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Interdisciplinary aspects of diseases of the skin and mucous membranes

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Streszczenia

Single nucleotide polymorphisms of the COL3A1 gene in atopic dermatitis

Polimorfizm pojedynczego nukleotydu genu COL3A1 w atopowym zapaleniu skóry

Krzysztof Szaluś, Weronika Zysk, Jolanta Gleń, Monika Zabłotna, Roman Nowicki, Trzeciak Magdalena

Trustee of the paper: prof. Magdalena Trzeciak
Research centre: Gdański Uniwersytet Medyczny

The pathophysiology of atopic dermatitis (AD) is complex, and not fully understood. However, the genetic background is crucial. Collagens are the most abundant proteins in the Extra Cellular Matrix (ECM). There is a little data on their potential role in AD pathogenesis. Single Nucleotide Polymorphism (SNP) of COL3A1 is believed to be important in AD pathogenesis.

To search for the associations between SNP of COL3A1/rs1800255 genotype with course and occurrence of AD.

Blood samples were collected from 157 AD patients and 111 controls. Variant analysis of genotype polymorphisms was performed using polymerase chain reaction with sequence-specific primers (SSP-PCR).

AA genotype of COL3A1 rs1800255 to be most frequent significantly associated with mild SCORAD (OR = 0.16; 95% CI: 0.03–0.78; p = 0.02) and the GG genotype with severe AD (OR = 6.6 (95% CI: 1.23–32.35, p = 0.03). AA genotype of COL3A1 rs1800255 dominants in patients with mild pruritus (OR = 18.5, 95% CI: 3.48–98.40, p = 0.0006).

Our results may indicate the role of SNP of COL3A1 rs1800255 in AD pathogenesis and indicate it as a clinical biomarker. However, this needs further studies.

Genetic analysis reveals different determinants of mupirocin and fusidic acid resistance in Staphylococcus aureus strains collected from atopic dermatitis patients

Analiza genetyczna ukazuje różne determinanty oporności na mupirocynę i kwas fusydowy u szczepów *Staphylococcus aureus* wyizolowanych od pacjentów z atopowym zapaleniem skóry

Mateusz Ziomek, Leszek Blicharz, Lidia Rudnicka, Zbigniew Samochocki, Ksenia Szymanek-Majchrzak

Trustee of the paper: dr hab. n. med. Ksenia Szymanek-Majchrzak
Research centre: Warszawski Uniwersytet Medyczny

Skin colonization with Staphylococcus aureus (SA) is common in atopic dermatitis (AD) patients and is associated with a high risk of skin infections. Eradication, empirically provided with the usage of topical antibiotics: mupirocin (MUP), or fusidic acid (FD), reduces the severity of the disease, but could be also associated with resistance development.

To examine the prevalence of antibiotic resistance in S. aureus isolated from AD patients with focus on phenotypic and genotypic characterization of MUP and FD resistance.

112 SA strains isolated from 41 patients with diagnosed AD were collected from non-lesional skin (n = 34), atopic but not infected skin lesions (n = 42) and anterior nares (n = 36). The strains were identified based on the protein profile mass spectrometry. Antibiotic resistance was performed based on disc-diffusion and E-test methods, according to EUCAST recommendations. The mupA/mupB/fusB/fusC/fusD genes were detected using the PCR technique. Point mutations in fusA/rpl genes were detected by amplicon-based sequencing, according to the Sanger methodology.

Among all 7 resistant to mupirocin strains, mupA gene was detected. Among 14 isolates resistant to the FD, only 3 carried plasmid-borne fusB gene. The point mutations in fusA/rpl amplicons were responsible for FD resistance among 11 remaining strains. The fusC and fusD genes were not detected.

The resistance to MUP and FD in S. aureus, isolated from AD patients is a real threat. Plasmid encoded resistance, especially under antibiotic selective pressure related to empirical therapies, poses a serious threat to the inter-strain dissemination.

The function of the ABCA4 gene in physiology of skin epithelial cells

Rola genu ABCA4 w fizjologii komórek naskórka

Krzysztof Łuszczyński, Marcin Radziszewski, Marta Soszyńska, Michał Komorowski, Aneta Ścieżyńska

Trustee of the paper: dr n. med. Aneta Ścieżyńska
Katedra i Zakład Histologii i Embriologii, Warszawski Uniwersytet Medyczny

ABCA4 gene encodes an ATP-binding cassette transporter which translocates retinoid intermediates of the visual cycle. ABCA4 gene mutations cause a spectrum of ABCA4 retinopathies, the most common is called Stargardt disease. ABCA4 has previously been observed almost exclusively in the retina, but recently expression of the ABCA4 gene was revealed in other tissues i.e. skin and hair follicles cells.

Main aim of the study was to investigate the possible role of the ABCA4 gene in skin epithelial cells.

All experiments were performed on keratinocyte primary cell lines isolated from skin explants. For simulations solutions of 2ug/ml Tunicamycin, 1uM Retinoic Acid and 10uM all-trans retinal were used. Expression of the ABCA4 gene and selected genes involved in the process of keratinocytes differentiation, was evaluated at the mRNA and protein levels with qRT-PCR and Western Blot. Cell proliferation was measured directly with an automated fluorescence cell counter. Cellular localization of the ABCA4 gene was evaluated with confocal microscopy.

Under endoplasmic reticulum stress conditions ABCA4 protein level was lowered however expression on mRNA level increased, genes involved in keratinocytes differentiation showed the opposite pattern. After retinoid stimulation ABCA4 expression significantly increased. Confocal microscopy confirmed the membranous localisation of ABCA4. Keratinocyte proliferation decreased after treatment with Tunicamycin and retinoid derivatives.

According to the obtained data ABCA4 is involved in the process of keratinocytes proliferation and differentiation. These preliminary results are promising and more research targeted on gene function should be performed.

Prevalence of depression and social isolation in young adults with primary hyperhidrosis

Występowanie depresji oraz izolacji społecznej u młodych dorosłych z pierwotną nadpotliwością

Anna Ryguła, Magdalena Łyko, Michał Kowalski, Aleksandra Snopkowska

Trustee of the paper: dr hab. n. med. Alina Jankowska-Konsur
Research centre: Katedra i Klinika Dermatologii, Wenerologii i Alergologii, Uniwersytet Medyczny im. Piastów Śląskich we Wrocławiu

Primary hyperhidrosis (HH) is excessive sweating beyond thermoregulatory needs.

Determine the prevalence of HH in young adults in Lower Silesia, Poland. The impact of HH on quality of life and its association with depression and loneliness were studied.

An anonymous survey was distributed to university students in Wroclaw between May and December 2022. The prevalence and severity of hyperhidrosis, quality of life, and occurrence of symptoms associated with depression and loneliness were studied using Hyperhidrosis Disease Severity Scale (HDSS), Beck's Depression Inventory (BDI), Revised UCLA Loneliness Scale (R-UCLA), and Dermatology Life Quality Index (DLQI).

Of 398 participants, 265 (66.58%) were females and 133 (33.42%) were males. The age range was 17-33 years. 292 (73.36%) self-reported primary HH. Axillary hyperhidrosis was most frequently observed (243/292; 83.22%). The prevalence of depression was significantly higher in moderate to severe HH (47.75%) compared to mild (38.74%) and no HH (13.51%) ($c^2 = 18.56$; $p < 0.001$). The median R-UCLA was significantly higher in HH vs no HH group (53 (IQR = 6), 51 (IQR = 6), respectively; $p = 0.013$) and was associated with HH severity ($p = 0.03$). The median DLQI in HH group was significantly higher than in no HH group (1 (IQR = 3) vs. 0 (IQR = 1), respectively; $p < 0.001$). A higher DLQI score was associated with more severe HH ($p < 0.001$).

HH is related to depression, loneliness, and lower quality of life. More severe HH is associated with a more frequent occurrence of mentioned disorders. Diagnostics of mental health disorders are crucial in patients with hyperhidrosis.

Psoriasis versus sexuality – comprehensive cross-sectional questionnaires-based survey

Łuszczyca a seksualność – kompleksowa ocena oparta na kwestionariuszach przekrojowych

Agata Karny, Miłosz Nesterowicz, Julia Nowowiejska, Anna Baran, Iwona Flisiak

Trustee of the paper: dr hab. Anna Baran
Research centre: Klinika Dermatologii i Wenerologii, Uniwersytet Medyczny w Białymstoku

The symptoms that accompany psoriasis affect functioning and comfort of patients. The impact of dermatosis on sexual health is also observed although this issue is not frequently discussed.

The aim of study was to assess the prevalence of sexual dysfunctions in psoriatic patients.

In this cross-sectional questionnaire-based study, volunteers with psoriasis completed an online survey containing: Dermatology Life Quality Index (DLQI), Female Sexual Function Index (FSFI), International Index of Erectile Function (IIEF-15), Alcohol Use Disorders Identification Test (AUDIT) and basic epidemiological and health-related questions. Female controls received FSFI and male ones IIEF-15 questionnaires.

The research involved 51 psoriatics and 63 controls (mean age 35 and 24 respectively). The mean DLQI score was 11.7 for women and 9.5 for men. The skin condition affected sexual life in 47% of patients. Almost 70% admitted the disease's influence on sexual desire and approximately 57% of patients claimed psoriasis causes intercourse difficulties. The mean FSFI score for the study group was 22.1, and IIEF 40.4. There was no significant difference between patients and controls in FSFI and IIEF scores.

Appropriate questionnaires should be developed for patients with chronic skin diseases to identify the presence and type of clinical problems with sex life because psoriasis is apparently to affect it. Psoriatics with abnormal scores in such questionnaires could be further referred to other specialists in order to manage the origin of their problems and improve life quality.

Stigmatization among adolescence with acne

Stygmatyzacja wśród młodzieży z trądzikiem

Marta Szepietowska, Alicja Dąbrowska, Bernadetta Nowak, Katarzyna Skinderowicz, Bartosz Wilczyński

Trustee of the paper: dr hab. n. med. Alina Jankowska-Konsur
Research centre: SKN Dermatologii Eksperymentalnej, Katedra i Klinika Dermatologii, Wenerologii i Alergologii, Uniwersytet Medyczny we Wrocławiu

Stigmatization is defined as a discrediting mark which sets the person from others and hindering interpersonal relationships. Literature data on stigma in acne subjects are scarce. This study was undertaken to assess feelings of stigmatization in adolescents with facial acne.

The study was performed on 730 high-school students aged 15 to 19 years with the mean age of 17.05 ±1.18 years. Self-reported acne was found in 74.9% of subjects. The severity of acne was self-assessed with the standardized color images based on Investigators Global Assessment (IGA). Stigmatization was studied with 6-Item Stigmatization Scale (6-ISS) and Perceived Stigmatization Questionnaire (PSQ). Additionally, quality of life (QoL) was evaluated with Dermatology Life Quality Index (DLQI).

58% of adolescents with acne presented with feelings of stigmatization. Within the acne population, stigmatization was significantly more common in females than in males ($p < 0.001$). The mean level of stigmatization according to 6-ISS was significantly higher in acne sufferers than in those free from acne (1.68 ±2.42 points and 0.55 ±1.50 points, respectively; $p < 0.001$). Feelings of stigmatization were significantly more pronounced by females than males ($p < 0.001$). Staring at the skin and the fact that others are not attracted to person due to skin lesions were main problems raised by the study participants with acne. 6-ISS scores correlated with acne severity ($r = 0.278$; $p < 0.001$) and both 6-ISS and PSQ scores with QoL impairment ($r = 0.530$; $p < 0.001$ and $r = 0.341$; $p < 0.001$, respectively).

In conclusion, facial acne is a highly stigmatized skin disease and requires a holistic therapeutic approach.

Effect of antidiabetic treatment on the course of psoriasis

Wpływ leczenia przeciwcukrzycowego na przebieg łuszczycy

Mateusz Matwiejuk, Hanna Myśliwiec, Iwona Flisiak

Trustee of the paper: dr hab. n. med. Hanna Myśliwiec
Research centre: Klinika Dermatologii i Wenerologii, Uniwersytet Medyczny w Białymstoku

It is well established that psoriasis (PSO) and type 2 diabetes (T2D) are not only comorbidities but they share the same pathogenic pathways. Chronic inflammation, genetic and environmental factors, metabolic abnormalities are common in both diseases. Non-pharmacologic lifestyle modification like: healthy diet, weight loss, smoking cessation, increased physical activity may have positive effects on T2D and PSO. Additionally, some therapies may be potentially used to treat both conditions. There is increasing evidence of the beneficial effects of antidiabetic hypoglycaemic agents in PSO. Metformin has been one of the most popular oral drugs for the past 60 years. It decreases risk of developing psoriasis in T2D patients. Good results have been achieved with metformin treatment in patients with psoriasis and metabolic syndrome, for both skin lesions and metabolic syndrome. Interestingly new hypoglycaemic drugs have promising effects on psoriasis. Their beneficial effect on the course of psoriasis was mainly shown by the reduction of PASI. Glitazones may enhance insulin sensitivity and lower inflammation through peroxisome proliferator-activated receptors-γ, and retain proliferation of keratinocytes. Glucagon-like peptide-1 receptor agonists play a role in the reduction in the number of Invariant natural killer T cells in psoriatic plaques. In contrast, flozins – mediated protective effects in PSO could not be established. Flozins treatment increased PSO risk in patients with T2D exhibiting renal diseases.

Therapeutics that effectively treat both PSO and T2D simultaneously and are non-immunosuppressive may have great value in the future approach. More research is needed to evaluate the efficacy of shared treatments in both diseases.

The use of high-frequency ultrasonography for the diagnosis of basal cell carcinoma – literature review

Zastosowanie ultrasonografii wysokiej częstotliwości w diagnostyce raka podstawnokomórkowego skóry – przegląd literatury

Maria Płocka

Trustee of the paper: prof. dr hab. Rafał Czajkowski, dr hab. Mateusz Jagielski
Research centre: Interdyscyplinarna Szkoła Doktorska *Academia Copernicana*, Uniwersytet im. Mikołaja Kopernika w Toruniu

High-frequency ultrasonography (HFUS) is a non-invasive and highly repetitive medical imaging method with a great and still rising value in the diagnostic process of skin tumors. It accompanies physician's examination, dermoscopy and biopsy, increases the diagnostic accuracy by facilitating the real-time assessment of locoregional staging, supports planning the adequate margins of surgical excision, as well as provides postoperative inspection of the treatment results by detecting early local or nodal recurrence.

The aim of this literature review is to briefly present the methodology of HFUS skin examination and its clinical application both in the grayscale and color-doppler method as exemplified by the features of the most common cutaneous malignant tumor and the most frequent human cancer overall – the basal cell carcinoma (BCC).

The review shortly depicts BCC's epidemiology, its clinical variants, treatment methods, but primarily shows the ultrasonographic findings possible to assess with the use of high-frequency ultrasonography (HFUS), particularly HFUS-assisted evaluation of the cancer's dimensions, peritumor tissues invasion and ultrasonographical signs of high risk of BCC recurrence. The use of HFUS in clinical assessment of skin malignancies due to its high correlation to histopathologic results enhances the chance for radical treatment and positive prognosis for the patient.

Combination of bullous pemphigoid with mucosal pemphigoid revealed after treatment with nivolumab and vaccination against COVID-19: case report

Złożenie pemfigoidu pęcherzowego z pemfigoidem błon śluzowych ujawnione po leczeniu niwolumabem i szczepieniu przeciwko COVID-19: opis przypadku

Natalia Welc

Trustee of the paper: prof. dr hab. Marian Dmochowski
Research centre: Pracownia Autoimmunizacyjnych Dermatoz Pęcherzowych, Klinika Dermatologii, Uniwersytet Medyczny im. Karola Marcinkowskiego w Poznaniu

Bullous pemphigoid (BP) is the most common autoimmune bullous dermatosis. It is characterized by autoimmunity against BP180 and/or BP230. Blisters with a well-tight cover, filled with serous content, rarely bloody, are usually observed. Numerous trigger factors may play a role in the pathogenesis of BP, including drugs and malignancy in the context of neurodegeneration in the aging process. Mucous membrane pemphigoid (MMP) comprises a group of autoimmune chronic inflammations with a predilection for mucosal eruptions. The skin may or may not be involved. The clinical hallmark is scarring, difficult to detect in the oral cavity.

Cases of BP diseases have been reported in patients treated with checkpoint inhibitors, including nivolumab, and after vaccination against COVID-19. Both situations were observed in a 68-year-old woman admitted to a dermatology department who underwent eleven courses of nivolumab during the melanoma treatment. She reported bleeding gums and numerous erosive lesions on the oral mucosa, which temporarily subsided 3 months after discontinuation of therapy. Also, 1 week after the third dose of vaccination against COVID-19, the patient observed skin eruptions in the right armpit, where blisters filled with serous content developed a few days later; mucosal eruptions were visible again. Based on the clinical picture, H + E test, direct immunofluorescence of a skin sample, ELISA panel in bullous diseases, and indirect mosaic immunofluorescence with laminin 332, a combination of BP/MMP was diagnosed.

Recognition of trigger factors of BP/MMP diseases should be part of managing patients with comorbidities.

The use of botulinum toxin in the treatment of androgenetic alopecia – a systematic review

Zastosowanie toksyny botulinowej w leczeniu łysienia androgenowego – praca przeglądowa

Natalia Welc

Trustee of the paper: dr n. med. Magdalena Jałowska
Research centre: Klinika Dermatologii, Uniwersytet Medyczny im. Karola Marcinkowskiego w Poznaniu

Androgenetic alopecia (AGA) is the most common cause of hair loss. The course of AGA may vary among patients. AGA is caused by increased sensitivity of the hair follicles to dihydrotestosterone, which affects the androgen receptors of the hair follicles and leads to their gradual involution. Presently, the treatment mainly uses topical minoxidil and finasteride in general treatment. Increasingly, however, there is a growing interest in new techniques in the treatment of AGA, such as scalp injections with botulinum toxin (BTX). It would lead to the relaxation of the scalp, thus improving the blood supply to the scalp and increasing the oxygenation of skin tissues, which would promote the oxygen-dependent conversion of testosterone to estradiol instead of dihydrotestosterone.

To assess the effectiveness of BTX in the AGA treatment, an analysis of the available articles in the PUBMED database until November 2022 was carried out. Following the PRISMA 2020 guidelines, 7 articles were qualified for review. The studies involved a total of 265 patients aged 18 to 65. All projects involved injecting the scalp intramuscularly with various doses of BTX at intervals set by the researchers. The evaluation consisted of the objective assessment of the number of hairs before, during, and after the end of the study, objective assessment by clinicians, and subjective assessment of the patients' satisfaction. None of the patients presented serious side effects.

The results indicate that BTX could be an additional solution in the treatment of AGA.

High-intensity focused ultrasound – application, effects, and complications – a systematic review

Skupiona wiązka fal ultradźwiękowych o dużym natężeniu (*high-intensity focused ultrasound*) – zastosowanie, efekty, powikłania

Natalia Welc, Michał Owczarek

Trustee of the paper: dr n. med. Magdalena Jałowska
Research centre: Klinika Dermatologii, Uniwersytet Medyczny im. Karola Marcinkowskiego w Poznaniu

The HIFU (high-intensity focused ultrasound) method has gained particular popularity in the field of aesthetic medicine in recent years. It has been used primarily in rejuvenating the skin of the face, neck, and cleavage and in reducing body fat. With the help of an ultrasonic wave, a large amount of energy is released, and the temperature in the surrounding tissues is increased, which in turn contributes to the formation of collagen and tissue remodeling, as well as a reduction in the size of adipocytes in adipose tissue. The results of previous scientific reports seem to be promising. There are also the first studies on the use of the HIFU method in new, previously untested applications. HIFU treatments, despite their low invasiveness, are not without side effects or complications. To assess the effectiveness of this procedure, an analysis of articles in the PUBMED database was carried out until May 2022.

The following review paper systematizes the available knowledge on the use of the HIFU method in face and neck skin rejuvenation and fat reduction, its effects, and complications.

Effects of PPE on epidermal barrier parameters in pandemic COVID-19

Wpływ środków ochrony osobistej PPE na parametry bariery naskórkowej w pandemii COVID-19

Iga Kopeć, Magdalena Basałygo, Joanna Śliwińska, Barbara Zegarska

Trustee of the paper: prof. dr hab. n. med. Barbara Zegarska
Research centre: Katedra Kosmetologii i Dermatologii Estetycznej, *Collegium Medicum*, Uniwersytet Mikołaja Kopernika w Bydgoszczy

The Covid-19 pandemic has contributed to the increased use of personal protective equipment (PPE), which can contribute to disruption of the skin's hydrolipid barrier.

The objectives of the study were: to evaluate the effect of wearing protective masks on skin conditions and to analyze the effect of skin disinfectants on epidermal biophysical parameters.

The study involved 84 medical and non-medical workers aged 18-85. The epidermal barrier was assessed using the Corneometer®CM825 and Mexameter®MX18. Visual assessment of the skin consisted of 2 qualitative scales: the IGA and the VAS. This was supplemented by a proprietary research questionnaire. For the comparative analysis of the three hand skin disinfectants, a double-blind study was conducted.

The survey showed an association between acne severity as measured by the IGA scale and chin epidermal hydration ($r = 0.35$; $p = 0.006$). The frequency of applied facial as well as hand skin care is associated with epidermal hydration ($r = 0.31$; $p = 0.015$) ($r = 0.43$; $p < 0.001$). With the use of propan-2-ol, the level of skin pigmentation increased significantly.

The use of protective masks was shown to increase the level of epidermal hydration of the chin area, which correlates with the severity of acne symptoms as measured by the IGA scale. The use of gloves does not change the level of hydration and does not affect the redness of the skin. The use of proper skin care reduces the risk of adverse reactions. A comparative analysis of skin disinfectant preparations indicated propan-2-ol as causing more skin redness than ethyl alcohol-based preparations.

Stigmatization among adolescence with acne

Stygmatyzacja wśród młodzieży z trądzikiem

Marta Szepietowska, Alicja Dąbrowska, Bernadetta Nowak, Katarzyna Skinderowicz, Bartosz Wilczyński

Trustee of the paper: dr hab. n. med. Alina Jankowska-Konsur
Research centre: SKN Dermatologii Eksperymentalnej, Katedra i Klinika Dermatologii, Wenerologii i Alergologii, Uniwersytet Medyczny we Wrocławiu

Stigmatization is defined as a discrediting mark which sets the person from others and hindering in-

terpersonal relationships. Literature data on stigma in acne subjects are scarce. This study was undertaken to assess feelings of stigmatization in adolescents with facial acne.

The study was performed on 730 high-school students aged 15 to 19 years with the mean age of 17.05 ±1.18 years. Self-reported acne was found in 74.9% of subjects. The severity of acne was self-assessed with the standardized color images based on Investigators Global Assessment (IGA). Stigmatization was studied with 6-Item Stigmatization Scale (6-ISS) and Perceived Stigmatization Questionnaire (PSQ). Additionally, quality of life (QoL) was evaluated with Dermatology Life Quality Index (DLQI).

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In conclusion, facial acne is a highly stigmatized skin disease and requires a holistic therapeutic approach.

Lichen sclerosus and genital lichen planus

Liszaj twardzinowy i liszaj płaski narządów płciowych

Maciej Stępień

Trustee of the paper: dr n. med. Aleksandra Wielgoś
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Lichen planus and lichen sclerosus are chronic autoimmune inflammatory dermatological diseases affecting both men and women. The prevalence of lichen planus, which affects the skin, mucous membranes and nails, as well as the genitalia, where it manifests itself as milky white patches, erythema or erosions, ranges from 0.9% to 1.2%. In women, it manifests as burning, discharge, dysuria and dyspareunia. In men, the symptoms include itching, pain and dyspareunia. Therapy includes strong topical corticosteroids, which often allow good control of symptoms. Azathioprine, cyclophosphamide, mycophenolate mofetil are used in severe and refractory cases. Vaginal dilators coated with corticosteroid ointment or oestrogen cream are also used. Surgery for fused labia is possible when the disease is well controlled.

Lichen sclerosus affects 3% of postmenopausal women and more than 0.07% of men, occupies the anal and genital areas and increases the risk of carcinogenesis. The onset of erythema and oedema is preceded by the presence of characteristic porcelain-white papules and plaques. The prolonged disease activity leads to atrophic changes, which can cause haemorrhagic blisters and erosions. Symptoms include dyspareunia, pruritus increasing at night, dysuria, constipation and burning. In men, lesions most commonly affect the foreskin, the glans penis and the external urethral orifice, causing pain and possibly a flail. Topical corticosteroids are the first line of treatment. Cyclosporine, retinoids, phototherapy and photodynamic therapy are also used. In men, it is not uncommon for circumcision to be used as a treatment. These two diseases represent a problem that significantly reduces quality of life.

Nail lesions in the course of alopecia areata

Zmiany na paznokciach w łysieniu plackowatym

Maciej Stępień

Trustee of the paper: lek. Małgorzata Kostrzewa
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Alopecia areata (AA) is an immune-mediate, chronic, non-scarring hair disorder which affects 0.5–2% of the general population worldwide. It is a disease whose aetiology has not yet been fully explained, while the symptoms for patients are extremely troublesome. Nail changes are also a common feature of alopecia areata (AA) found in 10% to 66% of the patients. This disease leads to nail cosmetic distortions and functional impairments. Studies show that the nails are targeted by the same type of inflammatory cells targeting hair follicles in AA. The clinical manifestation of nail disorders in AA is variant and depends on localization of the lesion and disease's severity. The most common nail features in AA are: nail pitting, trachyonychia, onychorrhexis, onycholysis, onychomadesis, leukonychia punctata, koilonychia and red lunulae. Nail changes were more frequent (47%) with the severe form of AA. This review provides an update on the prevalence, pathogenesis, clinical and histopathological features, differential diagnosis and management of nail changes in patients with AA.

Psychiatric disorders as a basis for the development of prurigo nodularis

Zaburzenia psychiczne jako podłoże rozwoju świerzbiączki guzkowej

Martyna Orzechowska, Adrian Potocki

Trustee of the paper: dr n. med. Dominika Kwiatkowska, dr n. med. Justyna Szczęch
Research centre: Studenckie Naukowe Koło Dermatologiczne, Kolegium Nauk Medycznych, Uniwersytet Rzeszowski

Prurigo nodularis is a chronic dermatosis characterized by intense pruritus with multiple pink or bluish-red nodules, mainly located on the distal parts of

the extremities, seldom on the trunk. The etiology of the disease is complex and still not fully understood.

In recent years there has been a steady increase in the incidence of this disease. Data in the literature shows that as many as one-third of patients suffering from prurigo nodularis are initially misdiagnosed. Currently, two types of prurigo nodularis are distinguished – related and unrelated to atopy. More frequently, we can observe prurigo nodularis with psychiatric disorders, including depression, which is associated with a significant deterioration in the quality of life. It is important not only to control the disease's dermatological symptoms but also to provide psychiatric treatment and specialized psychological care for patients.

Awareness of the correlation of psychological disorders with the possibility of developing prurigo nodularis is necessary for rapid diagnosis and selection of appropriate therapeutic methods.

Bowel-associated dermatosis-arthritis syndrome (BADAS): a review of the literature

Zespół dermatozy i zapalenia stawów związany z chorobami jelit (BADAS): przegląd literatury

Aleksandra Białczyk

Trustee of the paper: prof. dr hab. Rafał Czajkowski
Research centre: *Collegium Medicum* im. Ludwika Rydygiera w Bydgoszczy, Uniwersytet Mikołaja Kopernika w Toruniu

Bowel-associated dermatosis-arthritis syndrome (BADAS syndrome) is a rare systemic disease characterized by flu-like symptoms, polyarthralgia, and a cutaneous eruption of papules and pustules. The skin lesions are typically localized to the upper extremities and chest. Initially, the condition was referred to as bowel bypass syndrome because of its association with bariatric surgery, particularly jejunoileal bypass. It is also currently linked with inflammatory bowel disease (IBD). Its prevalence is unknown mainly since it is rare and the literature is limited to case reports. The disease etiology remains unclear, but the center of the proposed pathophysiology involves immune complexes related to bacterial overgrowth in areas of the altered gastrointestinal tract, either surgically or functionally, by inflammation. In many cases, BADAS resolves spontaneously. Treatment focuses on reducing neutrophilic inflammation and bacterial overgrowth and treating the underlying gastrointestinal condition. Treatment options include antibiotics, systemic corticosteroids, dapsone, sulfa pyridines, and surgery. BADAS symptoms are nonspecific, so that differential diagnosis may be difficult. It is important to approach the patient holistically, as this may be necessary to make an accurate diagnosis.

Role of minoxidil in the treatment of alopecia areata

Rola minoksydylu w łysieniu plackowatym

Michał Majewski, Karolina Gardaś

Trustee of the paper: dr n. med. Anna Waśkiel-Burnat
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Alopecia areata is a non-scarring form of hair loss. However, the scalp is most commonly affected, other areas may be also involved. Alopecia areata is associated with the collapse of the hair follicle immune privilege which results in infiltration of immune cells around the lower part of the hair bulb during the anagen phase and further hair loss.

Minoxidil was first developed for treatment of hypertension with approximately 20% of patients experiencing hypertrichosis as an unexpected adverse event. Nowadays, both topical and oral, minoxidil is commonly used in treatment of various forms of hair loss. Minoxodil has a vasodilatory effect, thus increasing cutaneous blood flow with resultant increase in oxygen and growth factor delivery to the hair follicle. In addition, minoxidil prolongs the anagen and shortens the telogen phase of hair cycle. Minoxidil may also have immunomodulatory effects by moderating concanavalin A, an intermediary in the T lymphocyte activation process, causing suppression of T-cells and possible effectiveness in alopecia areata.

In alopecia areata, both topical and oral minoxidil has been used with variable effectiveness. The concentration of topical minoxidil used in alopecia areata varied from 1% to 5%. Oral minoxidil has been used at the daily dose of 0.5–10 mg. To date, there is a lack of studies evaluating the efficacy of minoxidil in large groups of patients with alopecia areata over a long-term period. Taking into consideration good

safety profile and possible efficacy, minoxidil should be considered in patients with alopecia areata as second-line or adjuvant therapeutic options.

Monilethrix – causes, clinical picture and therapeutic options

Monilethrix – przyczyny, obraz kliniczny i możliwości terapeutyczne

Joanna Rapiejko

Trustee of the paper: dr hab. n. med. Adriana Rakowska
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Monilethrix is a hair shaft disorder with the fragility of the hair caused by a structural weakening of the hair; regular, periodic thinning of the hair shafts is present, giving it a beaded appearance. It is a genetically determined condition; with autosomal dominant or autosomal recessive inheritance. The autosomal dominant form of the disorder is caused by mutations in KRT81, KRT83 and KRT86 genes encoding a type II hair keratin that is expressed mainly in the keratinizing zone of the hair shaft cortex. Autosomal recessive type of disease is the result of mutations in the coding for the desmoglein-4 protein (DSG4) gene, which is also expressed in the hair cortex. High phenotypic variability of monilethrix is observed. The hair, which may appear to be normal after birth, becomes short, fragile and brittle within a few months. This leads to hypotrichosis, especially on the scalp in the occipital region. The eyebrows, eyelashes and nails (koilonychia) can be involved. Alopecia and follicular hyperkeratosis can be present. Concomitant symptoms may include brittle nails, syndactyly, juvenile cataracts, visual field restriction and dental abnormalities. Hair condition may improve with pregnancy, advancing age and in the summertime. Therapeutic options include topical treatment; minoxidil improves hair density and hair shaft quality and tretinoin can improve hair abnormalities. Oral minoxidil in low doses is a promising treatment. Reports of improvement during the use of oral acitretin are available. The rules of gentle hair care, that are recommended, are no brushing, backcombing, chemical products and heat exposure.

The effect of probiotics and prebiotics on the oral mucosa

Wpływ probiotyków i prebiotyków na błonę śluzową jamy ustnej

Karol Paradowski, Jan Błaszczyk, Oliwia Burdan, Julia Kot

Trustee of the paper: dr n. med. Karolina Thum-Tyzo, prof. dr hab. n. med. Renata Chałas
Research centre: Katedra i Zakład Medycyny Jamy Ustnej, Wydział Lekarsko-Dentystyczny, Uniwersytet Medyczny w Lublinie

In the face of the dynamic development of medicine, more often we can hear about probiotics – living microorganisms with proven health benefits, and prebiotics – resistant to the digestive enzymes of ingredients.

The aim of the study is to present the current knowledge on probiotics and prebiotics and their impact on the oral mucosa. For this purpose, Internet databases such as: PubMed, Google Scholar were reviewed, and information contained in scientific articles on the subject of the work was analyzed.

Research suggests the beneficial effect of probiotics on reducing the number of bacteria involved in periodontitis and fungi of the genus Candida causing oral candidiasis. Studies have also shown that using probiotics effectively reduces gingivitis, the amount of accumulated plaque in patients with moderate to severe gingivitis, and significantly reduces the concentration of cytokines that increase the inflammatory response IL-8 and TNF-a. The ability of probiotics to reduce volatile derivatives of sulfur compounds suggests the possibility of their use in the prevention and treatment of halitosis. In addition, studies conducted *in vitro* and on animal models have shown the inhibitory effect of probiotics on the growth of Candida albicans and even the development of oral cancer. Probiotics have great potential and impact on the oral mucosa by limiting and controlling specific pathogens. Contrastingly, prebiotics support the growth and development of microorganisms, thus increasing the benefits of using probiotics. The effect of this is striving to restore homeostasis in the patients microbiome, which cannot be achieved by conventional treatment methods.

Can IL-35 be of importance in atopic dermatitis?

Czy IL-35 może mieć znaczenie w atopowym zapaleniu skóry?

Weronika Zysk, Jolanta Gleń, Magdalena Trzeciak

Trustee of the paper: prof. dr hab. med. Magdalena Trzeciak
Research centre: Gdański Uniwersytet Medyczny

Atopic dermatitis (AD) is a recurrent, chronic, inflammatory, itchy dermatosis. The pathophysiology of the disease is multifactorial, and not fully understood. It consists of epidermal barrier defects, genetic predisposition, environmental factors, and altered immune response. The immune system in AD is heterogeneous and complex. It is known that cytokines from axis Th1, Th2, Th17, and Th22 are involved in the pathogenesis of AD. Additionally, the dominance of various types of cytokines depends on the phase of the disease, age, and race of the patient.

In this review, we present the role of IL-35 in modulating the immune system and discuss its possible involvement in the pathogenesis of AD. Dysregulated expression of IL-35 is observed in many autoimmune, inflammatory, and allergic diseases. A few of these scientific reports also refer to AD. Research data suggest that IL-35 may play different roles in different diseases. Most of the available evidence indicates an anti-inflammatory and protective effect of this cytokine, but a few reports suggest its pro-inflammatory effect. It might be that its activity depends on the cytokine milieu. IL-35 can inhibit the development of Th1, Th2, and Th17 cells in the early stage of the proliferation of these cells. Moreover, IL-35 induces a subset of regulatory cells secreting immunosuppressive cytokines. Taking into consideration, IL-35, theoretically, would contribute to restoring balance to the observed immune dysregulation in AD. However, further studies are required to evaluate this hypothesis.

Raynaud's phenomenon – pathogenesis and indicators

Objaw Raynauda – patogeneza i czynniki indukujące

Kinga Borowiec

Trustee of the paper: lek. Justyna Milewska
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Raynaud's phenomenon is a common disorder of the blood vessels which is caused by vasoconstriction of peripheral arteries in response to cold exposure, emotional stress or vasoconstrictive agents such as nicotine, beta-blockers, bleomycin and others. It typically affects fingers and toes and is characterized by three phases of skin colour change: pallor (ischaemia), cyanosis (deoxygenation) and erythema (reperfusion) phase. The pathophysiological background of Raynaud's phenomenon includes increased vasospasm and reduced vasodilatation, structural abnormality of the vessels, and coagulopathy. The main known factors contributing to these processes are endothelin-1, nitric oxide (NO), calcitonin gene-related peptide (CGRP), β2-adrenoceptor, free radicals, and platelet activation. Raynaud's phenomenon is classified as a primary Raynaud's phenomenon or Raynaud's disease when there is no underlying disease and secondary Raynaud's phenomenon or Raynaud's syndrome occurs as a result of another condition. One of the most frequent causes of secondary Raynaud's syndrome is systemic sclerosis, however, it can also co-occur with other connective tissue diseases, haematological diseases, vascular diseases, neurological diseases or as a paraneoplastic syndrome.

Trichoblastoma – from the pathogenesis to the treatment

Trichoblastoma - od patogenezy do leczenia

Monika Nowakowska

Trustee of the paper: lek. Paulina Chmielińska
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Trichoblastoma (TB) remains a rare, benign adnexal tumor that originates in follicular germinative structures. Clinically, trichoblastoma presents as a smooth, isolated, nonulcerated, skin-colored papule or nodule. In most cases, the diameter of a lesion does not exceed 0.5 cm. It is usually located on the head or neck. A lesion may occur sporadically, but in most cases it arises in sebaceous nevus. Numerous variants of trichoblastoma have been described, including nodular, cribriform, retiform, racemiform, columnar and adamantanoid form. In the majority of cases a lesion appears after the fourth decade of life.

Currently, the exact pathogenesis of trichoblastoma is not fully understood. Moreover, some research emphases the significance of activating mutations in the RAS-MAPK pathway.

Dermoscopy of trichoblastoma reveals blue-ovoid nests, spoke wheel areas and arborizing vessels. Histopathological findings show well-demarcated nests composed of basaloid keratinocytes with focal peripheral palisading. The aggregations of cells are surrounded by a fibrous stroma.

Several treatment modalities can be proposed to a patient with trichoblastoma, depending on the location, size, and depth of a lesion. Management plan often involves prophylactic surgical excision, including Mohs micrographic surgery. However, curettage, cryosurgery, electrocautery and laser resurfacing can be proposed as a nonsurgical destructive therapy.

The association between acne and diet – what is the evidence?

Czy czynniki dietetyczne mają wpływ na przebieg trądziku? Jakie istnieją dowody?

Katarzyna Żak

Trustee of the paper: lek. Monika Siedlecka
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Acne vulgaris is a chronic inflammatory disease influenced by numerous genetic and hormonal factors. The role of diet, among environmental factors, is non negligible in the development, duration and severity of acne, as shown in recent review articles on such association.

One of the most important acne – promoting factors is high glycemic index food, causing hyperinsulinemia, secretion of androgens and insulin growth factors. Data show that dairy, fat products and chocolate are also involved in the exacerbation of the disease, however the role played by specific dietary components pertaining to different foods (e.g. milk or dark chocolate, whole or skim milk, cheese etc.) needs further research. Furthermore, the effect of some products may be dependent on the population, which is why every patient should be treated individually. Acne-protective factors include omega-3 polyunsaturated fatty acids, which are known for their anti-inflammatory properties. The mediterranean or paleolithic diet, considerably rich in fruit and vegetables compared to the western diet, is considered a food model for acne patients.

The aim of this review is to summarize the current knowledge on the effect of dietary factors on acne development and the individuality in dietary decision-making.

The adverse effects of spironolactone used in dermatology

Objawy niepożądane spironolaktonu stosowanego z powodów dermatologicznych

Katarzyna Mączka

Trustee of the paper: lek. Aleksandra Soplińska-Bornsztajn
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Spironolactone is a synthetic aldosterone receptor antagonist. Registered indications for its use include congestive heart failure, liver cirrhosis and primary hyperaldosteronism. However, due to its antiandrogenic effects, spironolactone is commonly prescribed as an off-label medication in dermatological indications. Spironolactone's mechanism of action involves diminishing testosterone production in gonadal and adrenal glands, improving its metabolic clearance and competitive inhibition of peripheral receptors. Therefore, it shows great efficacy in reducing hyperandrogenism, which is the underlying pathogenesis for several dermatological conditions, such as: acne, androgenetic alopecia, hirsutism or hidradenitis suppurativa.

Although spironolactone has a good safety profile and tolerability, several adverse effects and contraindications should be considered. First and foremost, it is important to notice that due to feminization in men, spironolactone's use in dermatology is mostly limited to women. Most often reported side effects are dose-dependent menstrual cycle irregularities. Continuous treatment with spironolactone may also lead to hyperkalemia, especially in patients with renal insufficiency. The other less common undesirable effects comprise: dizziness, headaches, anxiety, frequent urination, abdominal pain, skin dryness, breast tenderness and breast enlargement. Moreover, spironolactone is teratogenic and is not recommended in pregnancy.

Hyperandrogenic skin disorders are a frequent health problem affecting approximately 10-20% of young women, leading to both social and psychological consequences. Due to its long-lasting effects and low cost, spironolactone seems to address this issue and should have a granted position in daily dermatological practice. Whether it requires additional monitoring is still controversial.

Pili torti – causes and therapeutic management

Pili torti – przyczyny i postępowanie terapeutyczne

Anna Rapiejko

Trustee of the paper: dr hab. n.med. Adriana Rakowska
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Pili torti, also known as twisted hair, is a rare disease in which hair shaft is flattened at irregular intervals and rotated 180° around its long axis. Clinically, lusterless, coarse and dry hair can be observed. The diagnosis is made based on microscopic or trichoscopic examination. Pili torti may be inherited or acquired. Congenital forms could be isolated or associated with a number of genetic diseases (e.g. Bazex-Dupré-Christol syndrome, Björnstad syndrome, Menkes disease). Patients with ectodermal dysplasias suffer from the aforementioned condition as well (e.g. Ankyloblepharon-ectodermal defects-cleft lip/palate syndrome, Rapp-Hodgkin syndrome). Among acquired causes of pili torti we can distinguish different forms of cicatrical alopecia (such as lichen planopilaris, frontal fibrosing alopecia or discoid lupus erythematosus) as well as malignancies (cutaneous T-cell lymphoma) or chronic graft-vs-host disease and anorexia nervosa. Pili torti may be induced by different drugs, especially epidermal growth factor receptor inhibitors, but oral retinoids, sodium valproate, and carbamide perhydrate are also harmful for the hair shaft. When the diagnosis is made, it is essential to look for symptoms of underlying diseases. Therapeutic management of the condition is not specified but patients should nevertheless avoid damaging their hair. Drug-induced forms should resolve after discontinuation of the drug, whereas management of acquired pili torti relies on the treatment of underlying conditions. Inherited forms may improve after puberty. There is no pharmacological treatment that would bring the desired effects, although in some cases the use of topical minoxidil may be beneficial.

Mpox (monkeypox) – pathogenesis, clinical course, treatment

Mpox (małpia ospa) – patogeneza, przebieg, leczenie

Aleksandra Bętkowska

Trustee of the paper: lek. Paulina Adrian
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Mpox (formerly known as monkeypox) is a zoonosis caused by the monkeypox virus (MPXV). MPXV is an orthopoxvirus genetically and antigenically similar to the variola virus responsible for smallpox. Mpox is endemic to Central and West Africa, but in 2022 it has spread rapidly, leading to many cases in non-endemic countries. Human-to-human contact is currently the main mode of transmission.

Patients usually present with a prodromal syndrome of fever, myalgia, headache, lymphadenopathy, and fatigue. The characteristic centrifugal rash with mucocutaneous lesions develops 1–4 days later. Lesion evolution typically follows a sequence of changes (macules, papules, vesicles, pustules, and crusts). The disease is mostly mild and self-limiting.

Distinct clinical presentations have been observed during the ongoing outbreak. Prodromal symptoms may be less pronounced or absent. Lesions are located predominantly in the anogenital and perioral areas. Patients may present with few lesions clustered in the genital region or a solitary lesion.

Mpox diagnosis is usually confirmed through viral DNA detection with polymerase chain reaction (PCR).

There is no specific treatment for mpox. Therapy remains supportive in most cases. Antiviral drugs available include tecovirimat, cidofovir, and brincidofovir. Antibody-based therapies are another treatment option. Smallpox vaccines should be considered for high-risk patients (pre-exposure prophylaxis) and following high-risk exposures (post-exposure prophylaxis).

Comprehensive differential diagnosis and screening for co-infections with other sexually transmitted pathogens are needed.

Is the identification of skin lesions beneficial for the diagnostic process of viral meningitis?

Czy identyfikacja zmian skórnych jest korzystna dla procesu diagnostycznego wirusowego zapalenia opon mózgowo-rdzeniowych?

Agata Marszałek, Weronika Górska, Artur Łukawski

Trustee of the paper: lek. Carlo Bieńkowski
Research centre: Student's Scientific Group at the Department of Children's Infectious Diseases, Medical University of Warsaw, Poland

Viral infections may vary from mild to severe manifesting with skin lesions and influenza-like symptoms, up to meningitis/meningoencephalitis, respectively. Well-known viruses that can cause both skin lesions and meningitis are Enteroviruses (EVs) and Herpes viruses (HV). EVs are responsible for approximately 85% of viral meningitis cases. Few-day-old newborns can develop such infection as a result of vertical transmission. Dermal manifestations of the disease occur more frequently among children under 3 years old, and are characterized as hand, foot and mouth disease (HFMD) or various types of rash. HV infections are responsible for up to 18% of viral meningitis mostly among adults or older children. Most patients with viral meningitis recover entirely. However the rates of serious complications and mortality may be as high as 74 and 10%, respectively for particularly vulnerable neonatal or immunocompromized patients. Children with classic form of meningitis do not require empiric acyclovir therapy before PCR-test results, unless they present signs of encephalitis and/or we suspect HSV/VZV infection. To sum up, the clinical picture of viral meningitis may differ depending on the virus including presence of both meningeal signs and skin lesions. Therefore, early identification of the etiological factor is necessary for early and proper treatment implementation.

Etiopathogenesis of alopecia areata

Etiopatogeneza łysienia plackowatego

Aleksandra Jóźwik

Trustee of the paper: dr n. med. Anna Waśkiel-Burnat
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Alopecia areata (AA) is a condition characterized by non-scarring hair loss which pathogenesis is still not fully understood. It is considered as an autoimmune disease associated with loss of the immune privilege of hair follicles which results in infiltration of immune cells around hair follicles and further hair loss. In etiopathogenesis of alopecia areata genetics seem to play an important role. It was shown that prevalence of alopecia areata is much higher in monozygotic twins. Moreover, positive family history is observed in 10-42% of patients with alopecia areata. Specific alleles such as HLA-DQB1*0301, HLA-DRB1*0401, HLA-A1, HLA-B13, MICA*6, MICA*5.1 were described as associated with susceptibility to alopecia areata and there is a linkage between polymorphisms in PTPN22 or CTLA-4 genes and higher risk of hair loss. A connection between bacterial (Helicobacter pylori) or viral infection (such as SARS-CoV2 and Hepatitis B/C virus) and alopecia areata was also described. Stress is another important factor that probably induces hair loss. Numerous studies show that alopecia areata occurs more often after a traumatic life event. Alopecia areata has been considered as a disorder limited to the hair follicles. However, recent studies have indicated that the disease is associated with dysregulation of numerous systemic proinflammatory cytokines. Chronic systemic inflammation leads to numerous consequences. Indeed, in patients with alopecia, diabetes mellitus type 2, dyslipidemia, cardiovascular disease, depression and anxiety are more commonly observed compared to controls.

How does menopause affect skin?

Skóra i hormony – jak menopauza wpływa na skórę?

Patrycja Łazicka

Trustee of the paper: lek. Aleksandra Soplińska-Bornsztajn
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Menopause is a natural process in women's live defined as the last menstrual bleeding followed by one year of amenorrhea. It results from cessation of ovarian hormonal activity leading to decreased levels of estrogens and progesterone. During menopausal transition, women experience various symptoms: mainly hot flashes and sweats, headaches, weight gain, memory impairment or depression. Other symptoms comprise vaginal dryness and pain,

or discomfort during sex, or recurrent urinary tract infections.

Menopause has a crucial influence on skin structure and its function, hair cycle and course of common dermatoses. Estrogen receptors are located on keratinocytes and fibroblasts throughout the skin, predominantly in the face and genital region. The reduction in circulating estrogen levels might cause increased transepidermal water loss and decreased collagen production leading to the thinning of dermis. Secondary to the changes in skin structure, menopause can manifest itself as eczema, psoriasis xerosis, rosacea or pruritus. Furthermore, the imbalance between androgens and estrogens have a great impact on the hair cycle. In menopausal women a reduction in anagen hair is observed more often than in pre-menopausal women. Furthermore, due to relative hyperandrogenism, female pattern hair loss or frontal fibrosing alopecia is more frequent.

Menopause has a great impact on women's wellbeing. Several studies have shown multiple benefits of hormonal replacement therapy in alleviating symptoms of menopause, yet its use in dermatological indications is still controversial.

Dermatological sign of child abuse and neglect

Objawy dermatologiczne przemocy i zaniedbywania dzieci

Weronika Caban

Trustee of the paper: lek. Artur Kośnik
Research centre: Klinika Hepatologii i Chorób Wewnętrznych Katedry Chirurgii Ogólnej, Transplantacyjnej i Wątroby

Abuse and neglect can influence both the biological and psychological development of children. In some cases, consequences may be fatal. Health professionals are responsible for the detection of some physical signs of abuse and neglect. Awareness of the signs is essential for the accuracy of their assessment.

This work contains a list of the most common dermatological signs of child abuse and other variables essential for differentiating: aspects of the history of the patient and risk factors.

The most common cutaneous signs of physical abuse are ecchymosis, petechiae, wounds, and cicatrices, especially if they're in various stages of healing. Particularly common is oral or facial trauma. The tool-specific shape of injury and unusual burn marks are also alarm signs.

History of sexual abuse may manifest in sexually transmitted infections, injuries of the perineum and anus, and abrasions of the epidermis in the genital area.

The most common risk factors that can be helpful for the detection of child abuse are younger age, previous history of abuse, and comorbid conditions. They should be carefully assessed in the differential diagnosis of ambiguous skin lesions.

Another issue discussed in this work is the identification of child neglect based on cutaneous signs. It is more complicated, but it should be considered in case of infected skin lesions, chronic dental problems, and untreated eyesight defects.

Modern treatment of advanced melanoma

Nowoczesne metody leczenia zaawansowanego czerniaka

Przemysław Klasicki

Trustee of the paper: lek. Magdalena Maciejewska
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

In recent years the morbidity of melanoma significantly increased. Although 80% of melanoma are diagnosed at an early stage, in recent years especially in Poland notable growth of advanced melanoma was observed compared to Western Europe countries. Advanced melanomas were characterized by high mortality and dynamic growth. In the last decade the development of modern therapy relevantly improved their prognosis. The current therapy, which is known as a modern therapy, includes both immunotherapy and molecular therapy. The immunotherapy agents block PDL-1 or CTLA4 and function as checkpoints inhibitors. On the other hand molecular therapy, defined as targeted therapy, interrupts BRAF/MEK pathway in patients with bRAF V600 mutation, which elicit cell programmed death. The studies demonstrate that firstly molecular therapy was connected with high response, but also with rapid development of resistance. Both treatments were admitted in treating melanoma either advanced or local with the high risk of progression. Modern therapy is significantly over the conventional chemotherapy and resulted into longer overall survival rate and progression free survival. Moreover recent

studies proved that targeted therapy was effective in intracranial metastases and extended an overall survival time in this group of patients. However, modern therapy associates with severe side effects. To compare the mRNA technology can become a future prospect, which features with high effectiveness and might be connected with higher tolerance rate, than present accessible therapy. This review summarizes the current state of knowledge of advanced melanoma therapy and the prospective therapy possibilities.

Belimumab in systemic lupus erythematosus treatment – prospects and limitations

Belimumab w leczeniu tocznia rumieniowatego układowego – możliwości i ograniczenia

Marta Januszek

Trustee of the paper: lek. Martyna Smolińska
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Standard therapies (ST) based on glucocorticoids, antimalarials and immunosuppressants have long been the only option for patients with systemic lupus erythematosus (SLE). Belimumab was the first biologic drug specifically developed for the treatment of SLE, approved by the FDA and EMA for both adults and children. It is a fully human monoclonal antibody directed against BLyS, a key factor in the maturation of autoreactive B cells. Since its approval in March 2011, numerous clinical trials and follow-ups have been conducted. Belimumab is recommended as an add-on drug for ill-responsive patients treated with ST, that are seropositive for anti-nuclear and anti-dsDNA antibodies. This review discusses the efficacy, prospects and limitations of belimumab in the treatment of SLE.

Analysis of studies available from PubMed has shown that combined therapy consisting of belimumab and ST lowers the risk of SLE flare-ups, additional organ damage and slows down progression of lupus nephritis. The drug is well tolerated and carries a low risk of side effects even in long-term therapy. Although it cannot be used for a single-drug therapy, it allows for reducing the glucocorticoids doses to the minimum.

However, there are also limitations to its use. It is not approved for the treatment of severe central nervous system lupus. There is still not enough data to confirm its safety in pregnancy. Finally, there is little data on the effects of permanent discontinuation of belimumab therapy or its concomitant use with other biologics.

Nevi of special sites. Does location matter?

Znamiona melanocytowe miejsc specjalnych. Czy lokalizacja ma znaczenie?

Carolyn Szwed

Trustee of the paper: dr hab. n. med. Joanna Czuwara
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Melanocytic nevi are benign tumors of melanocytes. On certain parts of the body they may clinically and histopathologically resemble melanoma. They can be distinguished using worked-out diagnostic criteria and experience. Nevi of special sites (NOSS), also referred to as nevi with site-related atypia, are nevi which may exhibit a greater degree of atypical histopathological features. They are typically located on special anatomic sites such as the embryonic milkline (breast, axillae, umbilicus, genitals), acral surfaces, flexural areas, ear and scalp. NOSS may reflect the anatomic diversity in skin structure and function. Skin microanatomy varies in terms of melanocyte distribution and vascularity, but the exact mechanism of development of these atypical histopathological features is unknown.

NOSS may demonstrate asymmetry, cytologic atypia, irregular nesting and, in rare cases, mitotic activity. Also, pagetoid scatter may be observed and such nevi are referred to as MANIAC (melanocytic acral nevus with intraepithelial ascent of cells). It may be difficult to distinguish pagetoid scatter in MANIAC from pagetoid scatter in melanoma as this requires clinical judgment and experience.

It is important to avoid the misdiagnosis of NOSS as melanoma or dysplastic nevus, as this may lead to unnecessary intervention. On the other hand, it is important to avoid the misdiagnosis of melanoma or dysplastic nevus as NOSS, as this may lead to a lack of surveillance or definitive treatment. There are several publications suggesting that the use of PRAME (preferentially expressed antigen in melanoma) staining may be useful in distinguishing between NOSS and melanoma.

Dermatological adverse reactions of COVID-19 vaccinations

Dermatologiczne objawy niepożądane szczepionek przeciw COVID-19

Katarzyna Pomykała

Trustee of the paper: lek. Małgorzata Maj
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

COVID-19 vaccine was approved in December 2020. Therefore, serious adverse events, including deaths related to COVID-19 infection were reduced and the survival rate increased. Nevertheless, it is important to enhance the knowledge about adverse effects linked to the COVID-19 vaccinations. Different dermatological reactions have been associated with these vaccinations. Mostly they are mild and resolve spontaneously, however medical staff should be provided with the appropriate guidance for their effective treatment. The most commonly reported dermatological adverse effects are local injection site reactions, urticaria, angioedema, and the various types of rashes, e.g., maculopapular rash, eczematous rash, morbilliform rash. Moreover, reactivation of varicella-zoster virus and herpes simplex virus was reported. Also, some patients experienced new-onset and flare-ups of preexisting diseases, i.e., lichen planus, psoriasis, pemphigus vulgaris. Furthermore, there were reports of other rare dermatological adverse reactions, i.e., vasculitis, erythema multiforme, erythema nodosum, morphea, pityriasis rosea, skin necrosis, flagellate purpura, Grover disease. Gianotti-crosti syndrome and cutaneous arteritis were reported in pediatric patients. Dermatological adverse effects were also evaluated in patients with allergies, anaphylaxis, autoimmune diseases, on immunosuppressive or biologic drugs. They were at higher risk of developing post-vaccination adverse reactions and caution is advised in these patient groups. Severe vaccine-related cutaneous reactions are uncommon. The majority of dermatological adverse effects are not contraindications to COVID-19 vaccination. Benefits of COVID-19 vaccination outweigh potential negative effects and the risk of a severe course of the disease, which may be life-threatening without vaccination, is reduced.

Mucocutaneus manifestations of non-specific inflammatory bowel disease

Zmiany skórne i śluzówkowe w przebiegu nieswoistych zapaleń jelit

Jakub Modrzewski, Natalia Zalewska, Kinga Filipek

Trustee of the paper: lek. Aleksandra Kaczyńska-Trzpil
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Non-specific inflammatory bowel diseases (IBD) may affect not only the digestive system but also other systems or organs. Mucocutaneous changes are relatively frequent extraintestinal symptoms, may precede them or alter the course of the disease.

Specific dermatological manifestations occur in Crohn's disease (CD) and have the same histological features as the underlying disease. Continuous lesions affect oral and perianal areas, leading to ulcers, abscesses, fistulas and fissures, angular cheilitis, gingival nodules, painful gingivitis and cobblestone-like oral mucosa. Metastatic CD presents as polymorphic skin lesions with non-caseating granulomas at distant sites from the digestive system, mainly at lower limbs and intertriginous areas.

Associated skin disorders include erythema nodosum, aphthous stomatitis, being the most frequently reported skin manifestation in IBD, may be the first sign of intestinal disease and are associated with chronic inflammation and the expression of genes such as HLA-DR2 and HLA-B27. Another disorder is psoriasis due to shared pathogenesis, and rarely epidermolysis bullosa aquisita.

Reactive manifestations develop probably due to cross-reaction between antigens of skin, synovia, and intestinal mucosa. Pyoderma gangrenosum is a severe sign of IBD with an unpredictable course and is often debilitating. Sweet's syndrome is often associated with systemic syndromes. Pyodermatitis-pyostomatitis vegetans is considered a specific marker of IBD.

Mucocutaneous manifestations are a common and important aspect in patients with IBD. Their course and diagnosis are diagnostic clues and aid in monitoring the underlying disease activity. Dermatological knowledge of the skin lesions presents in IBD and interdisciplinary cooperation can support early application of adequate treatment.

The application of line-field confocal optical coherence tomography in dermatology

Możliwości zastosowania LC-OCT w dermatologii

Alicja Nowik

Trustee of the paper: lek. Małgorzata Maj
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Line-field confocal optical coherence tomography (LC-OCT) is a novel, non-invasive imaging technique that combines deep penetration of optical coherence tomography (OCT) with cellular resolution of confocal microscopy. It enables the production of high-quality and detailed cross-sectional scans of the skin. This method is capable of providing real-time images of the healthy skin and subcutaneous tissues, as well as skin lesions.

Recent studies show that this method can become a practical tool in identifying and distinguishing various types of skin cancers including a basal cell carcinoma, a squamous cell carcinoma, an actinic keratosis or a malignant melanoma. Some of the research suggests that besides its use in diagnosis, this method can provide information about planning treatment and follow-up of keratinocyte dysplasia and cancers.

Furthermore, using LC-OCT in daily practice can possibly help in the differential diagnosis in the number of conditions such as autoimmune bullous diseases (AIBDs), pustular skin disorders or lichenoid papular conditions among the children and the youth.

Although there are numerous promising researches providing clinical applications of LC-OCT in dermatology, it is not yet an extensively used technique in clinical practice. Therefore, worldwide application of this technology by dermatologists should be a scope of further research.

Dynamic optical coherence tomography as a novel diagnostic tool in dermatology

Dynamiczna optyczna tomografia koherencyjna jako nowe narzędzie diagnostyczne w dermatologii

Adam Grzechnik

Trustee of the paper: Łukasz Kopoczyński, dr n. med. Małgorzata Ostrowska
Research centre: *Collegium Medicum* im. Ludwika Rydygiera w Bydgoszczy, Uniwersytet Mikołaja Kopernika w Toruniu

Cutaneous vascular patterns of microcirculation and its properties had been important subjects of studies. As a result neoangiogenesis as a whole process is better understood and microvasculature imaging techniques have moved a long way forward. Conventional optical coherence tomography (OCT) is used to visualize and differentiate morphological changes to skin, especially skin cancers. Yet, structural OCT lacks ability to image deeper skin striata and to differentiate between malignant melanomas or dysplastic nevi as it is hampered by resolution and optical properties of melanin.

Development of dynamic OCT (D-OCT) also called optical microangiography enabled visualization and measure of skin micro-vasculature and its properties *in vivo* and in 3D by detection of fast changes in the interferometric signal of blood flow. This provides precise insight into healthy skin as well as inflammatory and neoplastic skin lesions like melanoma and nonmelanoma skin cancer (NMSC) already resulting in improved descriptions of NMSC morphological features and diagnostic criteria. D-OCT represents non-invasive imaging technology that has become one the most sensitive tools to detect melanomas, having special use in advanced stages as well as many other skin conditions. It is used in imaging of hemangiomas, port wine birthmarks identification and treatment, allowing precise selective photothermolysis. Optical microangiography in dermatology is an emerging technology with great potential further use in diagnostics and treatment procedures.

Tralokinumab – effectiveness and safety in dermatology. A review

Tralokinumab – efektywność i bezpieczeństwo w dermatologii

Magdalena Zielińska

Trustee of the paper: lek. Paulina Chmielińska
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Tralokinumab is a human monoclonal antibody, which targets IL-13 and neutralizes its biological activity. IL-13 plays a significant role in the pathogenesis of atopic dermatitis (AD), defined as a relapsing or chronic inflammatory skin disorder with a substantial economic and social impact. Based on the ECZTRA1-3 and ECZTRA5 studies with a large cohort of patients, tralokinumab was approved (June 22, 2021) in the EU for the treatment of moderate to severe AD in adults and children over the age of 12 who are candidates for systemic therapy. The studies comparing the efficacy of tralokinumab monotherapy vs. placebo noted an effective and sustained response. Tralokinumab was superior to placebo at 16 weeks of treatment and was well tolerated up to 52 weeks of treatment. Improvement in itching and sleep disturbance were noted. Conjunctivitis was the only adverse event reported with a significantly higher frequency in the tralokinumab group. Other studies also reported upper respiratory tract infections, eosinophilia, allergic conjunctivitis, keratitis and eczema herpeticum. Studies have shown that tralokinumab can be used in monotherapy or in combination with topical glucocorticoids. The efficacy of tralokinumab in the treatment of atopic dermatitis indicates the important role of IL-13 in the pathogenesis of AD and opens paths for new targeted therapies.

Trichoscopy beyond scalp and hair diseases

Objawy trichoskopowe chorób nie dermatologicznych

Lena Jaworowicz, Maria Wieczorek

Trustee of the paper: dr n. med. Anna Waśkiel-Burnat
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Dermoscopy and trichoscopy are modern diagnostic tools that have been shown to improve the clinical diagnostic performance in daily practice. Patterns of certain skin and scalp diseases have been described and documented making the process of diagnosis more efficient. It could be used in different fields of medicine. Trichoscopic signs are not only found in dermatological cases. The aim of the presentation is to demonstrate the importance of knowing the trichoscopic signs of non-dermatological diseases as an important starting point in establishing a diagnosis.

Endocrine diseases, connective tissue diseases, amyloidosis, sarcoidosis, even scalp metastases, lymphomas and angiosarcomas give trichoscopic symptoms. Clinical manifestation may vary from non-scarring alopecia in endocrine diseases, amyloidosis, DM, SLE and systemic sclerosis to scarring alopecia in sarcoidosis and angiosarcoma.

Trichoscopy may show brownish discoloration typical for endocrine diseases. Orange-salmon colored perifollicular halos are observed in systemic amyloidosis. Cutaneous sarcoidosis is characterized by orange-colored areas and telangiectasias. Angiosarcoma may manifest as structureless dark red to purple areas, pink or red polymorphic areas. Systemic sclerosis, dermatomyositis and systemic lupus erythematosus characterize as thick arborizing, polymorphic and tortuous vessels. Systemic sclerosis shows avascular areas as well. Scalp metastases may present as polymorphic vessels and yellow areas on a pink background. Vessel abnormalities may be also seen in t-cell and b-cell lymphomas.

A necessary aspect is a histopathological differentiation due to the high similarity of the presented symptoms.

The papers we analyzed showed that trichoscopy can help to determine diagnostic direction.

Mohs surgery

Chirurgia Mohsa

Piotr Gronowski

Trustee of the paper: dr n. med. Olga Warszawik-Hendzel
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Mohs micrographic surgery (MMS) is a surgical technique used to treat various skin cancers that allows precise microscopic control of the margins with cut frozen-section histology. Mohs surgery has be-

come the treatment of choice for most cutaneous tumors on the head and neck.

MMS is performed in 4 steps: surgical extension of tissue; mapping the piece of excised tissue, freezing and cutting the tissue between 5–10 µm using a cryostat and staining with hematoxylin and eosin (HE); interpretation of microscope slides; possible reconstruction of surgical defect. It differs from other skin cancer treatments in permitting the immediate and complete microscopic examination of the removed cancerous tissue.

MMS has been recognized as the skin cancer treatment with the highest reported cure rate. It's indicated for numerous cutaneous tumors depending on their clinical appearance, size, location, histologic findings, prior treatment, patient's immune system and genetic syndromes.

Most tumors treated with MMS are non-melanoma skin cancers (NMSCs). MMS is recommended as gold standard treatment for high-risk SCCs and treatment of choice for high-risk BCCs and tumors in locations where tissue conservation is fundamental. MMS can also be used to treat rare cutaneous tumors: atypical fibroxanthoma (AFX), dermatofibrosarcoma protuberans (DFSP), Merkel cell carcinoma (MCC), and adnexal carcinomas.

Mohs micrographic surgery is a precise procedure that examines complete surgical margin and conserves maximum amount of healthy tissue. MMS can be a valuable addition to a multidisciplinary approach to treat cutaneous tumors.

Be aware of the skin presentations of interferonopathies

Warto poznać zmiany skórne w interferonopatiach

Aleksandra Partyka

Trustee of the paper: dr hab. n. med. Joanna Czuwara
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Interferonopathies are a group of disorders that belong to autoinflammatory diseases. Autoinflammatory diseases are innate immune system activation disorders. They can be described as recurrent episodes of inflammation occurring without high-titer autoantibodies and autoreactive T or B cells.

Interferonopathies are a relatively new group of monogenic diseases in which mutation in genes associated with proteasome degradation or cytoplasmic RNA and DNA sensing pathways causes in consequence upregulation of type I interferon (IFN). They often present in childhood and are heterogeneous. Notable advances in sequencing methods enabled genotypic and phenotypic characterization of many new diseases. Interferonopathies include Aicardi-Goutières syndrome, monogenic systemic lupus erythematosus (SLE), spondyloenchondrodysplasia, Proteasome Associated Autoinflammatory Syndromes (PRAAS), Singleton-Merten syndrome, stimulator of IFN genes (STING)-associated vasculopathy with onset in infancy (SAVI), X-linked reticulate pigmentary disorder and more.

Along with many organs, skin can be often affected. Vasculitis in small-sized vessels and chilblains in acral sites are often present. Early onset of the skin vasculopathy with chilblains, livedo reticularis and panniculitis, involvement of the central nervous system, and interstitial lung disease represent the 'clinical IFN signature'. Chilblains caused by strong type I IFN responses have also been seen in patients with COVID-19. In histology, a thrombotic microangiopathy is a sign of interferonopathies. Diagnosis remains a challenge due to the rarity of diseases. The use of JAK inhibitors is a promising treatment in these diseases with genetic disturbances. Dermatological symptoms of dysregulated interferon function will be presented for better awareness of such group of diseases.

Xeroderma pigmentosum – pathomechanism, clinical picture, diagnosis, and therapeutic methods

Skóra pergaminowa i barwnikowa – patomechanizm, obraz kliniczny, diagnostyka i leczenie

Marella Sankari

Trustee of the paper: dr n. med. Marta Kurzeja
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Xeroderma pigmentosum (XP) is a rare inherited disorder that is caused by mutations in genes which are involved in repairing damaged DNA. The major features of XP result from a buildup of the non-repaired DNA damage. XP causes extreme hypersensitivity to ultraviolet light from sunlight. It usually

affects the eyes and areas of the skin which are exposed to the sun such as face, arms, and lips. Symptoms usually start to show during infancy or in early childhood. By the age of 2, almost all affected children will start to have freckles on the skin. Exposure to sunlight often causes dry skin and changes in skin coloring. Approximately 25% of affected individuals develop progressive neurological manifestations. The diagnosis of XP relies on clinical findings, family history, and/or identification of biallelic pathogenic variants in DDB2, ERCCI, ERCC2, ERCC3, ERCC4, ERCCS, POLH, XPA, or XPC. Xeroderma Pigmentosum is an incurable disease that highly increases the chances of developing cancer such as basal cell carcinoma, squamous cell carcinoma, and others so preventive actions and palliative therapeutic approaches are critical for limiting cancer development and progression. Treatment varies depending on the location and type of the manifestation. Cancerous lesions should be excised. Retinols can be used as chemoprophylaxis agents. Gene therapy such as introduction of the missing genes and genome is still in a hypothetical and investigational stage. Early diagnosis and timely symptom management are very pivotal to the long term survival of patients with XP.

Use of ruxolitinib in topical treatment in dermatology

Ruksolitynib w leczeniu miejscowym w dermatologii

Urszula Wodo

Trustee of the paper: lek. Małgorzata Papierzewska
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Ruxolitinib is a selective Janus kinase (JAK) inhibitor. It potently inhibits JAK1 and JAK2 subtypes of JAK family. Through inhibiting JAK/STAT signaling pathway, ruxolitinib blocks signal transduction for many proinflammatory cytokines involved in pathogenesis of inflammatory skin conditions. Ruxolitinib, initially known as medication for myelofibrosis and polycythemia vera, is currently approved by the Food and Drug Administration (FDA) for atopic dermatitis and non-segmental vitiligo.

The PubMed, EBSCO, and Scopus databases were reviewed for original articles and case reports. The terms used for search were: "ruxolitinib atopic dermatitis", "ruxolitinib lichen planus", "ruxolitinib psoriasis", "ruxolitinib alopecia areata", "ruxolitinib vitiligo", "ruxolitinib topical". Reviews, animal studies and in vitro studies were excluded. 8 clinical trials and 2 case reports were included into the analysis.

Topical ruxolitinib was an effective therapeutic option in atopic dermatitis, vitiligo, psoriasis, and lichen planus. Single case reports showed its efficacy in seborrheic dermatitis and cutaneous lupus. Effects of ruxolitinib in alopecia areata varied in different studies. Topical application was well tolerated by patients, only a few mild adverse effects were observed.

Topical ruxolitinib to date has been examined in following skin disorders: atopic dermatitis, vitiligo, psoriasis, alopecia areata, lichen planus, seborrheic dermatitis, and cutaneous lupus. Efficacy and safety profile make ruxolitinib cream a promising therapeutic option especially in atopic dermatitis and vitiligo. Further studies are needed to evaluate use of topical ruxolitinib in other inflammatory skin conditions.

Not only jaundice – heterogeneity of cutaneous manifestations of liver diseases

Nie tylko żółtaczka – różnorodność skórnych manifestacji chorób wątroby

Jan Domański

Trustee of the paper: lek. Artur Kośnik
Research centre: Studenckie Koło Naukowe przy Klinice Hepatologii, Transplantologii i Chorób Wewnętrznych, Warszawski Uniwersytet Medyczny

Liver diseases are common clinical problems and their diagnosis is still difficult. According to World Health Organisation's data liver diseases are responsible for about two million deaths worldwide annually. Around sixty percent of them are related to cirrhosis, which makes it the 11th most common cause of death in the year 2019. Plenty of liver diseases can present with abnormalities of skin and its appendages. Practitioners should distinguish patients presenting them and take into consideration liver disease in differential diagnosis. Cutaneous manifestations of liver diseases can be divided into two major groups. The first group consists of findings seen in cirrhosis regardless of its cause for example pruritus, spider angiomas, palmar erythema, xanthomas, hair loss and nail changes. The second group is formed by constellations of aforementioned signs and symptoms with other findings which are seen in specific

disease entities. These distinct combinations are seen in infectious, metabolic, genetic and neoplastic diseases which are reviewed in this work.

Autoimmune skin diseases as a cutaneous adverse effect of TNF-a inhibitors

Choroby autoimmunologiczne skóry jako działania niepożądane inhibitorów TNF-α

Maciej Lazarek

Trustee of the paper: dr hab. n. med. Beata Januszko-Giergielewicz
Research centre: *Collegium Medicum* im. Ludwika Rydygiera w Bydgoszczy, Uniwersytet Mikołaja Kopernika w Toruniu

Biologic therapy is increasing its popularity in a treatment of various immunological diseases like inflammatory bowel diseases, psoriasis or rheumatoid arthritis among the most common ones. This group of drugs includes TNF-α inhibitors – adalimumab, etanercept and infliximab among others. Amidst adverse effects of use of anti-TNF agents, skin reactions are one of the most common ones, they occur in about 20–30% of patients treated with TNF-α inhibitors. The use of these agents has been associated with dermatological autoimmune diseases like cutaneous vasculitis lupus-like syndrome. This work reviews the literature on cutaneous autoimmune diseases as adverse reactions after tumor necrosis factor inhibitor drugs and discusses the relationship between anti-TNF therapy and the occurrence of autoimmune skin diseases. Moreover, it also points out how important it is to educate patients receiving biologic treatment and to cooperate as a multidisciplinary medical team in the event of skin side effects of this kind of therapy.

Cutaneous metastasis of colorectal cancer – literature review

Przerzuty raka jelita grubego do skóry – przegląd literatury

Maciej Lazarek

Trustee of the paper: prof. dr hab. n. med. Kornelia Kędziora-Kornatowska
Research centre: *Collegium Medicum* im. Ludwika Rydygiera w Bydgoszczy, Uniwersytet Mikołaja Kopernika w Toruniu

Colorectal cancer is one of the most common malignancies and one of the leading causes of cancer deaths in both sexes. With the growing population of seniors in Polish as well as European society, the incidence of bowel cancer is projected to increase in the coming years. Only about 2–4% of patients with metastatic colorectal cancer are found to have cutaneous metastases. They are considered as a poor prognostic factor due to the often accompanying spread to internal organs, usually the cause of death. The most common location of cutaneous metastases of colon cancer are postoperative scars on the abdomen, however, they can be localized throughout the skin. Furthermore, it has also been noted that several agents used in the treatment of bowel cancer may cause mucocutaneous side effects. This literature review examines the relationship between the course of colorectal cancer and the occurrence of skin lesions as well as describing the management of skin metastases.

Etiology of frontal fibrosing alopecia. Do we know the cause? An updated review

Etiologia łysienia czołowego bliznowaciejącego. Czy znamy przyczynę? Przegląd literatury

Natalia Dąbrowska, Magdalena Maciejewska, Joanna Czuwara, Małgorzata Olszewska, Lidia Rudnicka

Trustee of the paper: lek. Magdalena Maciejewska
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Frontal fibrosing alopecia (FFA), a variant of lichen planopilaris, is a progressive cicatricial alopecia affecting the frontotemporal hairline. The etiology is

not fully understood, and no treatment guidelines have been developed for this disease yet. Most commonly this type of alopecia occurs in postmenopausal women. However, the role of hormonal factors in pathogenesis is still to be fully understood. An increased coexistence of frontal fibrosing alopecia and autoimmune diseases such as hypothyroidism, rheumatoid arthritis, vitiligo, polymyositis, systemic lupus erythematosus and discoid lupus erythematosus has been reported. Some studies are focused on the identification of human leukocyte antigens (HLA) polymorphisms due to possible genetic basis. Sunscreens have been the most studied potential factor of frontal fibrosing alopecia recently, but available date are controversial due to the retrospective nature of the analyzed data, the lack of specification of the preparations and the basis of collected data on self-assessment. In the article we review the latest reports on the triggers of the disease, especially sunscreens. In view of current studies, sunscreens cannot be considered as a potential factor of frontal fibrosing alopecia. Considering sunscreens could reduce their use and therefore potentially increase the risk of skin cancers.

Dermatomyositis as the first manifestation of malignancies

Zapalenie skórno-mięśniowe jako pierwsza manifestacja nowotworów

Aleksandra Białczyk, Urszula Adamska, Rafał Czajkowski

Trustee of the paper: prof. dr hab. Rafał Czajkowski
Research centre: *Collegium Medicum* im. Ludwika Rydygiera w Bydgoszczy

Dermatomyositis (DM) is a multifactorial autoimmune disease characterized by skin lesions and muscle involvement. The exact pathogenesis has yet to be fully understood. DM is also considered a paraneoplastic syndrome and may occur before, simultaneously, or after a cancer diagnosis.

We encountered two cases of gastrointestinal malignancies with DM as the first symptom. A 73-year-old woman with redness of the face, neck, and shoulders, Gottron's papules on the joints of the hands, and weakness of the upper body part muscles for one month. Tests showed positive antinuclear antibodies and nonspecific inflammatory changes in skin and muscle biopsies. Electromyography (EMG) revealed myogenic muscle damage. Due to the positive result of the fecal occult blood test, an oncological diagnosis was performed. The patient was diagnosed with colorectal cancer and died due to postoperative complications. A 72-year-old man presented significantly intensified periorbital oedema and erythema of the face, neck, and back accompanied by weakness of the shoulder girdle muscles over the previous two weeks. DM was diagnosed based on physical examination and additional tests. Due to the dysphagia, further examinations were performed, which revealed chronic gastritis with hyperplasia foveolaris mucosae. After six months, the patient was diagnosed with inoperable gastric cancer with liver metastases, from which he died.

The factors responsible for the etiology of DM and cancer coexistence remain unclear. It is essential to remember the increased risk of cancer and conduct diagnostics to exclude neoplastic tumors in patients suffering from DM.

Use of platelet-rich plasma in the treatment of scars and stretch marks – case reports

Zastosowanie osocza bogatopłytkowego w leczeniu blizn i rozstępów – opisy przypadków

Karolina Majowicz-Czaszyńska, Martyna Orzechowska

Trustee of the paper: dr n. med. Dominika Kwiatkowska, dr n. med. Justyna Szczęch
Research centre: Studenckie Naukowe Koło Dermatologiczne, Kolegium Nauk Medycznych, Uniwersytet Rzeszowski

Treatments using autologous preparations have become increasingly popular both in Poland and worldwide. Platelet-rich plasma (PRP) is an autologous blood product that contains concentrated platelets suspended in plasma. This preparation promotes regeneration of the skin and subcutaneous tissue via delivery of various growth factors and cytokines released from the granules. This makes it viable in the treatment of diseases involving collagen atrophy, atrophic scars and stretch marks. Scars are skin lesions resulting from the replacement of damaged dermis with fibrous connective tissue, while stretch marks are caused by damage to collagen and elastin fibers.

This paper presents cases of three patients treated with needle mesotherapy using PRP. The first patient was a 27-year-old woman struggling with a stretch mark problem developed after pregnancy. The following case is a 29-year-old woman with an extensive scar from a third-degree burn over the ankle joint. The third case was an 18-year-old woman who presented with a scar from an open fracture of the fibula and tibia. All patients received three PRP mesotherapy every four weeks.

PRP appears to be an effective treatment for scars and stretch marks. During the evaluation of post-treatment effects, there was a significant clinical remission of symptoms with very good aesthetic results. Adverse effects weren't observed. PRP treatments give fast and spectacular results, both in the therapeutic and cosmetic aspects.

Pityriasis rubra pilaris – case report

Łupież czerwony mieszkowy – opis przypadku

Barbara Kamińska, Kaja Męcińska-Jundziłł, Rafał Czajkowski

Trustee of the paper: prof. dr hab. Rafał Czajkowski
Research centre: SKN Dermatologii, *Collegium Medicum* w Bydgoszczy, Uniwersytet Mikołaja Kopernika w Toruniu

Pityriasis rubra pilaris (PRP) is a rare, heterogeneous dermatosis. The association between UV radiation and aggravation of PRP is well known. However, reports of PRP's initial appearance in a photoexposed distribution have been unusual, and phototesting confirmation is not a standard procedure.

A 43-year-old male was admitted to the Clinic for the diagnosis of massive, confluent erythrosquamous, and annular skin lesions, primarily on the face, upper back, shoulders, and forearms that had occurred 3 weeks earlier after excessive exposure to the sun. Due to the indefinite clinical display, phototesting was performed, which revealed photoreproduction in all UVB test areas. Then, orange, hyperkeratotic plaques with significant desquamation on the feet and hands, and follicular papules on the thighs and abdomen, were observed. Based on the clinical presentation and histopathological results, the diagnosis of classical adult onset PRP (type 1) was made. Acitretin was utilized in the treatment at first, however, it did not reach the desired effects. Furthermore, the patient required psychiatric consultation due to a depressed mood. Regression of lesions was obtained after 6 weeks of subcutaneous injections of methotrexate (20 mg/week) in combination with emollients, and topical glucocorticoids.

There are no standard criteria for treating PRP, because therapy experiences are primarily based on case reports. PRP requires extensive, individual, and long-lasting treatment. Concerning the patient's mental health could be essential to therapeutic success. UV radiation might not only exacerbate, but also trigger PRP, hence phototherapy is questionable and patients should receive phototesting before starting phototherapy.

Folliculitis decalvans with orofacial granulomatosis – a case report of a 32-year-old man

Wyłysiające zapalenie mieszków włosowych z ziarniniakowym zapaleniem ustno-twarzowym – opis przypadku 32-letniego mężczyzny

Adam Wełniak, Kaja Męcińska-Jundziłł, Agnieszka Białecka

Trustee of the paper: prof. dr hab. n. med. Rafał Czajkowski, dr n. med. Luiza Marek-Józefowicz
Research centre: SKN Dermatologii, Katedra Dermatologii i Wenerologii, *Collegium Medicum* w Bydgoszczy, Uniwersytet Mikołaja Kopernika w Toruniu

Folliculitis decalvans (FD) is a rare type of cicatricial alopecia whose clinical features consist of follicular pustules and papules with hemorrhagic crusting resulting in alopecia. Orofacial granulomatosis (OFG) is a chronic swelling of one or both lips due to granulomatous inflammation. It is considered as a mono-symptomatic form or an incomplete variant of Melkersson-Rosenthal syndrome (MRS).

A 32-year-old man was admitted to the clinic for the diagnosis of follicular pustules, erosions, and focal hair loss on the scalp, with persistent swelling of the lips. The scalp lesions appeared in childhood and the lip swelling persisted for 3 years. Swabs were taken from the erosions and pustules Staphylococcus aureus was cultured. The patient was consulted neurologically, there were no indications of facial nerve palsy. A skin biopsy was taken from the scalp and lip. Based on patient history, physical and histopathological examination, diagnosis FD and orofacial granulomatosis were stated. Treatment with dapsone in combination with topical corticosteroids and antibiotics was initiated resulting in significant results.

To date, there is no evidence supporting a link between FD and OFG but the involvement of microbial agents plays a role in both diseases. In managing patients with OFG, neurological diagnosis to exclude MRS is crucial. Treatment of FD mainly relies on antibiotics, however, this case shows that dapsone can be very effective in treatment of FD. In the therapy of OFG, topical steroids were used, however, intradermal and systemic administration is also an option.

Primary cutaneous follicle center lymphoma

Pierwotny chłoniak skóry z ośrodków rozmnażania

Justyna Pięta

Trustee of the paper: dr n. med. Anna Waśkiel-Burnat
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Primary cutaneous follicle center lymphoma (PCB-CL) is the most common primary cutaneous B-cell lymphoma. The disease is characterized by the presence of erythematous, painless, nonpruritic papules, plaques or tumors. The scalp area is most commonly affected.

A 54-year-old man was admitted to the Department of Dermatology with a 10-month history of erythematous plaques on the scalp and forehead. The patient had been initially treated with topical corticosteroids, ivermectin and tacrolimus and oral lymecycline without clinical improvement. The physical examination revealed the presence of erythematous plaques on the scalp and forehead. On trichoscopy, salmon-pink areas, arborising and serpentine vessels were presented. Histology showed nodular, diffuse infiltration of mononuclear cells in the dermis. Immunohistochemistry staining presented lymphocytic infiltration with B cell predominance (CD20 > CD3), BCL6+, BCL2-, MUM10, CD5-, CD30-. Based on the clinical picture, trichoscopy, histology and immunohistochemistry the diagnosis of primary cutaneous follicle center lymphoma was established.

Primary cutaneous follicle center lymphoma should be considered in the differential diagnosis of erythematous lesions of the scalp.

The CO_2 fractional laser – an efficient therapeutic option for patients with large epidermal nevus?

Czy laser frakcyjny CO_2 może być skutecznym rozwiązaniem terapeutycznym u pacjenta z dużym znamieniem naskórkowym?

Marta Billewicz, Zuzanna Targowska

Trustee of the paper: prof. dr hab. n. med. Aleksandra Lesiak, dr n. med. Małgorzata Skibińska
Research centre: Uniwersytet Medyczny w Łodzi

Epidermal nevi (ED) are benign, hamartomatous lesions of congenital character, occurring as a consequence of an overgrowth of the epidermis. Lesions are mainly located on the chest, face or limbs. Therapeutic options of ED range from topical medicaments to surgical excisions. Unfortunately, the one effective treatment of ED does not exist, however, an utilization of carbon dioxide laser is reported in the literature as an efficient therapy in particular cases of ED.

A 26-year-old female was admitted to the dermatological department for laser ablation of a congenital epidermal nevus located on the left shoulder, chest and linearly entering the lateral part of the neck. In addition, the nevus was also located on both upper eyelids, temples and on the forehead. The treatment consisted of four sessions with fractional CO_2 laser performed under local anesthesia. The surface of the lesion was significantly reduced with satisfying results for the patient. The patient was discharged from the hospital with recommendations of sun protection and application of emollients on the surface of the skin where the laser was utilized.

Fractional CO_2 laser should be considered as an effective therapeutic option of epidermal nevi, especially when lesions occupy a significant surface of the skin.

Trigeminal trophic syndrome associated with neuralgia after ischemic stroke – a case report

Zespół troficzny nerwu trójdzielnego związany z neuralgią po udarze niedokrwiennym – opis przypadku

Julia Alicja Lewandowska, Natalia Joanna Machoń

Trustee of the paper: Joanna Rybak-d'Obyrn, Agnieszka Owczarczyk-Saczonek, Waldemar Placek
Research centre: Studenckie Koło Naukowe Dermatologiczno-Wenerologiczne przy Klinice i Katedrze Dermatologii, Chorób Przenoszonych Drogą Płciową i Immunologii Klinicznej, Uniwersytet Warmińsko-Mazurski w Olsztynie

Trigeminal trophic syndrome is a rare condition resulting from self-manipulation of the skin after an injury to the trigeminal nerve. The syndrome consists of a triad of anesthesia, paresthesia, and a secondary persistent or recurrent facial ulceration.

We describe the case of a 70-year-old woman who was admitted to the dermatology department because of erythema, ulceration and crusts on the right

side of her face, accompanied by itching, burning and irritation forcing self-manipulation of the skin. She had been previously repeatedly treated with antibiotics, acyclovir and topical medications without any improvement. Her medical history revealed an episode of ischemic stroke in 2016, after which a deformation and partial atrophy of the right ala nasi appeared. On admission, there were only slightly elevated CRP and ESR in laboratory tests. Staphylococcus aureus MRSA in a bacteriological swab from the conjunctiva of the right eye and skin of the face was present. Purulent conjunctivitis of the right eye with corneal erosion was diagnosed. Trigeminal neuropathy was confirmed by a neurological consultation. The patient was educated not to scratch the skin and after several days of topical treatment, eye medications, and a synthetic acetylcholinesterase inhibitor, improvement was observed.

Diagnosis and treatment of trigeminal trophic syndrome requires a multidisciplinary approach (dermatologist, ophthalmologist, neurologist, surgeon). Awareness of this disease should be raised to enable proper diagnosis and management of difficult-to-treat facial ulcers that cannot be explained by common causes especially, especially in patients with a previous neurological pathology.

Abscess after cardiac pacemaker implantation

Ropień po implantacji stymulatora serca

Natalia Joanna Machoń, Julia Alicja Lewandowska

Trustee of the paper: Joanna Rybak-d'Obyrn, Agnieszka Owczarczyk-Saczonek, Waldemar Placek
Research centre: Studenckie Koło Naukowe Dermatologiczno-Wenerologiczne przy Klinice i Katedrze Dermatologii, Chorób Przenoszonych Drogą Płciową i Immunologii Klinicznej, Uniwersytet Warmińsko-Mazurski w Olsztynie

The implantation of a pacemaker is one of the main methods of invasive treatment for patients with cardiac arrhythmias. This pacemaker was implanted in the left subclavian region in a lodge under the fascia of the pectoralis major muscle. One of the most serious complications of this procedure is infection of the implanted system.

A 90-year-old female patient was urgently admitted to the Department of Dermatology in Olsztyn with suspected cellulitis of the thorax. Her medical history included a condition after pacemaker implantation in 2015. On physical examination, the patient showed well-demarcated inflammation of the left side of the chest in the close proximity of the pulse generator. In addition she had a fever for 5 days. Before hospitalization the patient was treated with amoxicillin with clavulanic acid, which did not result in significant improvement. On chest X-ray, pleural fluid was present. Superficial ultrasound revealed a fluid in the left subclavian region, which was recognised as an abscess. Laboratory investigations confirmed ongoing inflammation and the patient was given intravenous clindamycin and ceftriaxone and the partial improvement was achieved. After cardiological consultation, it was decided to immediately remove the peacemaker and transfer the patient to the Cardiological Department.

Patients with implanted pacemakers should be checked frequently due to possible infection of the pacing system. Check-ups for such patients are once a year, often even without a physical examination of the patient. It is therefore important to check the condition of the skin and subcutaneous tissue around the pacemaker during the dermatological examination.

Presence of atopic dermatitis with nephrotic syndrome. Do rare comorbidities matter?

Współwystępowanie atopowego zapalenia skóry z zespołem nerczycowym. Czy rzadkie choroby współistniejące mają znaczenie?

Weronika Zysk, Jowita Sroka-Tomaszewska, Małgorzata Sokołowska-Wojdyło, Sławomir Lizakowski, Aleksandra Wilkowska, Monika Sikorska, Roman Nowicki, Magdalena Trzeciak

Trustee of the paper: prof dr hab. med. Magdalena Trzeciak
Research centre: Gdański Uniwersytet Medyczny

Atopic dermatitis (AD) is a chronic, recurrent disease that significantly reduces the patient's quality of life and may contribute to the development of atopic and non-atopic comorbidities.

We present the history of a 52-year-old patient suffering from severe AD since the age of 16 and coexisting with nephrotic syndrome (NS) for 10 years. Initially, high doses of steroids and intravenous cyclophosphamide pulse therapy were introduced to treat NS. Despite this therapy complete remission of the disease was not achieved and treatment with

cyclosporine A (CsA) was started under the control of blood levels (target trough level of 100 to 150 ng/ml). Over the years, attempts to reduce the dose of CsA resulted in a relapse of NS. Thus, since 2018 the patient has been chronically treated with CsA at a dose of 200 mg, resulting in partial remission of proteinuria. In regard to AD treatment, the dosage and duration of use of CsA largely depended on the coexisting kidney disease. Despite the many years of use of it, no satisfactory improvement in the clinical picture of AD was achieved. Additionally, due to long-term immunosuppressive treatment, the patient experienced recurrent skin viral infections such as molluscum contagiosum and genital warts. Finally, the patient was referred for qualification for biological treatment.

Atopic dermatitis coexists with other diseases that may cause therapeutic difficulties. The immune dysregulation reported in nephrotic syndrome may explain its association with atopic dermatitis.

Atypical cutaneous mycobacteriosis of the upper extremities with Mycobacterium chelonae etiology

Atypowa mykobakterioza skóry kończyn górnych o etiologii *Mycobacterium chelonae*

Karolina Kazimierska, Milena Baran

Trustee of the paper: lek. Magdalena Maciejewska
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Mycobacterium chelonae is a non-tuberculous acid-fast bacillus which causes chronic skin infections. Immune deficiency is a risk factor for mycobacteriosis. Nonspecific symptoms of the disease, which include painful erythematous, infiltrative skin lesions, impede the establishment of the diagnosis.

We present a case report of a 76-year-old female patient with infiltrative skin lesions on the upper extremities. The patient has had recurring desquamating skin lesions of the phalanges for a year and a half, evolving into erythemato-infiltrative lesions. The diagnosis of mycobacteriosis includes a histopathological as well as a microbiological examination. M. chelonae was discovered in the patient skin sample using molecular methods. Treatment of the atypical mycobacteriosis is based on the targeted antibiotherapy, therefore the empirical treatment was modified to oral clarithromycin based on the antibiogram. Skin condition improved only temporarily, so parenteral linezolid was implemented. The patient was discharged in a good general condition.

The final diagnosis of atypical mycobacteriosis is based on the microbiological examination. In order to obtain a clinical improvement of a patient, it is essential to administer targeted antibiotherapy based on an antibiogram, due to a broad resistance to antibiotics of M. chelonae.

Loss of response in plaque psoriasis treatment with ustekinumab and clearence of skin lesions after treatment with guselkumab

Utrata skuteczności leczenia łuszczycy plackowatej ustekinumabem i ustąpienie zmian skónych po rozpoczęciu leczenia guselkumabem

Anna Ziobro

Trustee of the paper: lek. Aleksandra Kaczyńska-Trzpil
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Inhibitors of interleukin (IL)-23 and IL-12 are effective treatment of autoimmune diseases. Psoriasis is an inflammatory hyperproliferative dermatosis with a chronic and recurrent course. Ustekinumab is a human monoclonal antibody targeting the p40 subunit of IL-12 and IL-23 that offered significant improvement in psoriatic patients. Recently guselkumab, which is a selective inhibitor of IL-23 p19 subunit, was shown to be superior to ustekinumab in psoriasis. The aim of our study was to present the case of a patient with plaque psoriasis and clearance of skin lesions after shift to guselkumab following loss of response to ustekinumab.

We herein report a case of a 60-year-old woman with plaque psoriasis diagnosed at the age of 8. After unsuccessful treatment with methotrexate and cyclosporine in 2011 the patient was started on ustekinumab, which resulted in remission of skin lesions. The treatment was continued (with several breaks due to administrative requirement). During subsequent course of ustekinumab, gradual exacerbation of skin lesions was observed. In addition in April 2021 three days after ustekinumab injection urticaria and angioedema occurred. The patient was switched to gusel-

kumab, resulting in clear skin (PASI100) at week 8 and maintenance of response at week 90. No adverse effects were observed.

Guselkumab was found to be an effective and safe drug in the treatment of plaque psoriasis, also for patients with an insufficient response to another anti-IL-23 treatment.

Blastic plasmacytoid dendritic cell neoplasm: case report

Nowotwór z blastycznych plazmocytoidnych komórek dendrytycznych – opis przypadku

Anna Jurga, Katarzyna Pisarz, Joanna Czuwara

Trustee of the paper: lek. Katarzyna Pisarz
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Blastic plasmacytoid dendritic cell neoplasm (BPDCN) is a rare hematological malignancy with a poor prognosis. In the course of the disease, blood, bone marrow, lymph nodes, and skin may be involved.

A 78-year-old man was referred to the Department of Dermatology at Medical University of Warsaw with disseminated, erythematous and infiltrative lesions. Lesions have been occurring for one year and were located on the skin of the forehead, back, chest, and shoulders and were accompanied by mild itch. Laboratory tests revealed neutropenia, anemia, and thrombocytopenia, and USG showed numerous pathological, enlarged peripheral lymph nodes. The histopathological examination revealed nodular mononuclear cell infiltration, with features of atypia and imitating lymphoid follicles. Immunohistochemistry showed the presence of cells with a C56+/CD4+/CD123+/-/MPO-/CD3-/CD20-/CD34-/CD117- phenotype. Based on the clinical picture and results of additional tests, the patient was diagnosed with BPDCN.

BPDCN is a rare disease with an atypical clinical picture and aggressive course. Delayed diagnosis may result in rapid progression to multiorgan involvement, which leads to a poorer disease prognosis.

Prurigo pigmentosa – case study

Prurigo pigmentosa – studium przypadku

Klaudia Wojtach, Joanna Czuwara, Milena Marzęcka

Trustee of the paper: lek. Milena Marzęcka
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Prurigo pigmentosa (Nagashima's disease) is a rare inflammatory dermatosis that mainly affects young East Asian women. Erythematous, papular and vesicular skin lesions, forming a net pattern, are most often located on the back, chest, neck and arms. The disease is characterized by severe itching of the skin. The literature describes the coexistence of prurigo pigmentosa with diseases such as Still's disease, H. pylori infection, allergic diseases, diseases of the liver and bile ducts, and Sjogren's syndrome.

A 45-year-old female patient with a history of primary cholangitis, cholestasis, thrombocythemia and Sjogren's syndrome was referred to a dermatological consultation due to erythematous and erythematous-squamous lesions of the face, chest and hands, as well as erythematous-papular lesions of the arms and trunk occurring from 7 days. Skin lesions were accompanied by intense itching of the skin. So far, the patient has been treated on an outpatient basis with systemic and topical glucocorticosteroids and antihistamines with temporary improvement, reduction of pruritus and then exacerbation of symptoms. Laboratory tests revealed elevated level of transaminases, thrombocythemia, mild anemia, leukocytosis and neutrophilia. The histopathological examination of the skin samples showed features of prurigo pigmentosa. Oral tetracycline and topical glucocorticoids were administered, resulting in partial clinical improvement. Naltrexone in a low dose was subsequently introduced with a good clinical effect.

Clindamycin induced pustulosis

Osutka krostkowa po klindamycynie

Filip Jasiński, Milena Król, Joanna Czuwara

Trustee of the paper: lek. Milena Król
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Acute generalized exanthematous pustulosis (AGEP) is a rare drug reaction characterized by rapid

development of numerous small sterile pustules, not related to hair follicles on an erythematous base. Skin lesions first appear on face and in skin folds and may be associated with fever and peripheral blood neutrophilia. AGEP is usually caused by medications, most often by beta-lactam antibiotics.

A 51 year old female patient was admitted urgently to the Dermatology Clinic with extensive skin lesions which appeared after taking 600 mg of clindamycin due to a planned dental procedure. Physical examination revealed extensive erythematous, erythematous-edematous and erythematous-papular lesions with the greatest intensity on the skin of the trunk and face. Laboratory tests revealed raised inflammatory markers with leukocytosis and neutrophilia. Histopathological examination of the skin lesion reported subcorneal spongiotic pustules formed by neutrophils.

Based on the patient interview, clinical picture, test results and utilizing EuroScar criteria, clindamycin induced AGEP was diagnosed. Topical treatment and systemic steroids that were used in therapy resulted in a significant improvement of the skin condition.

AGEP is a severe adverse drug reaction. Discontinuation of the inducing drug is the most important part of treatment, however in severe cases general glucocorticosteroids and sometimes cyclosporin are used.

Galli-Galli disease

Choroba Galli-Galli

Natalia Dąbrowska, Magdalena Maciejewska, Joanna Czuwara

Trustee of the paper: lek. Magdalena Maciejewska
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Galli-Galli is a very rare genodermatosis considered as an acantholytic variant of Dowling-Degos disease. It is inherited in an autosomal dominant manner, more commonly affecting women. The pathogenesis of this disease is related to genes involved in the transfer of melanosomes and the differentiation of melanocytes and keratinocytes. The symptoms of the diseases are the reticulated hyperpigmentation in the flexural regions, in the area of axillae, the submammary area, the inguinal area, the thorax and the face. It may also manifest as vesicular papules resembling comedones located on the back and scarring in the perioral area. In histological examination, there are acantholytic-lentiginous proliferation of the epidermis mimicking seborrheic keratosis in the adenoid variant, without papillomatosis, with subepidermal acantholysis and hyperkeratosis on the surface with absent or weakly expressed superficial inflammation.

This is a case of a 54-year-old female referred to the Department of Dermatology in Warsaw due to brown macules forming a reticular pattern symmetrically on the skin of the thorax, occurring for 15 years without other symptoms. She was treated with topical glucocorticoids without clinical improvement. A biopsy of the skin lesion was taken for histopathological examinations. The clinical presentation along with the biopsy result most closely resembled Galli-Galli disease.

For the correct diagnosis, it is important to correlate clinical and histological symptoms to differentiate the disease with other acantholytic diseases. The microscopic picture of Galli-Galli disease in case of dyskinesia with insufficient clinical data or limited knowledge of diseases associated with acantholysis may resemble Grover's disease, Hailey-Hailey disease or Darier's disease.

Cutaneous involvement as a first sign of pediatric marginal zone B-cell lymphoma – case report

Zajęcie skóry jako pierwszy objaw dziecięcego węzłowego chłoniaka strefy brzeżnej - opis przypadku

Beata Zagórska, Michał Sobjanek, Marcin Hennig, Martyna Sławińska

Trustee of the paper: dr n. med. Martyna Sławińska, dr hab. n. med. Michał Sobjanek
Research centre: Katedra i Klinika Dermatologii, Wenerologii i Alergologii, Wydział Lekarski, Gdański Uniwersytet Medyczny

Pediatric marginal zone B-cell lymphomas are rare, low-grade malignancies. They are subcategorized into nodal (pNMZL), extranodal (pEMZL) and splenic (pSMZL). While in the extranodal form skin involvement is relatively common (19–35%), in the nodal form it is extremely rare. Distinguishing primary cutaneous lymphoma from skin involvement in systemic lymphoma is of great importance in the context of prognostic and therapeutic approach.

A 4-year-old patient presented to the Dermatology Department due to an asymptomatic erythematous infiltrative lesion on the right ear lobe. The lesion had appeared several weeks prior to the visit. Dermoscopy revealed white-orange-pink structureless areas as well as branched vessels. Clinical examination revealed cervical lymphadenopathy. The patient was referred to the multisite nodal ultrasound which revealed pathological lymph nodes in the parotid gland. Further diagnostics performed in the Pediatric Oncology Department (skin lesion biopsy, magnetic resonance imaging, lumbar puncture, bone marrow biopsy) led to the diagnosis of pediatric marginal zone B-cell lymphoma.

Skin involvement as a first sign of systemic pediatric marginal zone B-cell lymphoma is extremely rare. A thorough physical examination, including lymph node assessment, should be performed in every pediatric patient who presents due to skin lesions of uncharacteristic clinical presentation. In cases suspected for skin lymphoma the patient should be managed by a multi-specialty board including hematologist, pathologist and dermatologist.

Tinea faciei connected with keeping a guinea pigs

Grzybica skóry twarzy związana z hodowlą świnek morskich

Piotr Fularski, Natalia Lewandowska

Trustee of the paper: prof. dr hab. Aleksandra Lesiak, dr Małgorzata Skibińska
Research centre: Uniwersytet Medyczny w Łodzi

Tinea faciei is a fungal infection affecting the skin of the face. Most commonly it is caused by specific anthropophilic (human) or zoophilic (animal) dermatophyte species. Pets like cats, dogs or guinea pigs might be a vector for zoophilic dermatophyte fungi such as Microsporum canis or Trichophyton mentagrophytes.

A 54-year-old woman was admitted to the dermatological department due to oval shaped erythematous skin lesions with a central area of clearing and slightly elevated edge localised at patient's nose, left cheek and chin. Skin lesions were accompanied by itching, burning, pain and a feeling of skin tightness. Patient denies chronic diseases and allergies and has two guinea pigs indoors. The direct microscopic examination was performed and revealed the presence of the fungus. In the tissue culture Microsporum canis was detected. Therapy with itraconazole, terbinafine was started for a period of 4 weeks. Patient was also instructed to visit the vet with pets. After a month of therapy, the patient was readmitted for the follow-up, with further improvement of the skin lesions.

Pets may also be a vector for certain types of fungi that can cause a tinea faciei. The key is to collect a thorough medical history with the patient along with asking about having pets. It is important not only to treat patients, but also pets, to prevent the recurrence of infections or new infections.

A pink scalp nodule mimicking a basal cell carcinoma – case report

Guz owłosionej skóry głowy imitujący raka podstawnokomórkowego – opis przypadku

Wiktoria Stańska

Trustee of the paper: dr Aleksandra Wielgoś
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Scalp tumors are rare and account for approximately 2% of all skin tumors. Cutaneous metastases are encountered even less frequently, which comprise 0.7–9% of all metastases. We present a case report of a female patient with cutaneous metastasis of occult breast cancer.

The 53-year-old female patient was admitted to the outpatient clinic at the Department of Dermatology. The patient complained of a painless, pearly, white-pinkish nodule on the occipital region of the scalp, which had increased its diameter over 2 years. In dermatoscopy, arborizing vessels in a tree pattern were visible, as well as ulceration in the base area and mild scaling. There were no chronic comorbidities or a history of oncology diseases. Based on the dermoscopic examination, basal cell carcinoma was suspected.

A histopathology result of a punch biopsy revealed a poroma – a benign apocrine tumor. The lesion was excised by a plastic surgeon. However, the histopathological examination of the excised nodule was consistent with breast cancer metastasis, which was confirmed by immunochemistry. The patient was referred to an oncologist and had additional imaging examinations performed, including a PET-CT.

All the results were remarkable, but the primary tumor has not been detected.

Scalp metastasis may be the first and only manifestation of occult breast cancer. That is why all suspicious skin nodules should be excised and a diagnosis should be confirmed with a histopathological examination.

The remarkable psychosocial influence of the disease and hard to predict response to therapy make alopecia areata challenging to treat. Baricitinib can be considered as a promising therapeutic option both in adult and paediatric patients showing poor response to standard treatment of AA.

JAK kinase inhibitors as hope for more effective treatment of alopecia areata – case report

Inhibitory kinaz JAK nadzieją na skuteczniejsze leczenie łysienia plackowatego – opis przypadku

Łukasz Chętko, Magdalena Rybacka

Trustee of the paper: prof. dr hab. Aleksandra Lesiak, dr Małgorzata Skibińska
Research centre: Klinika Dermatologii, Dermatologii Dziecięcej i Onkologicznej, Uniwersytet Medyczny w Łodzi

Alopecia areata (AA) is an autoimmune disease leading to non-scarring hair loss. The clinical manifestations range from sharply demarcated, smooth, hairless patches to a complete absence of body and scalp hair. Standard treatment involves topical use of glucocorticosteroids, dithranol, minoxidil and contact immunotherapy as well as systemic therapy with methotrexate or cyclosporine. Furthermore, Janus kinase (JAK) inhibitors such as baricitinib have been increasingly implemented recently, yet this use remains off-label in paediatric patients.

A 16-year-old female patient suffering from AA was admitted to the dermatological department in April 2022 in order to modify the ongoing treatment. After the onset of the disease in 2008 no signs of significant clinical improvement were observed in response to conventional treatment. On admission the patient presented total hair loss on the scalp, eyebrows, and eyelashes. The trichoscopic findings, including multiple yellow and black dots with scarce exclamation mark hairs, indicated severe AA. The histopathological examination revealed the presence of hair follicles, which confirmed the diagnosis and allowed to administer baricitinib. During follow-up visits over the next 4 months, gradual regrowth of ca. 80–85% of hair on the scalp, eyebrows and eyelashes was observed. Consequently, the treatment was continued due to satisfactory results.

Is there an association between breast cancer and mycosis fungoides? A case report

Czy istnieje związek między występowaniem raka piersi i ziarniniaka grzybiastego? Opis przypadku

Arkadiusz Grunwald, Małgorzata Satora, Kinga Brzuszkiewicz, Dominika Dzik, Aleksandra Nowińska

Trustee of the paper: dr n. med. Agnieszka Gerkowicz, prof. dr hab. n. med. Dorota Krasowska
Research centre: Studenckie Koło Naukowe przy Katedrze i Klinice Dermatologii, Wenerologii i Dermatologii Dziecięcej, Uniwersytet Medyczny w Lublinie

Mycosis fungoides is the most common cutaneous T-cell lymphoma. It is characterized by a slow progression from erythematous, infiltrative lesions to disintegrating tumors, increase of number of Th2 cells and inhibition of antitumor processes in the surrounding microenvironment. In stage IVB the 5-year survival rate is only up to 15%. In recent years, factors that promote primary cutaneous lymphomas have been studied, one of which is hormone therapy with anti-estrogens for breast cancer in young women.

A patient aged 72 years diagnosed with advanced mycosis fungoides at the age of 69. The patient presented typical symptoms – erythematous, infiltrative lesions on the trunk and limbs and a tumor on the scalp. She had breast cancer in the past and was treated with hormonal therapy at the age of 43. For the treatment of mycosis fungoides methotrexate was used in the first line. Because of no signs of improvement, bexarotene was started. Recently, chlormethine has been added to the treatment, resulting in partial remission of the lesions.

Patients after hormonal therapy with anti-estrogens for breast cancer are a special group because of the increased incidence of primary cutaneous lymphomas among them due to the hormone deprivation, as well as genetic and environmental risk factors. Because of the unfavorable prognosis of

primary cutaneous lymphomas and no chances for complete remission, early diagnosis and treatment to slow progression of the disease are extremely important. Further research in effective therapies is required. There are high hopes towards inhibitors of control points.

Mpox infection in an HIV-positive man: case report

Infekcja Mpox u pacjenta zakażonego HIV: opis przypadku

Artur Łukawski, Weronika Górska, Agata Marszałek

Trustee of the paper: lek. Carlo Bieńkowski
Research centre: Student's Scientific Group at the Department of Children's Infectious Diseases, Medical University of Warsaw, Poland

Monkey pox is a viral infection caused by MonkeyPox Virus (MPXV). In 2022 an increase of Monkey pox cases has been noted worldwide mostly among men who have sex with men (MSM). The disease is usually mild and self-limiting, however it may have a more severe course in immunocompromized hosts including people living with HIV (PLWH).

In June 2022 a 25 year-old MSM, HIV-positive patient, was admitted to the Hospital for Infectious Diseases in Warsaw due to suspicion of Mpox infection. The patient presented with pain in the anal area, physical examination revealed vesicles, pustules and few scabs on the pharynx, face, torso, palms, feet, penis and anal area. The epidemiological interview revealed multiple unprotected sexual intercourses with unknown men, including risky sexual encounters during an LGBTQ+ party on Mallorca 1 month before. In addition, the patient was under care of HIV Outpatient Clinic for 2 years, and was on effective antiretroviral therapy (cART) with undetectable HIV viral load and CD4+ count of 879 cells/μl. The patient underwent conservative treatment (fluids IV and dexketoprofen IV). After 10 days the patient had all the scabs dried out and fallen off, and was discharged home in good general condition.

Based on this reported case PLWH on stable and effective cART have comparable course of mpox infection to immunocompetent hosts.

Out of the frying pan into the fire – from the diagnosis of polymorphic eruption of pregnancy to melanoma – a case study

Z deszczu pod rynnę – od diagnozy polimorficznych osutek ciężarnych do czerniaka – studium przypadku

Małgorzata Satora, Arkadiusz Grunwald, lek. Kinga Brzuszkiewicz

Trustee of the paper: dr n. med. Agnieszka Gerkowicz, prof. dr hab. n. med. Dorota Krasowska
Research centre: Katedra i Klinika Dermatologii, Wenerologii i Dermatologii Dziecięcej, Uniwersytet Medyczny w Lublinie

Despite advances in medicine, the exact incidence of melanoma in pregnancy is still unknown. During pregnancy, increased pigmentation is common in various parts of the body. What is more, some studies indicate that melanocytic nevi in pregnant women may undergo dermatoscopic changes. Due to the lack of randomized controlled trials, the database of clinical cases of pregnancy-related melanoma is small. Diagnosis and treatment of melanoma during pregnancy requires a balance of risks and benefits for both maternal and fetal well-being.

A 32-year-old pregnant woman was admitted to hospital with polymorphic eruption of pregnancy. Due to numerous pigmented nevi, the woman underwent a videodermoscopy examination, which showed 3 lesions with atypia. All lesions were excised under local anesthesia. Histopathological examination revealed 2 superficial melanomas on the skin of the leg and one dysplastic nevus. The patient gave birth to a healthy child and the follow-up visit showed no recurrence of melanoma.

Excision of melanoma during pregnancy is a safe method of treating the patient. Treatment of melanoma in pregnancy should be based on a multidisciplinary approach. Patient education should be undertaken to ensure that women understand the implications of the diagnosis and the potential risks to the fetus. Prevention of birthmarks and oncological vigilance are also important – the diagnosis of melanoma in an advanced stage in a pregnant woman can lead to fetal metastases and even early pregnancy loss.

A case of advanced Kaposi sarcoma with high treatment response to radiotherapy

Przypadek zaawansowanego mięsaka Kaposiego z dobrą odpowiedzią na leczenie radioterapią

Katarzyna Maciorowska, Katarzyna Anikiej, Julia Wawiernia, Julia Nowowiejska, Olivia Jakubowicz-Zalewska, Anna Baran, Iwona Flisiak

Trustee of the paper: Assoc. Prof. Anna Baran, MD, PhD, Julia Nowowiejska, MD PhD
Research centre: Klinika Dermatologii i Wenerologii, Uniwersytet Medyczny w Białymstoku

Kaposi sarcoma is a relatively rare angioproliferative disorder with estimated prevalence of 0.3 cases per 100 000 people per year in Europe. It is strongly associated with Human Herpes Virus 8 (HHV8). There are four types of Kaposi sarcoma, of which one is iatrogenic, occurring due to treatment with immunosuppressive agents or ACE inhibitors. The first symptoms are usually purple, red or brown nodular and papular lesions on the skin, most often on the feet and lower legs.

A 83-year-old woman, HIV-negative, treated for many years with perindopril (ACE inhibitor), was admitted to the Department of Dermatology in order to treat the skin lesions. First nodular lesions on the left shin appeared three years earlier. They were surgically removed. Histopathological examination revealed Kaposi sarcoma (nodular) CD34 (+), CD31(+), Ki67 (+). The patient was referred for balstilimab therapy which she refused. For the next three years more nodular lesions appeared, and about 3 months before admission they appeared also on the other leg and started to disintegrate and bleed. This time, the patient was referred for radiotherapy with a great improvement and cessation of pain.

We report the case of Kaposi sarcoma in an HIV-negative patient which appeared presumably due to administration of ACE inhibitor. Radiotherapy is an effective treatment for local palliation of Kaposi's sarcoma as in the presented patient.

Atypical manifestation of mycosis fungoides in a 30-year-old patient

Nietypowa manifestacja kliniczna ziarniniaka grzybiastego u 30-letniej pacjentki

Matylda Kubacz, Magdalena Radziszewska, Magdalena Jasińska

Trustee of the paper: lek. Magdalena Radziszewska
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Mycosis fungoides (MF) is the most predominant form of cutaneous T-cell lymphoma (CTCL) and is characterized by highly heterogeneous clinical manifestations.

Here, we present a case of a 30-y/o female with multiple erythemato-edematous lesions within facial and genital regions accompanied by axillary and inguinal lymph node enlargement. Moreover, in the current onset of the disease, a 3-cm nodule was observed on the right temporal area. Despite the atypical clinical manifestation, a biopsy from the nodule was performed and resulted in a diagnosis of folliculotropic variant of mycosis fungoides (FMF). Importantly, the patient had obtained MF diagnosis 4 years prior to the novel onset of symptoms with erythroderma as a main clinical manifestation, accompanied by generalized lymph node enlargement. Therapeutic combination of PUVA and methotrexate was ordered, however it was proven ineffective. Remission was induced after six courses of chemoimmunotherapy. During the current onset of the disease topical corticosteroids combined with UVB 311 successfully reduced the macules, yet only triamcinolone injections triggered the nodule's regression. The patient had also been given topical chlormethine gel with a good clinical response.

Therefore, in the current work, we aim to show that a variety of clinical symptoms always requires a proper differential diagnostic process and histopathological evaluation, and we also aim to raise awareness of multiple skin manifestations of CTCL.

Necrobiotic Xanthogranuloma of atypical localization

Necrobiotic Xanthogranuloma w nietypowej lokalizacji

Anna Skoczek-Wojciechowska

Trustee of the paper: lek. Paulina Głowacka
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Necrobiotic xanthogranuloma (NXG) is a chronic and slowly progressive non-Langerhans cell histiocytosis frequently accompanied by plasma cell dyscrasias or lymphoproliferative disorders. Histology examination reveals granulomas within subcutaneous and dermal layers with focal areas of necrobiotic collagen. The clinical features of NXG consist of yellow to orange skin lesions – plaques, nodules or papules with the tendency to ulceration. Periorbital region is the most frequent localization of skin changes. The etiology of this disease remains vague, thus there are no first-line treatment recommendations.

We present the case of a 71-year-old patient with infiltrative-nodular, pruritic skin lesions localized within old burn scars of the trunk, upper and lower limb. The biopsy showed a pattern of palisading histiocytic granulomas, bizarre giant multinucleated cells, cholesterol clefts and focal collagen necrobiosis – the image corresponding to NXG. Hematological and oncological diseases were excluded in the diagnostic process. Topical steroids were administered and methotrexate treatment was planned after excluding nephrological contraindications.

Treatment of NXG remains challenging due to lack of the guidelines and limited data on this rare disorder. Therapeutic options include topical treatment – corticosteroids, interferon alpha, laser therapy, PUVA, radiotherapy or surgical excision, whereas systemic treatment comprise of corticosteroids, alkylating agents (i.a. melphalan, chlorambucil), immunomodulatory drugs (lenalidomide, thalidomide), plasmapheresis, intravenous immunoglobulins (IVIG), stem cells transplantations or combined therapies consisting of foregoing methods. This case report shows atypical image of NTX without monoclonal gammopathy and with unusual localization of skin lesions.

Peculiarities of erysipelas in immunosuppressed patients

Specyficzne cechy róży w immunosupresji

Konrad Bagiński, Marta Całus, Małgorzata Duzinkiewicz, Julia Nowowiejska, Anna Baran, Iwona Flisiak

Trustee of the paper: prof. Anna Baran; prof. Iwona Flisiak
Research centre: Klinika Dermatologii i Wenerologii, Uniwersytet Medyczny w Białymstoku

Erysipelas is an acute inflammatory condition of the skin and subcutaneous tissue caused by streptococcal infection. The lesions usually affect lower limbs or face unilaterally and are characterized by erythema, oedema and pain. By the definition, the disease is accompanied by high fever. On the laboratory investigations, elevated C-reactive protein and leukocytosis are observed. However, in immunocompromised patients the diagnosis might not be clear.

We present three patients admitted to Department of Dermatology with erysipelas: a 51-year-old woman with rheumatoid arthritis treated with tocilizumab, methotrexate and methylprednisolone, a 51-year-old woman with systemic lupus erythematosus treated with prednisone, and a 75-year-old woman with rheumatoid arthritis treated with methotrexate. All of them had the history of erysipelas in the past. Clinical pictures shared common symptoms in all cases: oedema, erythema and pain in one of the limbs. However, none of the patients had a fever on admission. On laboratory tests, in two cases, there was no significant increase of inflammatory markers. The treatment with intravenous antibiotic therapy and low-molecular heparin resulted in good clinical improvement.

Chronic immunosuppressive treatment acting due to inhibition of pro-inflammatory cytokines reduces patients' immune response, which may result in the absence of fever and no significant increase in the inflammatory parameters. The diagnosis was made based on the clinical picture, supported by additionally positive medical history of erysipelas and the presence of predisposing factors: advanced age, circulatory failure, diabetes. Presented cases show some peculiarities of erysipelas in the distinct group of immunosuppressed patients and draw attention to the unusual clinical picture.

Recurrent proliferating pilar tumour treated with S-plasty

Nawracająca torbiel tricholemmalna leczona S-plastyką

Łukasz Kopoczyński, Kaja Męcińska-Jundziłł, Agnieszka Białecka

Trustee of the paper: prof. dr hab. n. med. Rafał Czajkowski
Research centre: Studenckie Koło Naukowe Dermatologii, *Collegium Medicum* w Bydgoszczy, Uniwersytet Mikołaja Kopernika w Toruniu

Proliferating pilar tumour (proliferating trichilemmal cyst) is a rare condition, which develops from pilar cysts or de novo. Pilar cysts are arising from outer root sheath, typically on the scalp due to the vast number of hair follicles on this skin area. In this case we have a 58-year-old male patient with recurrent proliferating pilar tumour.

Patient previously was supervised and treated due to progressive swelling of the scalp and was treated as an atheroma. Progressive recurrence occurred, with no history of inflammation or head trauma. Clinical examination showed firm, erythematous swelling with superficial ulcerations and telangiectasias localized on the scalp, with lesion of approximately 5 cm diameter. An excision of lesion was performed with a 2 cm margin of normal skin. To get the best aesthetical effect S-plasty was used. Due to the choice of S-plasty, satisfying results were achieved. During 1 year follow-up there was no sign of proliferating pilar tumour recurrence.

Operating a huge diameter tumour on a calvarium is not easy to perform with a good aesthetic outcome, due to its 3-dimensional shape. Skin transplantation to place of excision is not a good choice, because of lack of hair on transplanted skin. Round excision is hard to piece together - epileptic excision can result as an unaesthetic "dog ears". S-plasty was a good choice, that was as non-invasive procedure to the tissue as it could. Important in differential diagnosis is squamous cell carcinoma.

Perforating folliculitis – case series

Perforujące zapalenie mieszków włosowych – seria przypadków

Izabela Staniszewska

Trustee of the paper: lek. Justyna Milewska
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Perforating dermatosis is a heterogenous group of rare skin disorders characterized by the elimination of dermal components through the epidermis. These include elastosis perforans serpiginosa, reactive perforating collagenosis, Kyrle disease and perforating folliculitis (PF). PF is typically manifested by keratotic, follicular papules with a predilection for the extensor surfaces of the extremities and buttocks. Numerous disease associations have been described.

A 44-year-old man complained of diffuse papules on the thighs that had been recurring for a year. In laboratory tests he had carried out GGTP and abdominal ultrasound showed fatty liver. In dermoscopy, papules with centrally located keratinous cores were observed. The histopathological examination showed PF. The patient started treatment with oral isotretinoin.

A 53-year-old patient with a history of alcoholic liver fibrosis presented with multiple disseminated papules on the back, lasting for 2 years. Laboratory tests showed hyperglycemia and hyperlipidemia. Dermatoscopy and histopathology showed PF. Topical glucocorticosteroids and antihistamines were used in the treatment.

A 75-year-old patient presented with disseminated papules and isolated lesions on the chest and arms, which had persisted for 4 months. The lesions were accompanied by moderate pruritus. The patient suffered from chronic renal failure. In the histopathological examination, the picture of PF was described. Significant improvement was obtained after treatment with doxycycline in combination with topical glucocorticoids.

Perforating folliculitis is rare, often manifested by acne-like or folliculitis-like lesions. It should be taken into consideration especially with chronic renal disease patients. Dermoscopy can be helpful but the basis for the diagnosis is histopathology.

Pembrolizumab-induced psoriasis in a patient with advanced non-small cell lung cancer

Łuszczyca indukowana pembrolizumabem u pacjenta z zaawansowanym niedrobnokomórkowym rakiem płuc

Carolyn Szwed

Trustee of the paper: dr hab. n. med. Joanna Czuwara
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

Immune checkpoint inhibitors (ICIs) have emerged as promising therapeutic agents for the advanced forms of several solid and hematological malignancies. Although ICIs have dramatically improved patient survival, they are associated with many immune-related adverse events (irAEs) due to their unique mechanism of action. Cutaneous irAEs (cirAEs) are the most frequently reported irAEs with over a third of patients affected. CirAEs may manifest as pruritus, inflammatory dermatoses, immunobullous diseases or severe cutaneous drug reactions such as Stevens-Johnson syndrome/toxic epidermal necrolysis.

We present a 74-year-old man treated with pembrolizumab, a PD-1 inhibitor, for stage 4 non-small cell lung cancer with widespread erythematous scaly plaques. They had been progressing regardless of systemic prednisone treatment initiated by oncologists. The patient had no past dermatological history. The lesions were pruritic, distressing and appeared four months after the initiation of immunotherapy. Histopathological examination confirmed the clinical diagnosis of plaque psoriasis. Prednisone and pembrolizumab were terminated and treatment with topical calcipotriol+betamethasone and oral acitretin was initiated. The patient achieved rapid remission of his plaque psoriasis, but required chemotherapy and radiotherapy due to the progression of his non-small cell lung cancer.

In conclusion, cirAEs are common and may pose a significant challenge due to their broad spectrum of presentations. Not only do they have the potential to significantly decrease quality of life, but they may lead to treatment termination. Prompt recognition and management of cirAEs is essential for better oncological outcomes.

Double trouble combat grenade

Podwójna siła granatu bojowego

Julia Kobylińska, Zuzanna Panas, Agata Karny, dr n.med. Julia Nowowiejska, dr hab. Anna Baran, prof. dr hab. Iwona Flisiak

Trustee of the paper: dr hab. Anna Baran
Research centre: Klinika Dermatologii i Wenerologii, Uniwersytet Medyczny w Białymstoku

Allergic contact dermatitis (ACD) is a frequent dermatosis. It occurs when an allergen, which might be potentially a harmless substance, provokes a skin immune reaction. Furthermore, repeated contact with the allergen is required to provoke hypersensitivity reactions. Maculopapular rash is a frequent ACD manifestation. Although chloroacetophenone (CN) is a tear gas used as a common riot control agent, it should be safe and not cause fatal health effects. However, in high concentrations it triggers clinical consequences.

A 21-year-old male soldier was presented to the Department of Dermatology with a maculopapular rash after being exposed to a tear gas – chloroacetophenone – while throwing a practice gas grenade at military exercise. On physical examination, skin lesions were observed mostly on the forearms, lateral surfaces of the trunk and whole neck, with no rash on the face which was covered by the face mask. They were accompanied by pruritus. The treatment with intravenous hydrocortisone, intramuscular phenazoline, followed by oral antihistamines and topical steroids resulted in significant clinical improvement.

We present a unique case of ACD after exposure to CN, used as tear gas. Moreover, our patient has had contact with the described substance before, but this is the first time of the appearance of such symptoms. As CN is often used by military forces all around the world, research of CN potential side effects is desired. Since CN is not a natural part of the environment, the possibility of sensitization is higher among soldiers.

Painful mucosal lesions as a manifestation of myelodysplastic syndrome – a case report

Bolesne zmiany śluzówkowe jako manifestacja zespołu mielodysplastycznego – opis przypadku

Magdalena Karolak, Paulina Chmielińska, Marta Sar-Pomian, Anna Waśkiel-Burnat, Joanna Czuwara

Trustee of the paper: lek. Paulina Chmielińska
Research centre: Katedra i Klinika Dermatologiczna, Warszawski Uniwersytet Medyczny

A 77-year old patient with a 6-month history of painful mucosal lesions was admitted to the Dermatologic Department for evaluation of his disease. The patient presented erythematous lesions, ulcers and erosions located on the palate and on the right labial commissure. Additionally, the man experienced fatigue, night sweats, unintentional weight loss and episodes of low grade fever. History of present illness included benign prostatic hyperplasia, thyroid nodular goiter with euthyreosis and hiatal hernia. The patient had been surgically treated for colon cancer in 2008.

Blood tests revealed a severe drop in hemoglobin concentration, white blood cell and platelet counts. Immediate hospitalization and an extensive hematological diagnostics followed. Bone marrow aspiration and trephine biopsy, as well as genetic tests were carried out. Simultaneously, a skin biopsy was taken and showed disturbed keratinization and penetration of neutrophils into the epithelium. Based upon the test results, the patient was diagnosed with low-risk trilinear myelodysplastic syndrome.

The patient was treated with 500 µg darbepoetin alfa every 3 weeks, red cell concentrate and iron. For infection prophylaxis fluconazole and acyclovir was administered. Additionally, he received megestrol and nutritional preparations in order to manage the loss of appetite and cachexia. The patient experienced periodic improvements of blood parameters that correlated with a reduction of oral lesions and pain.

This case study provides an important reminder that skin lesions may be manifestations of various hematological illnesses and that one should be mindful of this fact during everyday practice.

Case report of erythema multiforme induced by pembrolizumab treatment of metastatic mucosal melanoma

Opis przypadku rumienia wielopostaciowego spowodowanego leczeniem systemowym pembrolizumabem przerzutowego czerniaka błon śluzowych

Piotr Błoński

Trustee of the paper: prof. dr hab. n. med. Anna Czarnecka
Research centre: Narodowy Instytut Onkologii im. Marii Skłodowskiej-Curie w Warszawie

Administration of immunological checkpoint inhibitors for patients with stage IV melanoma can result in long-lasting clinical benefit. Although these medications are known for inducing immune-related adverse events, erythema multiforme is caused by them very infrequently. However, it must be recognized and treated as a potentially health-threatening condition.

An 83-year-old female had been diagnosed with mucosal melanoma of rectum, BRAF mutational status was negative. Distant metastases in liver and lungs, confirmed by computed tomography, had been present at the diagnosis. Patient has started palliative treatment with pembrolizumab in a fixed dose of 200 mg every 3 weeks. By the time of the second cycle of the therapy, limited erythema multiforme lesions emerged. Immunotherapy must have been discontinued after the second cycle of therapy, due to further expansion of erythema multiforme. Successful dermatological treatment was administered. The diagnosis of erythema multiforme has been confirmed in histopathological examination of skin lesions. Best response to the immunotherapy was partial response (PR), according to the RECIST 1.1 criteria. The patient has been referred to second line systemic treatment, consisting of chemotherapy.

Erythema multiforme is an infrequent immune-related adverse event. In this case, permanent discontinuation of immunotherapy and dermatological treatment resulted in complete remission of erythema multiforme. Patients with extensive skin lesions during systemic therapy of cancer always should be consulted by a dermatologist. However, it should be considered whether immunotherapy may be reintroduced in other dermatological complications in order to sustain oncological benefit.

Immune related hepatotoxicity during adjuvant immunotherapy of melanoma

Toksyczne uszkodzenie wątroby o podłożu immunologicznym podczas uzupełniającej immunoterapii czerniaka

Maria Kleczkowska

Trustee of the paper: prof. dr hab. n. med. Anna Czarnecka
Research centre: Narodowy Instytut Onkologii im. Marii Skłodowskiej-Curie Państwowy Instytut Badawczy

The case report of immune related hepatotoxicity during adjuvant immunotherapy of melanoma

Melanoma is a rapidly increasing worldwide skin cancer caused by the malignancy of melanocytes. Its' typical cause is ultraviolet light exposure to melanocytes, however familiar history and genetic susceptibility also play a role, crucial for patient transfer from dermatologists to oncologists for adjuvant treatment. Immunotherapy is a revolutionizing treatment after radical excision of melanoma but is often restricted by toxicities. The objective of this clinical case is to describe the management of drug-induced liver toxicity using ASCO and ESMO guidelines as well as to emphasize the importance of early diagnosis and treatment of drug-induced complications.

A 42 year old woman presented with right inguinal lymph nodes metastases of previously removed adjacently localized melanoma (pT4a, Breslow 22mm, non-ulcerated IM4, (ICD10)C43.7) confirmed by fine-needle aspiration biopsy. The patient met the requirements for iliac-inguinal lymphadenectomy (TNM classification T4N1M0), later being qualified for adjuvant treatment -immunotherapy- with pembrolizumab. After two courses of immunotherapy the woman developed abdominal pain and shortly after that incident of nausea, high fever and shivers followed by AST/ALT control which turned out to be elevated thus suggesting liver toxicity. The patient received 30 mg of prednisone which normalized the liver function tests.

This case highlights the necessity of multidisciplinary melanoma care as well as dealing with early drug-induced complications which enables the patient to continue therapy. It's also crucial for the patient to recover fully if introduction of any further treatment is necessary.

Melanoma – from adjuvant to palliative treatment

Czerniak – od leczenia uzupełniającego do paliatywnego

Michał Zygarowicz

Trustee of the paper: prof. dr hab. n. med. Anna Czarnecka, prof. dr hab. n. med. Piotr Rutkowski
Research centre: Narodowy Instytut Onkologii im. Marii Skłodowskiej-Curie Państwowy Instytut Badawczy

Melanoma is a skin cancer originating from melanocytes, which represents 5.6% of all cancer diagnoses in the US, primarily diagnosed by dermatologists and managed by oncologists. It is localized during diagnosis and is treated by surgical excision. However, metastases are common and independent of the primary diagnosis. Among new therapeutic directions, a phase III study of adjuvant pembrolizumab in patients with surgically resected high-risk stage II melanoma is developed. The clinical case presents the importance of monitoring the patients in terms of relapse.

A case of a 39-year-old man with a history of melanoma excision on the left brachium. The lesion had 3 mm on the Breslow scale and was rated as pT3b on the pTNM scale with no metastases in sentinel lymph nodes. Due to the II-stage of Clark scale, he was enrolled to the clinical trial with administration of adjuvant pembrolizumab for one year. After the next 17 months a metastasis was revealed in the left fronto-parietal region of the brain, subcutaneous tissue of the left foot, and the left lung. Because of the progression of the disease, it was decided to use immunotherapy with nivolumab and ipilimumab.

Even after a long time of supposed remission of melanoma, the full health remains uncertain. It is important to diagnose the primary lesion as soon as possible because it often has a decisive impact on the future course of treatment and overall survival. The case highlights the impact of regular video-dermoscopy as a huge chance for early diagnosis.

Is accessible adjuvant immunotherapy a key to longer survival? Melanoma patient receiving pembrolizumab in the emergency access to drug technologies procedure – a case report

Czy dostępna terapia adiuwantowa jest kluczem do dłuższego przeżycia? Pacjent z czerniakiem leczony pembrolizumabem w ramach ratunkowego dostępu do technologii lekowych – opis przypadku

Maria Deczkowska

Trustee of the paper: prof. Anna Czarnecka
Research centre: Narodowy Instytut Onkologii

Since January 2021, adjuvant therapy has been reimbursed in Poland for melanoma patients operated for lymphatic node and systemic metastases with a high probability of recurrence. Consequently, quick access to nivolumab, pembrolizumab, and dabrafenib with trametinib emerged.

A 39-year-old patient who underwent a left foot lesion biopsy presented to the oncologist. After radical excision, the sample was evaluated as BRAF-negative melanoma penetrating the reticular dermis (pT4a). The sentinel lymphatic node biopsy was negative. After 12 months melanoma recurred, no metastases were found. In July 2020, a CT follow-up scan showed metastases in the iliac, inguinal, and obturator lymph nodes. A lymphadenectomy was performed and pembrolizumab was administered thanks to the emergency access to drug technologies application. After the eighth cycle, metastases were found. As a treatment of choice, nivolumab with ipilimumab was started, but after 2 cycles stopped due to G3 hepatotoxicity. In the next line of treatment, the patient was enrolled in the APX005M-010 trial. After progression, the patient received radiation therapy and VCD chemotherapy which resulted in disease stabilization 5 years after initial diagnosis.

The rapidly changing spectrum of available medications and their applications should encourage specialists to stay up-to-date. Consequently, they should feel invited to advocate for easy access to innovative therapies. Especially in case of treatment for rapidly progressing neoplasms such as melanoma.