and replaced by fluoxetine, amisulpride and hydroxyzine after psychiatric and pharmacological opinions.

During hospitalization, the patient was treated with oral prednisone at 0,5mg/kg/j, adjuvant therapy and emollients with complete resolution of cutaneous lesions after 10 days and significative improvement of biologic tests with normalization within 2 weeks.

Conclusion:

Erythema multiform-like DRESS syndrome is an unusual clinical presentation that can simulate other severe cutaneous drug reactions or infectious exanthems, therefore, misleading the diagnosis.

As in our patient, Dress syndrome can manifest as target or targetoid lesions and pustules can also be seen.

This case highlights these atypical manifestations of a severe systemic drug reaction to insure early diagnosis and the dermatologist's appropriate management.

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Abstract N°: 6115

Severe Myocarditis in Setting of Drug Rash with Eosinophilia and Systemic Symptoms secondary to Naproxen / Esomeprazole

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Introduction & Objectives:

Drug reaction with eosinophilia and systemic symptoms is a rare, potentially life –threatening drug induced hypersensitivity reaction that includes skin eruption, haematological abnormalities, lymphadenopathy and internal organ involvement. It has an estimated morality rate of up to 10%. The main offending medications are anticonvulsants, antibiotics (particularly beta-lactams), and allopurinol. However other medications that are known to be associated with DRESS include non-steroidal anti-inflammatory drugs, captopril, mood stabilisers, and antiretrovirals. Systemic symptoms commonly involve kidney, liver and lung but also less commonly cardiac and pancreas involvement. The mainstay of treatment withdrawal of the culprit medication and symptomatic control. We describe a patient who developed DRESS on exposure to naproxen/ esomeprazole 500/20mg complicated by myocarditis.

Materials & Methods:

A sixty-year-old male presented with three-day history of a widespread erythematous rash with associated chills, paraesthesia and haematuria. Medical history was unremarkable and he did not take regular medications. Of note he had recently taken Naproxen/Esomeprazole for back pain. Eosinophils were raised and he had a moderate acute kidney injury. Liver function tests were normal. Histology revealed parakeratosis, mild spongiosis with eosinophils. His admission was complicated by the acute onset of rapid atrial fibrillation with acute coronary syndrome. Coronary angiogram was non-obstructive however cardiac MRI revealed acute myocarditis secondary to Drug reaction with eosinophilia and systemic symptoms (DRESS). In addition to his cardiac management, he was treated with oral corticosteroids and best supportive care. Naproxen/Esomeprazole was stopped.

Results:

On repeat cardiac MRI 3 months later his myocarditis had resolved, and his skin remains clear. In this case the patient developed a severe rash complicated by atrial fibrillation and myocarditis which resolved within 3 months based on loop recordings, MRI and clinical findings.

Conclusion:

DRESS is a rare drug induced hypersensitivity reaction that includes skin eruption, haematological abnormalities, lymphadenopathy, and internal organ involvement which has morality rate of up to 10%. The objective of this case report is to highlight the significant cardiac complications that can ensue. Although not a common offending medication, (esomeprazole/naproxen) was the culprit drug. DRESS warrants prompt recognition with identification of causative drug and withdrawal. Multiorgan complications can be severe, and treatment should not be delayed. DRESS should always be considered with a new onset rash in the context of a new medication.

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Abstract N°: 6125

A rare complication of keloid infiltrations

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Introduction & Objectives:

Therapeutic options available for the management of keloid scars, although numerous, remain modest and even disappointing. These options, ranging from the simple application of silicone creams to surgery, are not without adverse effects. The risk of these complications should be considered wisely as they can be sometimes unsightly while the stake in treating keloids is mainly aesthetic.

Herein, we report a case of hyperpigmentation of a keloid scars following infiltration with betamethasone dipropionate.

Results:

The patient is a 22-year-old male, without any notable pathological history, of a type III on the Fitzpartick scale, who consulted for keloids. Lesions were firm, smooth and raised, localized on the upper back with two butterfly-shaped keloids in pre-sternal. A treatment based on monthly infiltrations of betamethasone dipropionate was initiated, with a volume of 1 milliliter partitioned over all the lesions. A clear improvement was observed, notably in the thickness and flexibility of the scars. When the lesions were examined on the third session, we noted a hyperpigmentation in the areas infiltrated by steroids. The hyperpigmentation was heterogeneous and accentuated in front of the injection points. On questioning, the patient stated that he had not applied anything to the lesions. He preferred to stop the treatment.

Conclusion:

Corticosteroid infiltration remains one of the cornerstones of keloid treatment. It is an accessible, fairly effective, and inexpensive method. Possible side effects include atrophy or the appearance of telangiectasias on the infiltrated areas. Hyperpigmentation, although classic, has been reported only rarely and its mechanism remains unknown. The main hypotheses are the occurrence of post-inflammatory pigmentation or a possible rebound effect. The management of this complication is based on stopping the injections and using topical steroids on the pigmented zones. It is important to be aware of this undesired effect in order to properly inform patients and know how to manage it.

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Abstract N°: 6130

DRESS in the pediatric population: About 7 cases

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Introduction & Objectives:

Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) is a rare drug-induced reaction in children but serious and potentially fatal. The prognosis is conditioned by the visceral organ involvement and the early management. The objective is to describe its clinical and evolutionary characteristics.

Materials & Methods:

A retrospective study of all cases of pediatric (aged <18 years) DRESS hospitalized between 2017 and 2020. The diagnosis of DRESS is dependent on findings consistent with the Registry of Severe Cutaneous Adverse Reactions (RegiSCAR) criteria.

Results:

Seven children (6 girls and 1 boy) were identified. The average age was 12.7 years (7-18 years). Antiepileptic drugs were incriminated in all cases (carbamazepine: 43%, phenobarbitol: 28.5%, lamotrigine: 28.5%) with a mean delay of 16.8 days between the onset of the medication and the onset of symptoms. All children presented with pruritic macula-papular exanthema involving more than 50% of body surface, associated to facial oedema and fever. Pustules were described in 43% of cases and purpura in 28,5%. Lymphadenopathy is seen in 71% of patients. Mucosal involvement has been frequently described (86%): cheilitis (57%), perleche (43%) and/or erosions (43%). Systemic involvement was dominated by haematological abnormalities: eosinophilia (100%), atypical lymphocytosis (71%) and/or macrophagic activation syndrome (14%). Among visceral organ, liver (cytolysis of 1.5 to 15 times normal) is involved in 71% of patients. Systemic corticosteroid (prednisone, 1 mg/kg/day per os) was indicated in two cases. The average time to recovery was 28 days. For the long-term evolution, one child developed fatal late myocarditis months after 2 clinical and biological remission. There were no long-term sequelae.

Conclusion:

Our series is characterized by the exclusivity of antiepileptic drugs in the induction of DRESS, contrary to older subjects and to a review of 148 children (Kim G et al*) where antiepileptic drugs represented only 52.6%. It is also characterized by a short delay compared to the same review (16.8 days versus 23.2 days). The mortality rate in children remains below 10% with a lower percentage than in adults. Visceral organ involvement is dominated by hematological and hepatic damage. In our series, no other systemic organ involvement was noted. The onset of hypersensitivity myocarditis varied from a few hours to two years after the eruption and can therefore be unpredictable. Our cases highlight the need to alert parents to the occurrence of a skin rash in the months following the prescription of antiepileptic drugs, especially in view of the frequency of viral infections at this age.

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Abstract N°: 6199

Metformin-Induced Generalized Bullous Fixed-Drug Eruption with a Positive Dechallenge-Rechallenge Test: A Case Report and Literature Review

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Introduction & Objectives:

Metformin is a commonly used medication in diabetic patients. It can cause different complications including cutaneous adverse reactions. Metformin-induced fixed-drug eruption (FDE) has been reported in limited cases.

Materials & Methods:

Herein, we report a 43-year-old man with generalized bullous lesions with a positive dechallenge-rechallenge test diagnosed as metformin-induced generalized bullous fixed-drug eruption.

Results:

Metformin dosage was stopped and lesions were treated with topical clobetasol propionate and oral prednisolone and cyclosporine-A. After a 6-month follow-up, he was well without any relapsing episodes.

Conclusion:

Due to the popularity of metformin, clinicians need to be aware of uncommon drug reactions for proper diagnosis and treatment.

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Abstract N°: 6229

Acute generalized exanthematous pustulosis (AGEP) induced by terbinafine

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Acute generalized exanthematous pustulosis (AGEP) induced by terbinafine

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Introduction & Objectives:

Acute generalized exanthematous pustulosis (AGEP) is a rare acute eruption characterized by numerous, small, non-follicular, sterile pustules arising within large areas of edematous erythema. The incidence of AGEP ranges between 3-5 cases per million population per year. More than 90% of the cases are drug-induced and it is usually classified as one of the severe cutaneous adverse reactions (SCARs) which usually develop within 48-96 hours after the drug administration. Any age may be affected and systemic involvement of the liver, kidneys, or lungs may only seldomly be observed. The most common culprits are antibiotics such as penicillins, cephalosporins, quinolones or tetracyclines, followed by calcium channel blockers, carbamazepine, non-steroidal anti-inflammatory drugs (NSAIDs) and antifungals, mostly terbinafine.

Materials & Methods:

We report a 40-year-old woman who presented to the clinic with exfoliating erythroderma of 4 days duration starting from the décolletage and rapidly spreading to the whole body with multiple non-follicular pustules affecting lower extremities. Few weeks prior to this episode, the patient was hospitalized in our department for generalized exanthematous drug eruption considered to be related to new NSAIDs intake. Complete remission of the initial rash was achieved by moderate doses of corticosteroids and antihistamines. The detailed drug history identified that the only agent to which the patient had been exposed prior to both skin rash episodes was terbinafine, hence, the diagnosis of terbinafine-induced AGEP was presumed. The diagnostic procedures included routine laboratory tests and histological examination.

Results:

Routine laboratory investigations demonstrated mild leukocytosis with neutrophilia and elevated inflammatory markers. The histological examination showed mild acanthosis, subcorneal collection of neutrophils, mild spongiosis and perivascular round cell infiltrates. Based on the clinico-laboratory findings the diagnosis of terbinafine-induced AGEP was accepted and the culprit drug was discontinued. Treatment with methylprednisolone 40mg, chloropyramine hydrochloride, infusions with serum glucose 500ml daily, and topical clobetasol dipropionate resulted in rapid complete remission.

Conclusion:

AGEP induced by terbinafine has only rarely been reported and the drug is not on the shortlist of medications responsible for this form of SCARs as it is mainly known to cause erythema multiforme, severe urticaria, erythroderma or worsening of pre-existing psoriasis. Terbinafine-induced AGEP may demonstrate slow recovery compared to other causative agents which is due to the presence of the drug in the skin for several weeks after exposure. Contrary to that experience, a rapid and complete recovery was observed in our patient after terbinafine withdrawal. Identification of the culprit agent may be difficult but is crucial for the disease duration and prognosis.

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Sweet syndrome induced by hydroxychloroquine

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Introduction & Objectives: Sweet syndrome, also known as acute febrile neutrophilic dermatosis, is a rare condition that predominantly affects women. It may be idiopathic, associated with malignancies or drug-induced. The most commonly reported drugs are granulocyte-colony stimulating factor and anticancer agents, antibiotics, antiepileptics and nonsteroidal anti-inflammatory agents.

Materials & Methods: We report a case of Sweet syndrome in a patient with recent Hydroxychloroquine treatment and anti-SARS-CoV-2 vaccination and subsequent infection and discuss the more probable etiology based on literature review of related cases.

Results: We present the case of a 51-year-old female patient admitted to the Dermatovenerology Clinic for a generalized erythematous pruritic rash, with macular, papular and nodular target-like lesions, which started suddenly 7 days ago, associated with fever and malaise. Mucosa, palmar and plantar areas were not involved. Leukocytosis with neutrophilia and increased CRP were associated and histopathology showed neutrophilic inflammatory infiltrate within the epidermis and superficial dermis, without vasculitis. Eight weeks before presentation in Dermatology department, patient has had anti-SARS-CoV-2 vaccination, with discreet facial erythematous papular eruption associated with slightly increased CRP for which 10 days of Norfloxacin was recommended in another dermatology setting. Two weeks after vaccination, the facial eruption persisted, she was diagnosed with undifferentiated arthritis of the 2nd to 4th fingers of the left hand and tested positive for SARS-CoV-2. Treatment with Doxycycline 100 mg od (same dermatologist recommendation) and Methylprednisolone 16 mg od (rheumatologist recommendation) for 20 days was administered, followed by Methylprednisolone 8 mg od and Hydroxychloroquine 400 mg bid as maintenance treatment, the latter regimen starting 3 weeks before presentation in our department, more exactly 2 weeks before the onset of generalized skin rash. Following cessation of Hydroxychloroquine and initiation of treatment with systemic and local corticosteroids, the obvious improvement of lesions occurred within 4 days.

Conclusion: Sweet syndrome has many possible concomitant etiologies and diagnostic of drug-induced type requires careful history including time-related occurrence. Hydroxychloroquine induced Sweet syndrome reports are exceptionally limited. Patients require regular clinical and biological evaluation, as complete resolution is achieved on average at 6 weeks.

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Cyclin-dependent kinase 4/6 inhibitors and dermatologic adverse events: results from a European multicentric study

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Introduction & Objectives:

Introduction of cyclin-dependent kinase inhibitors was a great advance in therapeutics for patients with estrogen receptor+/human epidermal growth factor receptor (HER2)− locally advanced and metastatic breast cancer. Despite the increasing use of these agents and the remarkable improvements in survival rates, drug related adverse events are not yet fully characterized. We describe the spectrum of cutaneous adverse reactions occurring in advanced breast cancer patients treated with cyclin-dependent kinase inhibitors, analyzing types, severity, time to onset, and possible treatment outcomes

Materials & Methods:

We performed an international multicentric retrospective study including patients with advanced breast cancer who developed cutaneous lesions during treatment with cyclin-dependent kinases 4 and 6 inhibitors, in the period June 2020–June 2021. Patients > 18 years, both males and females, were recruited at eleven Onco-dermatology units located in Albania(1), Argentina(1), France(1), Greece(3), Italy(3) and Spain(2). We evaluated patients' epidemiological and clinical characteristics, types of cutaneous adverse events, their time to onset and treatment outcomes. Severity of the skin reactions was assessed using the Common Terminology Criteria for Adverse events (CTCAE) version 5.0 score.

Results:

Seventy-nine patients (median age:62.3 years; range 39–83 years) were included in the study, and collectively, we recorded a total of 165 cutaneous adverse events during follow-up visits. The most frequent cutaneous reactions were pruritus (49/79 patients), alopecia (25/79) and eczematous lesions (24/79). Cutaneous toxicities were usually mild in severity (>65%), and occurred after a median of 6.5 months. Only 4 patients (5%) required treatment discontinuation due to the severity of the skin lesions. Majority of the skin reactions was managed with topical treatments.

Conclusion:

To our knowledge, we present the largest case series of cutaneous adverse events developing in advanced breast cancer patients treated with cyclin-dependent kinases 4 and 6 inhibitors. We showed that cutaneous toxicities are usually mild in severity, and manageable with standard supportive care; however, in selected cases, they can lead to treatment discontinuation with possible implications for patients' clinical outcome.

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Different pictures of allopurinol hypersensitivity syndrome (AHS)

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Introduction & Objectives:

Allopurinol is used as the first-line uric acid-lowering drug, but it is also associated with severe cutaneous adverse reactions (SCAR), including drug reaction with eosinophilia and systemic symptoms (DRESS), toxic epidermal necrolysis (TEN), Stevens-Johnson syndrome and allopurinol hypersensitivity syndrome (AHS).

Materials & Methods:

A retrospective analysis of patients hospitalized at the Department of Dermatology in Olsztyn for SCAR between 2016 and 2021 was performed

Results:

102 patients with SCAR were hospitalized in the Department of Dermatology from 2016 to 2021; 10,78% (11) had AHS manifested as erythrodemia (2), DRESS (5), maculo-papular rash (4). The majority were female (6:4), mean age was 61 years (45-89), mean time from the start of the treatment was 4,5 week (2-24), mean dose 245 mg (100-600). Indication for drug use was asymptomatic hyperuricemia (9) and gout (2). Concomitant diseases were hypertension (11), obesity (6), chronic heart failure (4), ischemic heart disease (3), chronic kidney disease (2), abnormal fasting blood glucose (2), type II diabetes (2), contact eczema (1), plaque psoriasis (1).

Conclusion:

The results of the analysis indicate a large contribution of allopurinol as a provocative factor in the occurrence of a severe drug reaction especially in patients in whom it was introduced because of asymptomatic hyperuricemia.