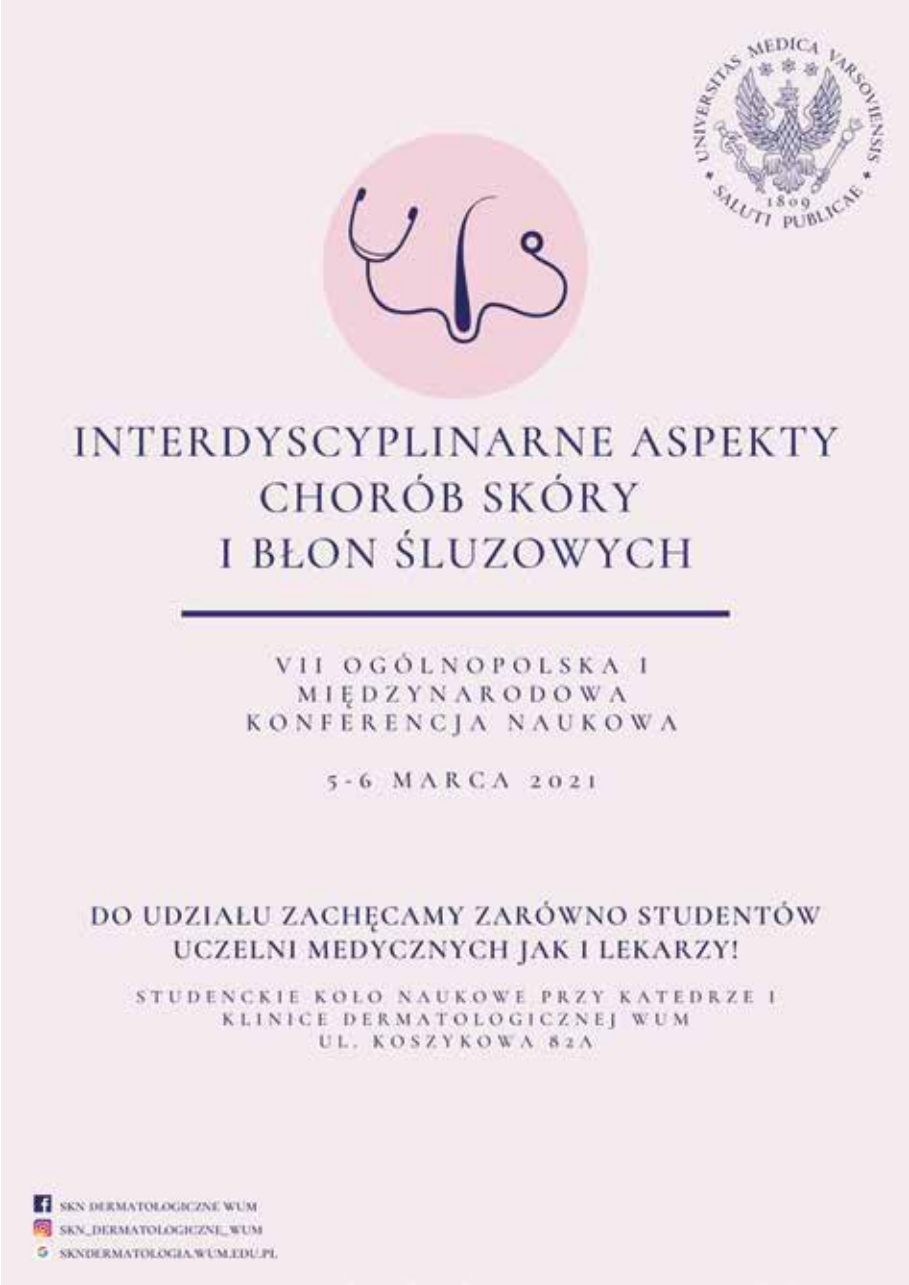
VII Ogólnopolska i Międzynarodowa Konferencja Naukowa
„Interdyscyplinarne aspekty chorób skóry i błon śluzowych”
Warszawa, 5–6 marca 2021 roku



Szanowni Czytelnicy „Przeglądu Dermatologicznego",
Drogie Koleżanki i Koledzy,

pragniemy Państwa serdecznie zaprosić na kolejną, **siódmą edycję ogólnopolskiej konferencji studentów i młodych lekarzy „Interdyscyplinarne aspekty chorób skóry i błon śluzowych"**.

Nasza konferencja umożliwia zaprezentowanie pracy w języku angielskim lub polskim w zależności od Państwa preferencji. Po raz pierwszy spotkanie odbędzie się w formie internetowej. **W tym roku zaprosiliśmy wybitnych profesorów z Polski i zagranicy** do podzielenia się swoją wiedzą, doświadczeniem i przemyśleniami.

Konferencja organizowana jest przez Studenckie Koło Naukowe Kliniki Dermatologicznej Warszawskiego Uniwersytetu Medycznego i **odbędzie się w dniach 5 i 6 marca 2021 r. w formule *on-line*.**

W piątek, 5 marca od godziny 16.00 wysłuchamy wykładów prof. Lidii Rudnickiej pt. „Can modern dermatology exist without trichoscopy?", prof. Mohamada Goldusta pt. „Skin manifestations of COVID-19", prof. Jacka Szepietowskiego pt. „Psychodermatology – an overview", prof. Piotra Rutkowskiego pt. „Immunoterapia w nowotworach złośliwych skóry" i dr. n. med. Adama Gałązki pt. „Nowotwory skóry głowy i szyi – obraz kliniczny oraz możliwości leczenia chirurgicznego".

W sobotę, 6 marca prof. Iris Zalaudek przedstawi wykład inauguracyjny na temat dermoskopii pt. „Role of dermoscopy in dermato-oncology".

Dotarcie do **szerokiego grona odbiorców oraz opublikowanie streszczeń konferencji jest możliwe dzięki uprzejmości prof. Małgorzaty Olszewskiej, redaktora naczelnego „Przeglądu Dermatologicznego", oraz wydawnictwu Termedia. Pragniemy ogromnie podziękować** za ten gest i wyjście naprzeciw oczekiwaniom studentów, przyszłych lekarzy zainteresowanych odkrywaniem dermatologii, piękna medycyny i jej interdyscyplinarności.

Konferencja „Interdyscyplinarne aspekty chorób skóry i błon śluzowych" powstała w celu wymiany doświadczeń dotyczących objawów dermatologicznych w różnych dziedzinach medycyny. Ku naszej radości cieszy się dużym zainteresowaniem, co świadczy o potrzebie jej współtworzenia przez studentów i lekarzy różnych specjalności z całej Polski. **Otrzymaliśmy zgłoszenia z wielu klinik i ośrodków naukowych. Ten fakt wskazuje na duże znaczenie zagadnień związanych z dermatologią oraz prawidłową interpretacją zmian skórnych w codziennej praktyce lekarzy wielu specjalności**.

Nie budzi wątpliwości, że **obecna medycyna opiera się na specjalistycznej współpracy interdyscyplinarnej.** Naukowcy przenoszą swoje odkrycia na grunt medycyny klinicznej, a klinicyści poszukują odpowiedzi na swoje pytania w badaniach naukowych. Wzajemna wymiana doświadczeń tworzy płaszczyznę porozumienia. To właśnie **dzięki ludziom młodym, dociekliwym, zmotywowanym i ciekawym odkryć kształtuje się medycyna teraźniejszości, a rodzi medycyna przyszłości.** Wyrażamy nadzieję, że taką możliwość daje między innymi nasza konferencja o zasięgu interdyscyplinarnym i ogólnopolskim, a przynajmniej takie jest jej zamierzenie.

Konferencję objęli patronatem najznamienitsi lekarze z Warszawskiego Uniwersytetu Medycznego, Polskiego Towarzystwa Dermatologicznego i izb lekarskich, a współtworzą lekarze z całej Polski, co bardzo nas cieszy i motywuje do dalszego działania.

W imieniu organizatorów, studentów i lekarzy serdecznie zapraszamy do zapoznania się z tematyką wystąpień na stronach „Przeglądu Dermatologicznego". **Mamy nadzieję, że zaszczycą nas Państwo swoją obecnością 5 i 6 marca.**

Liczymy na to, że tegoroczne wykłady zapoczątkują **inspirujące dyskusje, znamienici goście natchną swoją pasją, poszerzą rozumienie znaczenia diagnostyki onkologicznej i dermoskopowej, wykorzystania nowoczesnych terapii, a niepowtarzalna okazja wymiany doświadczeń zrodzi nowe pomysły i zaowocuje współpracą** na przyszłych interdyscyplinarnych konferencjach naukowych.

Z wyrazami szacunku

Joanna Czuwara

Streszczenia

Survey study on patients and doctors satisfaction with telemedicine in Poland

Badanie ankietowe satysfakcji pacjentów i lekarzy z telemedycyny w Polsce

Anna Stepaniuk, Cezary Pawlukianiec, Magdalena Krawiel

Trustee of the paper: dr hab. n. med. Anna Baran, prof. dr hab. n. med. Iwona Flisiak

During the COVID-19 pandemic health care systems worldwide rapidly implemented telemedicine solutions in order to avoid spreading the coronavirus among doctors and patients.

To analye the knowledge, usage and attitude towards telemedicine among patients, dermatologists and other doctors during SARS-CoV-2 pandemic.

In 2020 an original anonymous online survey was carried among 121 patients, 63 dermatologists and 50 doctors of other specialties. They filled general and specific questions regarding telemedicine. Statistical analysis was performed using Chi-Square test, statistically significant difference was at $p < 0.05$. In the patients group 58.7% suffered from a skin disease and more than half have been diagnosed with at least one disease other than dermatological.

79.3% have used telemedicine during the COVID-19 pandemic. However, 54.5% of our respondents viewed teleconsultations unfavourably. Furthermore, 96.6% of the dermatologists admitted that they had to schedule a visit at the office or ask for additional pictures. There was a statistical significance between dermatologists and other specialties doctors regarding telemedicine's ability to replace in office visits, use in treatment of elderly patients and duration of the teleconsultation compared to a traditional visit (all $p < 0.05$).

Telemedicine is a useful tool for communicating with the patients but it needs to be evaluated in the context of potential limitations. It is worth mentioning that teleconsultations can delay proper diagnosis and treatment when the clinical picture requires further assessment which may lead to irreversible changes and have a potential deadly effect.

Assessment of effectiveness of the full-thickness skin micrograft, using a skin punch method, for accelerating the epithelialization of the wound bed

Ocena skuteczności mikroprzeszczepów skóry pełnej grubości przy użyciu sztancy dermatologicznej w przyspieszaniu ziarninowania łożyska rany

lek. Marcela Nowak

Trustee of the paper: dr n. med. Dorota Mehrholz, prof. dr hab. n. med. Wioletta Barańska-Rybak

End stage of ulcer treatment is epithelialization. Various methods of skin grafting are available to accelerate this stage of wound healing, such as single-skin full-thickness transplantation, intermediate-thickness skin transplant using a dermatome, and epidermis islet transplantation using a Cellutome vacuum apparatus. Those methods require specialized equipment and training though, as well as they are costly. There is, however, an alternative to perform full-thickness skin grafts with a dermatological punch. We present the method itself and the effects of the procedure. 5 patients with granulating venous ulcers, that were not infected or cancerous underwent the procedure. 1 graft was placed for every 2 cm^2 using a 5 mm punch. Patients were followed up every week for 3 months and assessed for number of micrografts rejected and percentage of the wound that have epithelialized. We have also noted the VAS surgery pain scale. Reduction in the wound area after 30 days was observed in all patients. In 2 patients complete resolution was observed. No adverse effects were recorded. Average visual analog scale (1–10) for pain was 4.4 ±0.927. Procedure took on average 39 ±4.301 minutes. Micrografting is an effective method that accelerates the epithelialization of chronic ulcers. Moreover, it is cheaper and easier to perform in comparison to widely used procedures.

Selected cases of dermatological adverse drug reactions in children treated for cancers in one center of pediatric oncology

Wybrane przypadki dermatologicznych działań niepożądanych leków u dzieci leczonych z powodu nowotworów w ośrodku onkologii dziecięcej

Ewa Maria Sokolewicz

Trustee of the paper: prof. dr hab. n. med. Ewa Bień

Adverse drug reactions (ADR) are unexpected reactions to a medication administered in a correct way at a standard dose. Drug-induced skin reactions account for 60–70% of all ADR. Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN) remain the most severe ADR with various extent of destruction of epidermis and mucosa.

To describe selected cases of epidermal ADR in children treated for cancers in the Dept. of Pediatrics, Hematology and Oncology, University Clinical Center in Gdansk, Poland, within 2006–2019.

Retrospective analysis of patients' medical files was conducted to identify cases of epidermal ADR. In ten selected patients (9 F, 1 M) epidermal ADRs were caused by cytostatic drugs in six (5 F, 1 M) and by adjunctive treatment in four (4 F).

Among cytostatic drugs, MTX was the causative agent in five cases, cytarabine in one. Cytostatic drugs caused TEN in two cases – a 7-year-old boy with Burkitt Lymphoma and a 13-year-old girl with ALL. Both demonstrated generalized skin and mucosa erythema, blisters and desquamation, body fluid displacement, SIRS and multiorgan failure. Out of four reactions to adjunctive medications, two were most likely caused by Sulfamethoxazole-trimethoprim and two by voriconazole, all leading to SJS. Symmetrical erythema, blisters and severe paresthesia of soles and palms were observed. In our series of cancer patients, females showed higher prevalence for epidermal ADR (9 : 1).

Early detection of symptoms of SJS and TEN is crucial for their effective management and prevention of health deterioration.

Urticaria – a retrospective analysis of 137 patients

Pokrzywka – retrospektywna analiza 137 pacjentów

Bartosz Pomichter, Anna Stepaniuk, Aleksandra Morawska, Jowita Gursztyn

Trustee of the paper: dr hab. n. med. Anna Baran, prof. dr hab. n. med. Iwona Flisiak

Urticaria is a heterogeneous disease which affects nearly 1 in 5 individuals in their lifetime and significantly worsens the quality of life.

A five-year retrospective analysis of medical records of patients hospitalized for urticaria.

Epidemiological and clinical data of patients hospitalized for urticaria at the Department of Dermatology were analyzed and compared to control group composed of 137 healthy individuals BMI and sex-matched. Statistical analysis was performed using χ^2 test, a statistically significant difference was at $p < 0.05$.

In the analyzed period 137 patients were hospitalized for urticaria, 93 (68%) females and 44 (32%) males, of mean age 48.53. Half of the study group had systemic comorbidities, most often arterial hypertension (23%). 38% of patients have been previously diagnosed with an allergy most often to antibiotics (27%). Over 60% of patients suffered from acute and 38% from chronic urticaria. Over 40% had wheals on the whole body. Causal factor was identified in 62% of all case, the most common were drugs (48%) and food (40%). There was statistical significance regarding CRP, leukocytosis, neutrophilia and hyperglycemia between patients with urticaria and controls (all $p < 0.05$). The patients were treated with antihistamines (94%), glucocorticosteroids (81%) and one patient with omalizumab.

Urticaria is a common disease affecting people of all ages. It may generate high healthcare costs due to prolonged hospitalizations and often leads to a search for a cause, which in many cases can not be identified.

Itch after successful renal transplantation – an important problem

Świąd po pomyślnym przeszczepieniu nerki – poważny problem

Piotr K. Krajewski

End stage renal disease-associated chronic itch (ESRDCI) is a common burden affecting up to 35% of patients treated with hemodialysis. Kidney transplant (KTx) is believed to be the best renal replacement therapy. The study was undertaken to characterize and assess the prevalence of itch among renal transplant recipients. Between October 2019 and January 2020 we have analyzed data of 197 patients, 121 (61.4%) males and 76 (38.6%) females, aged 54.5 ±13.6. The data collection was performed with specially designed questionnaire. The patients suffered from chronic renal disease for 20.2 ±12.3 years, mean time of the pre-transplant dialysis was 2.6 ±2.4 years and the mean time after the KTx was 8.0 ±6.5 years. The itch was present in 38.6% of the patients during the hemodialysis and in 73.7% of them ceased completely after the successful transplantation. Moreover, only in 2.63% of the cases there was no improvement. Nevertheless, the itch was reported in 42 (21.3%) renal transplant recipients (RTR) and in 22 (52.4%) of them it appeared after transplantation. The majority of patients suffering from itch were women (54.8%). Itch in the last free days was reported in 21 patients. Itch worst severity, assessed with numerical rating scale (NRS), was at 6 ±2.2 points, indicating moderate itch. In most cases (57.1%) itch affected multiple body areas. Extremities (50%) and the back (50%) were among the most frequently affected areas. Our analysis on representative patients' population indicates that itch after KTx is an important problem.

Convenient access to a dermatoscope during dermatology courses may positively influence students' attitudes towards skin examination

Praktyczne nauczanie dermatoskopii podczas zajęć z dermatologii może pozytywnie wpłynąć na dokładność badania przedmiotowego skóry przez studentów kierunku lekarskiego

Teresa Wolniewicz, Magdalena Chrabąszcz, Cezary Maciejewski, Rosanna Alda-Malicka, Patrycja Gajda, Joanna Czuwara, Lidia Rudnicka

Trustee of the paper: lek. Magdalena Chrabąszcz, dr hab. n. med. Joanna Czuwara

Dermatoscopy is a clinical tool for the examination of potentially malignant skin lesions. Non-dermatologists are well positioned for opportunistic melanoma detection with their usage of dermatoscopy, however, still non-satisfactory.

This study was aimed at determining whether practical dermoscopy adjunct to traditional, lecture-based medical school curriculum would improve the perceived relevance of regular skin examination and basic skin lesions differentiation.

Fourth-year medical students participating in a 3-week-long dermatology course were randomly assigned to two groups: the first one with limited access to a dermatoscopes and the second one – with unlimited access to dermatoscopes constantly throughout the course. All participants answered surveys concerning their attitude towards skin examination, with a rating scale from 1 to 5, before and after the course. At the end, participants completed an image-based test for distinguishing benign from malignant skin lesions.

Students assigned to the first group significantly improved their perceived importance of routine skin examination (mean scores before 4.38; after 4.57, $p = 0.03$). No such tendency was observed in the second group – before 4.40, after 4.49 ($p = 0.29$). Students in the group with higher dermatoscope availability considered buying a dermatoscope more often (61%) than those without (44%) ($p = 0.037$). No significant score difference was observed when testing skin lesions identification, mean for extended access 7.84 vs. normal 7.64 points ($p = 0.69$).

Higher availability of dermatoscopy during dermatology rotations may encourage students to use this tool in future clinical practice and improve early detection of malignant skin lesions.

Reasons of non-compliance in patients with atopic dermatitis treated with topical calcineurin inhibitors: a cross-sectional study

Przyczyny nieprzestrzegania zaleceń u pacjentów z atopowym zapaleniem skóry leczonych miejscowymi inhibitorami kalcyneuryny: badanie przekrojowe

Stanisław Półjanowski, Magdalena Trzeciak

Atopic dermatitis (AD) is a common, chronic inflammatory disease of skin, which is a public health

issue. AD requires long-term treatment to prevent and manage flares. It is based on topical anti-inflammatory drugs such as topical corticosteroids and topical calcineurin inhibitors (TCIs). Due to existence of steroid phobia among patients with atopic dermatitis and concerns about safety use of TCIs over past years, we decided to find out what are the reasons of noncompliance in case of TCIs and if TCIs phobia-like symptoms exist. To determine which patients and what information should be given during a medical visit in order to improve compliance to therapeutic recommendations.

A cross-sectional study based on a questionnaire. Statistical analyzes were carried out using the Excel package. Apart from Demographic variables, we evaluated patients' knowledge of adverse drug effects. Additionally, we asked 10 questions regarding treatment with TCIs.

We gathered a base of 150 questionnaires from patients with atopic dermatitis treated with TCIs. More than one in 3 (37.7%) patients doesn't use TCIs as frequently as prescribed. Older and better educated patients present higher compliance 78% of parents of children with atopic dermatitis fully comply to recommended treatment compared to 45% in the group of adult patients. 48% of patients despite talking to a doctor, consulted the initiation of TCIs treatment with family, friends or on the Internet. 65.6% of patients think that using TCIs may to some extent lead to lymphoma or other cancer. The reasons of noncompliance to the therapeutic recommendations are: fear of local side effects of TCIs (32.7%), fear of systemic side effects (30.8%), 28.8% respondents find TCIs harmful to their health, too high price of the drug (25%). 23% claim that they do not want their bodies to get addicted to TCIs, malaise as a side effect (17%). 17% answer that it worsens their skin condition, 13.5% patients lack time to apply the drug thoroughly, 9.6% were not informed about benefits of regular use of TCIs.

As any other cross sectional study we are not able to assess a causal inference of patients' opinions and modifications we suggest on their compliance with recommended treatment. It is possible that patients filled questionnaire briefly, which limits its reliability.

More than one in three patients doesn't use TCIs as frequently as prescribed. Education is necessary. Phobia-like opinions are presented by a large group of patients. Clinicians treating atopic dermatitis should emphasize the benefits of regular use of TCIs and dispel false assumptions about the side effects.

Uraemic Pruritus in Dialysis Patient (UP-Dial) creation and validation of the Polish language version

14-punktowa skala świądu mocznicowego u chorych dializowanych, utworzenie i walidacja polskiej wersji językowej

Karolina Świerczyńska

End-stage renal disease-associated chronic itch (ESRDCI) is a common and burdensome symptom in patients undergoing hemodialysis. Significant negative impact of chronic itch on a patient's quality of life is proven. Therefore, a multidimensional instrument to characterize uremic pruritus is necessary. Various instruments describing itch are in use, yet there was no specific tool designed particularly for dialyzed patients.

To translate and to validate the Polish version of Uremic Pruritus in Dialysis Patient (UP-Dial) questionnaire.

A forward and backward translation was conducted from the original English version of the questionnaire to Polish language according to international standards. The validation was performed on a group of 30 patients undergoing hemodialysis and suffering from uremic itch. Respondents completed the questionnaire twice with a 3–7 days interval. Moreover, the subjects were also asked to fill the Polish version of Four-item itch and ItchyQoL questionnaires and also Pittsburgh Sleep Quality Index and NRS for convergent validity procedure.

The Polish version of UP-Dial questionnaire showed very good internal consistency (Cronbach α coefficient was 0.90 for total score) and reproducibility with the intraclass correlation coefficient (ICC) of 0.90. UP-Dial correlates strongly with Four-item itch questionnaire ($r = 0.82$, $p < 0.01$), ItchyQoL ($r = 0.88$, $p < 0.01$), and NRS ($r = 0.74$, $p < 0.01$).

The Polish version of UP-Dial questionnaire showed high internal reliability, validity and reproducibility. This multidimensional instrument can be useful in daily clinical practice to evaluate the effects of itch therapy as well as while conducting research by Polish speaking clinicians.

Factors affecting the length of hospitalization due to erysipelas: a retrospective study

Czynniki wpływające na długość hospitalizacji z powodu róży: badanie retrospektywne

Magdalena Łyko, Mateusz Kaczmarek, Polina Nekrasova

Trustee of the paper: dr hab. n. med. Alina Jankowska-Konsur

Erysipelas is an acute skin infection most commonly caused by beta-hemolytic streptococci. It is associated with many comorbidities and may require hospitalization.

The study aimed to evaluate the factors affecting prolonged hospitalization of the patients with erysipelas.

This retrospective study included 153 admissions to the Department of Dermatology, Venereology and Allergology of Wroclaw Medical University due to erysipelas from January 2010 to December 2019. Features such as clinical symptoms, test results, comorbidities and antibiotic treatment were analyzed. Collected data was the subject to statistical analysis.

The median length of hospitalization was 10 (IQR: 7–14) days. Women spent less time in the ward, but the difference was not significant. Features identified as prolonged hospitalization factors were leukocytosis (11 days, IQR: 8–15, $p = 0.005$), serum CRP level over 100 mg/l (11 days, IQR: 8–17; $p = 0.02$), anemia (11 days, IQR: 9–15; $p = 0.03$), chills (12 days, IQR: 9–15; $p = 0.03$) and tinea pedis (15.5 days, IQR: 13.5–20; $p = 0.002$). Moreover, localization on legs ($p = 0.01$) and gangrenous subtype ($p = 0.03$) were related to longer hospitalization. First-choice antibiotic was not significant in terms of prolonged hospitalization.

Patients suffering from erysipelas localized on legs and with gangrenous subtype have a higher risk of prolonged stay at hospital. Significantly increased inflammatory factors, anemia and tinea pedis contributed to prolonged hospitalization.

Is diabetes type 1 an itchy disease? Clinical characteristics of itch in children with diabetes type 1

Czy cukrzyca jest swędzącą chorobą? Charakterystyka kliniczna świądu skóry u dzieci z cukrzycą typu 1

Aleksandra Stefaniak

Type 1 diabetes mellitus (T1D) and its complications are a growing problem worldwide – approximately 2–3 teenager per every 1,000 are currently diagnosed with T1D.

Aim of this study was to investigate the prevalence of itch in T1D, provide itch characteristics and to explore the potential pathogenesis.

In this prospective study we evaluated 100 patients with diagnosis of T1D. Detailed information on demographics, physical findings and laboratory results were recorded, including glycated hemoglobin (HbA_{1c}) and fasting plasma glucose (FPG). Itch intensity was assessed with the Numerical Rating Scale (NRS) and the 4-item Itch Questionnaire (4IIQ). Quality of life (QoL) was assessed with Children Dermatology Life Quality Index (CDLQI). Skin dryness was evaluated clinically by graduation 4-point scale, and by non-invasive assessment of epidermis hydration.

Itch occurred in 22% of children with T1D with the mean maximal intensity of 5.9 ±3.0 points in NRS and 6.7 ±3.5 points in 4IIQ. Skin xerosis was significantly more pronounced in children with itch compared with those without ($p < 0.01$). There were no correlations between itch intensity and HbA_{1c} and FPG. The mean CDLQI score in all itch groups was 4.0 ±4.7 points. The intensity of itch in NRS correlated positively with QoL impairment ($p = 0.015$).

Our study found itch as a moderately frequent symptom in children with T1D, however, itch presence and intensity may relevantly debilitate QoL among subjects. Dryness of the skin may play a role in the pathogenesis of itch in this population.

Maskne – is it a real dermatological issue? The impact of personal protective equipment (PPE) on the facial skin condition – a survey research

Czy *maskne* to istotny dermatologiczny problem? Wpływ środków ochrony indywidualnej na stan skóry twarzy – badanie ankietowe

Izabela Malczyńska, Gabriela Krych, Anna Baran, Iwona Flisiak

Trustee of the paper: dr hab. n. med. Anna Baran

During the SARS-CoV-2 pandemic we stopped associating the PPE with healthcare – it is a new social norm. Analysis of the use and choice of PPE, following hygiene rules while using them and its impact on the formation of skin lesions on face, especially in the areas they cover.

In 2020 an original anonymous online survey was carried among 26 dermatologists and 360 volunteers with 60 questions about the use of PPE and skin lesions they experienced before and during pandemic. χ^2 statistics were performed, with a p-value < 0.05.

The patients group included 76.5% females and 23.5% males with an average age of 26.08 ±0.94, dermatologist group – 100% females. All participants used PPE. Volunteers mostly chose a disposable mask (55%), while dermatologists the FFP2/FFP3/N95 mask (30.8%). Over 80% of all respondents noticed lesions. Almost all dermatologists observed their patients lesions' worsened during the pandemic. 53.8% of dermatologists diagnosed these lesions as maskne. There was statistically significant difference between experiencing purulent lesions (48.6%), increased sweating (15.2%), itching (12.4%) before and during the pandemic around mouth, nose and cheeks area. 98% of volunteers and 10% of dermatologists admitted not following certain hygiene rules.

Most dermatologists recognized "maskne" as a current and urgent problem to be cured. The SARS-CoV-2 pandemic indicated a discussion about following general sanitary rules, but hygiene of PPE was unfortunately omitted. Education on the correct use of PPE should be improved.

How do disinfectants affect the skin of the hands during COVID-19 pandemic? Preliminary data from a questionnaire based survey

Jak środki do dezynfekcji wpływają na skórę rąk w czasie pandemii COVID-19? Wstępne dane z badania ankietowego

Agnieszka Polecka, Natalia Owsianko

Trustee of the paper: dr hab. n. med. Anna Baran, prof. dr hab. n. med. Iwona Flisiak

During the COVID-19 pandemic disinfection became an integral part of everybody's life in order to avoid spreading the coronavirus. Due to its usage, many people struggle with the hands' skin problems.

To analyze how using the disinfection affects the skin of the hand, especially of persons with hand skin problems, during COVID-19 pandemic.

In 2021 an original anonymous online survey was carried among 164 respondents. They filled questions regarding usage of disinfectants and possible relations with hands skin condition. Statistical analysis was performed using χ^2 test, statistically significant difference was at $p < 0.05$.

The study group included 137 women and 27 men at the mean age of 26 ±0.23. There were 109 healthy subjects and 55 ones with hand skin dermatoses. Nearly 70% felt pain and stinging while applying disinfectant. 44% noticed deterioration of the skin, 30% more often used medications. Almost 50% of all analyzed subjects claimed new symptoms over the hands. 60% of the group with hand skin dermatoses declared new dermatological signs that they didn't notice before COVID-19 pandemic. However, only 30% of respondents reckon that using disinfectants didn't affect their lives.

People have been using disinfectants every day for several months. Our survey showed that it has an impact on the course of hand skin diseases. Disinfection interrupts the hydrolipid barrier and it's important to use it as intended and take care of skin with emollients.

Medical comorbidities in lichen planopilaris

Choroby współistniejące w przebiegu liszaja płaskiego mieszkowego

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Trustee of the paper: dr n. med. Anna Waśkiel-Burnat

Lichen planopilaris is an autoimmune form of lymphocytic primary cicatricial alopecia. The pathogenesis of the disease is not fully elucidated. To date, only a few studies assessed medical comorbidities in patients with lichen planopilaris.

To identify the prevalence of medical comorbidities in patients with lichen planopilaris.

The medical records of 100 women diagnosed with lichen planopilaris (50 women with classic lichen planopilaris and 50 women with frontal fibrosing alopecia) were retrospectively reviewed for existing comorbidities. The control group consisted of 50 women with actinic keratosis.

In women with lichen planopilaris, hypertension and hypothyroidism were the most common comorbidities with the incidence rate 45% (45/100)

and 33% (33/100), respectively. Dyslipidemia and arrythmia were observed in 16% (16/100) and 10% (10/100) of patients with lichen planopilaris. Less commonly, diabetes mellitus type 2, asthma, vitiligo, rheumatoid arthritis and systemic lupus erythematosus were detected (6%, 6/100; 4%, 4/100; 2%, 2/100; 2%, 2/100 and 1%, 1/100, respectively). No significant differences were observed in the frequency of medical comorbidities between women with classic lichen planopilaris and frontal fibrosing alopecia.

Hypertension and hypothyroidism are the most common comorbidities in women with lichen planopilaris. Further studies are suggested to evaluate the impact of medical comorbidities on lichen planopilaris.

Toxic epidermal necrolysis – a retrospective study of cases of years 2011-2020 in Department of Dermatology, Medical University of Warsaw

Toksyczna nekroliza naskórka – retrospektywna analiza przypadków z lat 2011–2020 w Klinice Dermatologicznej Warszawskiego Uniwersytetu Medycznego

Jędrzej Niessner, Wiktoria Rutkowska

Trustee of the paper: dr hab. n. med. Joanna Czuwara, lek. Magdalena Jasińska

Toxic epidermal necrolysis (TEN) is a rare, severe mucocutaneous reaction with a high mortality rate. The pathogenesis is still unclear, however various drugs are reported to induce epithelial necrosis. Involvement of the ocular and genital epithelium is associated with serious complications if the condition is not treated promptly. There is no specified recommended treatment, but various systemic therapies are used including immunoglobulin G and cyclosporin A administration.

Evaluation of the clinical manifestation and treatment of TEN in the Department of Dermatology, Medical University of Warsaw. Case histories of 15 patients diagnosed with TEN in the past 10 years were collected and major symptoms, causing factor, coexisting diseases and treatment were assessed.

Analyzed group included 11 women and 4 men (mean – 51.5 y.o. from 19 to 85 y.o.). In 4 (26.6%) patients the reaction was evoked by antibiotics, in 3 (20%) by pain relieve medication, in 3 (20%) by lamotrigine, in one (6.6%) by allopurinol. In 4 (26.6%) patients the reason for TEN was unclear. Lesions appeared usually after 2 weeks from taking triggering medication (from 2 days to 3 weeks). Nine (60%) patients required to be hospitalized in the Intensive Care Unit.

In our study, we point out that TEN can be elicited by medicaments used in many subspecialties within medicine. TEN often requires treatment in high-specialized centers. Accurate and fast diagnosis can increase patients' chances to recover and minimize sequelae.

Mycosis fungoides overlapping with CD8 (+) anaplastic large cell lymphoma and accompanied by paraneoplastic pemphigus

Ziarniniak grzybiasty i CD8 (+) wielkokomórkowy chłoniak anaplastyczny ze współistniejącą pęcherzycą paraneoplastyczną

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Large cell transformation of advanced stage mycosis fungoides is associated with a more aggressive course. Transformed lymphocytes may present CD30 (+) phenotype. It is necessary to differentiate LCT-MF with mycosis fungoides coexisting with other CD30 (+) lymphomas.

The 40-years-old man had been referred to the Dermatology Department due to widespread patches, plaques and firm nodules on the trunk and extremities, without lymphadenopathy. Patches and plaques were diagnosed as psoriasis 8 years prior. Nodules appeared last year.

The disseminated blisters and erosions have been observed before on skin, not on mucosa. Paraneoplastic pemphigus antibodies had a titer of 1 : 1280. Blisters resolved and did not recur.

The additional laboratory tests and diagnostic imaging did not reveal extracutaneous manifestations of the disease. Histopathological examination of shoulder nodules' biopsy has suggested CD30(+) anaplastic large cell lymphoma. The biopsy of plaque on the back has revealed mycosis fungoides with overlap of anaplastic lymphoma.

Methotrexate p.o. was introduced with complete remission of skin lesions, but high aminotransferases levels occurred. The attempt with bexarotene 150 mg/m^2 was unsuccessful because of rapid hypertriglyceridemia (1697 mg/dl) with the patient's disastrous well-being. MTX was introduced again in a dose of 15 mg p.o. with good response and under strict liver enzymes levels control (normal range was observed this time).

Transformation of MF is associated with survival rates ranging from 1 to 4 years, while mycosis fungoides overlapping anaplastic large cell lymphoma five-years survival rates exceed 90%. In conclusion, the right diagnosis is essential to administer the effective therapy and prolong the patient's life.

Disseminated herpes zoster in progress of lymphoproliferative disease – a case report

Półpasiec rozsiany w przebiegu choroby rozrostowej szpiku – opis przypadku

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Disseminated herpes zoster is a manifestation of neurotropic viral disease which often occurs in patients with VZV (varicella zoster virus) history and compromised immunological response due to malignancy, transplantation or treatment. Onset is similar to the typical course of disease, which is neuralgia and polymorphic erythematous vesicular changes restrained to adjacent dermatomes or nerves, but within days it can scatter on multiple organs and lead to severe complications.

73-year-old man, during current diagnosing of chronic lymphoproliferative disease was transferred from the Hematology Department to the Dermatology Department. Due to skin lesions accompanied by neuralgia which initially have appeared on the left arm and forearm. After few days they disseminated on the face, head, back, upper abdomen and lower limbs. Laboratory tests revealed increased CRP level and high white blood cell level. Based on the overall clinical picture, disseminated herpes zoster was diagnosed. Systemic treatment with acyclovir, tazocin in combination with topical agents resulted in clinical improvement.

Herpes zoster is generally a mild condition, nevertheless it may be a first symptom of chronic diseases or malignancies, especially lymphoproliferative ones. Thus consideration of detailed diagnostic is crucial, because unattended it may lead to various complications such as neuralgia, nerve palsy or even life threatening visceral disseminated VZV.

Familial Darier disease

Rodzinne występowanie choroby Dariera

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Darier disease (DD) is a rare, autosomal dominant genodermatosis that occurs due to mutations in the

ATP2A2 gene, which encodes SERCA2 protein. DD is characterized by crusty patches that arise on seborrheic areas and flexures. Histopathologic changes include acantholysis and dyskeratosis. DD is exacerbated by heat, sweating, and stress. In some cases, neuropsychiatric disorders can co-occur. Currently, retinoids are the most effective treatment.

The case of familial DD is presented. A 53-year-old man demonstrated greasy, keratotic papules on face and trunk and nail dystrophy. According to the anamnesis the onset of the disease was around puberty. Family interview revealed that his brother, son and daughter suffer from the same disease but nobody was diagnosed. Based on clinical manifestation and histopathological examination DD was diagnosed. Treatment was initiated with acitretin. Patient did not appear on the control visit.

His daughter, a 24-year-old woman, presented keratotic lesions pronounced on chest, back and nails. Patient reported first papules 15 years prior, which aggravated recently after exposure to sunlight and heat. The patient underwent acitretin treatment resulting in significant improvement. Hormonal contraception was started one month prior to acitretin treatment.

The diagnosis of the DD may be challenging, because of its rarity and similarity to other dermatosis such as seborrheic dermatitis or Hailey-Hailey disease. Genetic associations between DD and psychiatric conditions should be taken into consideration, while making a diagnosis. It responds well to oral retinoids, but due to teratogenic side effects, its use is limited in women of childbearing age.

Acrodermatitis enteropathica in a pregnant woman – case report

Acrodermatitis enteropathica u ciężarnej pacjentki – opis przypadku

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Acrodermatitis enteropathica is a rare genetic (autosomal recessive inheritance) or acquired disorder associated with zinc deficiency. The first symptoms of primary acrodermatitis enteropathica appear a few days after birth or after cessation of breastfeeding. The classic triad of symptoms includes skin lesions, diarrhea and telogen effluvium.

A 23-year-old pregnant patient was admitted to the Department of Dermatology, University Hospital No. 1 in Bydgoszcz for the treatment of skin lesions which were erythematous spots covered with erosions, located around the mouth, ears, anogenital area, on the hands and soles. At 6 months of age, the diagnosis of acrodermatitis enteropathica was established. When the patient became pregnant, she stopped oral zinc supplementation and started taking a multivitamin preparation intended for pregnant women (~15 mg of zinc/day). The first skin lesions appeared on the lower limbs, then gradually progressed. The result of serum zinc concentration blood test was significantly below the norm. During the hospitalization numerous laboratory tests were performed, which revealed leukocytosis with neutrophilia, decreased hemoglobin concentration. The patient was treated with oral zinc supplementation, combined with topical treatment, resulting in a significant reduction of skin lesions after a few days.

Acrodermatitis enteropathica is a rare disease which may lead to the exacerbation of skin lesions and organ changes. During pregnancy and lactation, the body's demand for zinc is increased. It is important to implement appropriate zinc supplementation in a pregnant woman with acrodermatitis enteropathica.

Sarcoma Kaposi in HIV-positive patient – case report

Sarcoma Kaposi u pacjenta HIV-pozytywnego – opis przypadku

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Kaposi sarcoma is a HIV-related vascular neoplasm associated with HHV-8 infections. There are four widely recognized types of Kaposi Sarcoma: classic, endemic, epidemic, and iatrogenic. AIDS-associated Kaposi sarcoma often presents as mucomembranous lesions and it could be located on the face which is rare in other types. It mainly affects homosexual men.

A 28-year-old patient with ulcerative colitis and nephrolithiasis was admitted to the Department of Dermatology for the diagnosis of multiple skin lesions such as purplish macules, nodules located on the face, scalp, trunk, extremities, genitals. The first

skin lesion occurred 4 months before admission. It was located on the forearm, and accompanied by tenderness on palpation. The initial diagnosis was metastases to the skin of lung cancer (due to a lung focal lesion detected in CT and periodic hemoptysis). During hospitalization laboratory tests were performed – leukopenia, normocytic anemia, increased CRP were found. Tumor markers were normal. Virological tests were performed which revealed HBsAg positive, anti-HCV negative, HHV8 positive, HIV Ag/Ab double reactive test. To confirm the diagnosis of Kaposi sarcoma, an excised skin biopsy was taken from the upper limb – result: Kaposi's sarcoma– the expression of CD31 +, FLI-1 +, Ki67 up to 8%, HHV8 + was present.

Kaposi sarcoma combined with other long-term diseases may pose a diagnostic problem for clinicians. Although the incidence of Kaposi sarcoma has significantly decreased with the introduction of HAART, it should be considered in the differential diagnosis of vascular skin lesions.

COVID-19 in patients with atopic dermatitis treated with dupilumab – three case reports

COVID-19 u chorych z atopowym zapaleniem skóry leczonych dupilumabem – opis trzech przypadków

Michał Niedźwiedź

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There is limited clinical data on the impact of the SARS-CoV-2 infection on patients with dermatological conditions treated with biologics. Dupilumab is a recombinant human IgG4 human monoclonal antibody that inhibits interleukins (IL) 4 and 13 signalling and is used for moderate to severe atopic dermatitis treatment.

We present 3 patients with atopic dermatitis (AD) treated with dupilumab who underwent COVID-19. In all patients the infection had a mild course. Two patients did not notice any deterioration of their skin condition during or after the infection. One patient's AD deteriorated, but due to a prolonged positive PCR COVID-19 test the administration of dupilumab was delayed due to hospital's regulations.

Based on current knowledge there is no evidence to stop or delay starting or continuing dupilumab treatment in AD patients due to COVID-19 pandemic. Majority of data shows that SARS-CoV-2 infection in those patients has a mild to moderate course. However, careful assessment is needed for each patient.

Small pustule – small problem? A case report of a patient with pyoderma gangrenosum

Mała krosta – mały problem? Opis przypadku pacjenta z piodermią zgorzelinową

Monika Leończyk

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Pyoderma gangrenosum is a rare disease occurring with a frequency of 0.63 per 100,000 people per year. It most often occurs in the fourth and fifth decade of life, but it can also develop in childhood and is often associated with systemic disease. It is presumed that under the influence of an unidentified stimulus, an uncontrolled, exacerbated and abnormal inflammatory response occurs.

A 78-year-old man reported to the Department of Dermatology, Venereology and Allergology at the Medical University of Gdańsk due to two non-healing ulcers with a necrotic bottom and a rolled rim located on the scalp. The man complained of severe pain and general weakness. He had no fever or other signs of infection. Additionally, in the history, there was a suspicion of prostate cancer due to prostate enlargement and increased PSA antigen.

The patient underwent bacteriological cultures from skin lesions: aseptic, urine culture: sterile, nose, throat and skin culture: aseptic. Based on the clinical picture, pyoderma gangrenosum was suspected. Combined therapy with prednisolone and cyclosporine A was started, achieving complete healing of the lesions after 4 months of treatment. The patient was under the control of the Dermatology Clinic.

Diagnosis is made almost entirely from clinical symptoms. Primary lesion: a lump or pustule, mistakenly diagnosed as a boil, rapidly progresses into a painful ulcer.

Among people suffering from systemic diseases, high diagnostic sensitivity should be maintained in the diagnosis of skin lesions. The diagnosis of pyoderma gangrenosum should be actively considered in the evaluation of ulcers, as prompt treatment can

prevent complications of long-term systemic treatment, delayed wound healing and scarring.

The unusual coexistence of three dermatoses presented has not been reported yet. The simultaneous appearance of different skin lesions poses diagnostic difficulties. Therefore thorough correlation of the clinical picture with histopathological findings is necessary.

Unusual coexistence of polymorphous light eruption and eruptive lichen planus in a patient with necrobiosis lipoidica – a case report

Nietypowe współwystępowanie wielopostaciowych osutek świetlnych i liszaja płaskiego wysiewnego u pacjentki z obumieraniem tłuszczowatym – opis przypadku

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Polymorphous light eruptions (PMLEs) result from hypersensitivity to ultraviolet radiation (UV) and are characterized by multiform erythematous-papulo-vesicular rash on the sun-exposed skin. Eruptive lichen planus (LP) manifests as disseminated flat, violaceous papules usually on upper and lower limbs and trunk with no face involvement. Both are frequently accompanied by pruritus. Necrobiosis lipoidica (NL) is characterized by yellow-brown lesions with atrophy and telangiectasia, occurring especially on shins.

A 59-year-old woman with a history of NL was admitted to the Department of Dermatology for diagnostics due to newly appeared various skin lesions. On the admission erythematous-papular on the skin of neck, shoulders, upper back and confluent around the neckline were noted. Additionally, numerous disseminated papules on upper and lower limbs and sacral region with visible Koebner's sign and with accompanying intense pruritus along with extensive lesions of NL over the shins were observed. The ANA 3 panel came out negative. Based on the histopathological examination of skin samples and clinical picture the diagnosis of PMLEs on the skin of upper parts of the body and LP on the limbs was made. After administered treatment with clobetasol and cetirizine the condition improved and the patient was discharged home.

Basal cell carcinoma mimicking psoriasis: two case reports

Rak podstawnokomórkowy imitujący łuszczycę: opis dwóch przypadków

Beata Jastrząb

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Basal cell carcinoma (BCC) is the most commonly occurring cancer in humans. Superficial BCC as the second most frequent clinical variant, may present as circumscribed erythematous plaque with pearl-shape edge and telangiectasia. The differential diagnosis includes Bowen disease, eczema and psoriasis.

Case one: A 39-year-old man was referred to the department with a scaly erythematous plaque with slightly elevated rolled border on the left arm. It was diagnosed by dermatologists as psoriasis and treatment typical for psoriasis (topical steroids and exfoliating preparations) has been used. The plaque has increased progressively in size despite treatment, so the patient was qualified for biopsy. Pathology results of a biopsy yielded superficial BCC.

Case two: An 80-year-old man was presented with well-demarcated, circumscribed plaque with diffuse scaling on the back. It was diagnosed by the regional dermatologist as psoriasis and controlled with applications of topical steroids (clobetasol propionate) with only a slight improvement. This lesion was biopsied, and a pathology examination revealed a superficial type of BCC.

In summary, we would like to emphasize that clinical examination alone can be insufficient to establish a clear distinction between superficial BCC and psoriasis. Therefore, dermoscopy is strongly advocated in clinical practice.

Erythema multiforme-like allergic contact dermatitis after hairspray application – a case report

Alergiczne kontaktowe zapalenie skóry o charakterze rumienia wielopostaciowego po zastosowaniu lakieru do włosów – opis przypadku

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Erythema multiforme (EM) is the most common clinical manifestation of allergic contact dermatitis (ACD) with non-eczematous morphology. Skin lesions may be limited to the site of contact with the allergen or generalized. Originally, they frequently present eczematous morphology, which after a few days changes into EM. Usually, in the first days after the contact, eruptions occur only in the area directly exposed to a substance and then become more scattered. Typically, features of EM are not verified in the histopathological picture.

A 70-year-old female patient was admitted to the Department of Dermatology for EM-like skin lesions 24 hours after using new hairspray. On physical examination, erythemato-edematous lesions were visible, mostly on the entire scalp and facial skin. They were accompanied by itching and burning sensation. On the skin of the neck, upper limbs, subpectoral and inguinal folds, locally confluent foci of "target-like" morphology were observed. The patient was weakened and had dyspnoea. The treatment with topical and intravenous corticosteroids, and oral antihistamines resulted in significant clinical improvement.

EM secondary to ACD is rare, but it should be emphasized that it may occur instead of typical eczema. In the case described, it was most probably caused by locust bean gum (LBG) contained in the hairspray. While the dermatotoxicity of LBG is known, no case of EM-like ACD induced by this substance has been reported so far. Furthermore, it is rare for an allergen causing EM-like lesions to cause general symptoms as well.

Vaccination problems and recommendations in patients with mastocytosis

Problemy i zalecenia dotyczące szczepień u pacjentów z mastocytozą

Kinga Brzuszkiewicz, Arkadiusz Grunwald, Katarzyna Nowak

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Mastocytosis is a type of mast cells disease. It is a rare condition that affects both children and adults. It results from the accumulation of defective mast cells and their precursors (CD34+ antigen) in the skin and various organs. The disease is characterized by two age-related patterns that differ in clinical symptoms and prognosis. Mastocytosis onset in childhood usually affects the skin and resolves spontaneously during puberty. In turn, when it begins in adults, it usually has a chronic course. Due to an increased risk of anaphylactic shock and the concerns of doctors, patients with mastocytosis often have difficulties in accessing vaccinations.

The aim of the study is to present the case of a 4-year-old patient with mastocytosis, in whom, because of fear about possible side effects, protective vaccinations were constantly postponed. The first mandatory vaccinations were made at the age of 4, after the implementation of appropriate safety rules. No side effects were observed.

Isolated reports of skin reactions in patients with mastocytosis have been reported in the literature, leaving no epidemiological data on the safety of vaccines in those patients. The use of steroids, antihistamines, leukotriene receptor antagonists and single injection regimens prevents potential complications. In addition, it is recommended to extend the observation period in the waiting room to at least 30 minutes after vaccination in people with mastocytosis. In addition, parents should be trained in the supervision of the vaccinated child to recognize the symptoms earlier and speed up the procedure.

Bullous pemphigoid: diagnostic challenges

Pemfigoid: wyzwania diagnostyczne

Marta Szepietowska, Bernadetta Nowak

Some autoimmune bullous diseases, such as linear IgA dermatosis, pemphigus herpetiformis or bullous pemphigoid may present with similar clinical manifestations. Here, we report the case of bullous pemphigoid and underline the importance of immunological examinations in the diagnostic procedure.

A 53-year-old female patient was referred because of very itchy disseminated skin lesions. First lesions appeared on the right arm. She was consulted by a general practitioner and was treated with systemic antibiotics without any effect. The lesions were spreading involving upper and lower extremities as well as the trunk. On examination, 6 weeks after the first skin lesions development, disseminated erythematous lesions with erosions, vesicles and bullae were present on almost all body surface. The scalp was also involved. Itch was very severe, assessed as 10 points on Numerical rating Scale. The clinical manifestation was not diagnostic. Linear IgA dermatosis, pemphigus herpetiformis and bullous pemphigoid were considered. Indirect immunofluorescence showed circulating IgG antibodies directed against dermal-epidermal junction. Moreover, the split technique revealed antibodies bound with the roof of the blister. Additionally, antibodies binding to antigen BP180 were found. ELISA test confirmed presence of circulating IgG antibodies directed against BP180 antigen. Direct immunofluorescence showed linear C3 deposits along the dermal-epidermal junction. Based on the above examinations the diagnosis of bullous pemphigoid was made. The patient was controlled with methotrexate 15 mg s.c. once a week.

The diagnosis of bullous diseases is a challenge. Clinical manifestation is not sufficient to establish the diagnosis, which should be based on immunological examinations.

Tinea faciei gladiatorum

Grzybica twarzy gladiatorów

Katarzyna Skinderowicz, Marta Szepietowska, Alicja Dąbrowska

Dermatophyte infections, especially those of atypical clinical manifestation, constitute diagnostic and therapeutic challenge. Skin infections, including bacterial, fungal and viral ones, seem to be common in wrestlers. Tinea gladiatorum is a well-recognized health problem in athletes. Here, we report a case of recurrent tinea gladiatorum with lesions located on the face.

An 11-year-old boy was referred to our department because of an annular erythematous itchy lesion on the right cheek. He has been a member of the wrestlers' team for the last 6 years. First lesion in the same location appeared 3 months before the admission and was successfully treated with topical antifungal agents. A month later a bigger annular lesion appeared at the same location. Small vesicles were present on the border of the lesion. The herpes infection was suspected and the patient was put on oral acyclovir and topic antibacterial cream. This treatment was without improvement and the lesion worsened. On admission the patient presented with a 5 × 3 cm annular erythematous plaque with slight desquamation. Direct mycological examination (KOH) was positive. The culture showed colonies diagnosed as *Trichophyton tonsurans*. The disease was controlled with oral terbinafine and isoconazole cream.

Tinea gladiatorum located on the face is not a common condition. We do hope that the presented case will raise awareness of this type of fungal infection in the wrestlers. This might result in the diagnosis at the early stage of its development and in early introduction of effective treatment.

When dermatology meets psychiatry. A case report of dermatitis artefacta

Kiedy dermatologia spotyka się z psychiatrią. *Dermatitis artefacta* – opis przypadku

Maria Dobosz

Trustee of the paper: prof. dr hab. n. med. Wioletta Barańska-Rybak

Dermatitis artefacta (DA) is a self-induced psychocutaneous disorder, in which patients themselves cause skin damage due to the underlying stress or psychiatric condition. This disease is commonly related to borderline personality disorder, anorexia nervosa, posttraumatic stress disorder, dependency and manipulative disorder. Patients usually deny self-injury of their skin, however, some of them do it intentionally to assume the sick role. Lesions of DA are clinically heterogeneous, usually of bizarre shapes and sharply

demarcated from healthy skin. Characteristically, the skin changes are visible on the hand-accessible sites.

A 73 years-old man, a university professor, was admitted to Dermatology Outpatient Clinic with an ulceration and inflammation of the fourth finger of right foot. He believed that he had a common wart, so he was obsessively picking the skin, causing progressive tissue damage. 11 years earlier he had caused similar injury to the second finger of the same foot, which finally resulted in complete onycholysis and hypotrophy of the finger. Otherwise the patient was healthy, with no signs of any chronic disease that may cause this kind of lesion. Medical interview revealed that he was going through a lot of stress, due to his retirement. Patient was diagnosed with dermatitis artefacta. He was treated with clindamycin, sulfathiazole silver and microdacine. Patient's health improved, but he refused to get a psychiatric consultation.

Dermatitis artefacta is a challenge for dermatologists because of various clinical presentations, non-specific histopathological findings and normal blood tests. This disease needs a multidisciplinary approach of both dermatologist and psychiatrist, but unfortunately psychiatric consults are often refused by those patients. It is important to understand the basis of DA, create an appropriate non judgemental approach and avoid making immediate diagnosis. Increasing awareness of dermatitis artefacta may result in more rapid recognition, adequate treatment and lower frustration of the patient.

Allergic contact dermatitis elicited by diabetes medical devices – a case report

Alergiczne kontaktowe zapalenie skóry wywołane przez urządzenia dla diabetyków – opis przypadku

Mikołaj Cichoń

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Allergic contact dermatitis (ACD) is a type of contact dermatitis triggered by contact of skin with an allergen, towards which it has already been sensitized. There are few case reports describing ACD elicited by adhesives supporting either insulin pumps or glucose sensors among patients with diabetes mellitus (DM) type I or II.

A 15-year-old patient with DM type 1 was consulted due to skin lesions at the sites of application of his insulin pump. Skin lesions were papular, well-localized, itchy with surrounding erythematous halo. Clinical picture of dermatitis strongly suggested ACD. Epicutaneous patch tests (Polish Baseline Series) were performed and evaluated according to the International Contact Dermatitis Research Group from negative (–) to positive (+/++/+++). The following allergic reactions have been detected: cobalt chloride (+), epoxy resin (++), sesquiterpene lactones mix (+), quaternium 15 (+), methylisothiazolinone + methylochloroisothiazolinone (+) and formaldehyde (+++). From those compounds epoxy resin has been previously identified and reported as the culprit of ACD elicited by an insulin pump. An in-depth evaluation of chemical compounds contained in the medical devices will be made. Additionally, the patient will have a targeted series of epicutaneous tests carried out with the most common allergens found in diabetic devices.

The authors want to pinpoint that substances present in adhesive parts of diabetes medical devices can lead to ACD. Taking into account chronic course of DM and possibility for skin reactions to occur after long-term exposure, manufacturers should consider disclosing possible allergens found in adhesives.

Skin as the first clinical manifestation of a gastric signet ring cell carcinoma. A case report

Skóra jako pierwsza manifestacja kliniczna raka śluzowokomórkowego żołądka. Opis przypadku

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Cutaneous metastases of internal neoplasms are uncommon. Their reported incidence rate of 5.3% represents 2% of all skin tumors. Skin metastases usually come from breast or nasopharyngeal cancers, as well as melanomas, and tend to be close to the site of the primary tumor. The presence of cutaneous metastases in patients with gastric adenocarcinoma is extremely rare, with a prevalence of 0.04–0.8%.

A 67-year-old female patient was referred to an out-patients clinic to diagnose a persistent erythematous infiltrative skin lesion in the middle of her forehead. The lesion appeared 6 months prior and had been gradually expanding. No accompanying symptoms or signs were reported by the patient. The skin biopsy was performed, since the diagnosis

based on clinical presentation was not possible. Histopathological examination revealed atypical signet ring cells infiltrating the dermis with + reaction with PAS. Therefore, the suspicion of metastases from adenocarcinoma of the gastrointestinal tract was made. Ultrasonography of the abdomen, breast and reproductive organs also with the CT of the body did not reveal any primary tumor. High levels of D-Dimers and Ca 19-9 were detected. The decision to perform an endoscopy was made. A 3 cm long linear ulcer was visualized at the border of the gastric body and antrum. The biopsy showed high-grade gastric adenocarcinoma (G3) of the poorly cohesive carcinoma type with a signet ring cell component corresponding to that found in the dermis.

Diagnosis of the skin metastases in a patient without oncological history is a challenge since the clinical appearance of skin lesions does not indicate the origin of the atypical cells. Skin biopsy in similar cases is mandatory and in many cases additional stains should be performed to help to identify the source of metastases. It should be borne in mind that uncharacteristic skin lesions should be always diagnosed since they can indicate metastases and initiate the rapid oncological screen.

Psoriatic alopecia

Łysienie łuszczycowe

Natalia Wierzejska, Katarzyna Ulaszewska

Trustee of the paper: dr hab. n. med. Joanna Czuwara, dr n. med. Anna Waśkiel-Burnat

Anti-tumor necrosis factor (anti-TNF) agents have been successfully used to treat autoimmune disorders, but they can also induce cutaneous reactions, including hair loss. We report a case of woman treated by adalimumab which resulted in psoriatic alopecia.

A 58-year-old female patient was admitted to the clinic of dermatology for a scalp biopsy. Patient was treated for her rheumatoid arthritis (RA) with adalimumab. At admission to hospital she was diagnosed with scalp psoriasis and follicular mucinosis. The patient reported to suffer from itchy erythematous lesions with large amounts of white scales. The skin changes had been present for a year. The histopathological analysis confirmed the presence of psoriatic alopecia, which may be related to adalimumab treatment. The diagnosis was further evidenced by i.a. marked increase in telogen hairs, psoriatic epidermal hyperplasia, sebaceous atrophy and perifollicular and perivascular lymphocytic inflammation.

Based on the obtained results it can be concluded that psoriatic alopecia can occur during adalimumab treatment. Although the majority of patients get hair regrowth, it can potentially lead to permanent defluvium. Therefore the correct diagnosis and early introduction of the effective treatment is crucial.

Pyoderma gangrenosum successfully treated with cyclosporine A – a case report

Piodermia zgorzelinowa skutecznie leczona cyklosporyną A – opis przypadku

Magdalena Eksmond, Aneta Michalczewska

Trustee of the paper: lek. Agata Szykut-Badaczewska

Pyoderma gangrenosum (PG) is a rare neutrophilic dermatosis with unclear etiology. In almost 50% of cases it is associated with systemic diseases such as inflammatory bowel disease (IBD), rheumatoid arthritis, hematological disorders and autoinflammatory diseases. The clinical presentation of PG is variable, but it is usually characterized by rapidly progressing single or multiple painful ulcerations with ragged undermined edges and well-defined violet or blue borders. Despite the existence of the diagnostic criteria, no gold standard algorithm exists for management of pyoderma gangrenosum.

48-year-old woman with a two-year history of ulcerative colitis (UC) was admitted to Dermatology Clinic with plural ulcers with violaceous edges on lower limbs, buttocks and trunk. The clinical diagnosis of pyoderma gangrenosum was proved by the result of a histopathological examination. The combination of systemic prednisone and azathioprine with additional topical treatment was administered with local improvement. Four months after the discharge, during the reduction of the prednisone dose, sudden exacerbation of PG and UC appeared. After discussion with gastroenterology colleagues, cyclosporine A was given while discontinuing azathioprine and prednisone and a good therapeutic effect was achieved. The lesions healed almost fully with scarring. Significant improvement in gastrointestinal symptoms was observed. The therapy was well-tolerated.

Cyclosporine A turned out to be the effective treatment of PG and UC. Cyclosporine A therapy should be considered as a form of treatment for pyoderma gangrenosum that was refractory to more conventional therapies including treatment of concomitant diseases.

Squamous cell carcinoma as a complication of long-term hydroxyurea treatment in patient suffering from polycythemia vera

Rak płaskonabłonkowy jako powikłanie leczenia hydroksymocznikiem u pacjenta chorującego na czerwienicę prawdziwą

Miłosz Lewandowski

Hydroxyurea therapy is commonly used in treatment of patients suffering from myeloproliferative diseases, such as polycythemia vera. It is supported by evidence that this type of therapy can generate mild skin lesions like leg ulcers, erythema and also hyperpigmentation. There are also some studies, which show increased risk of development of non-melanoma skin cancers.

We report a 56-year-old man with a 13 years history of polycythemia vera, treated chronically with hydroxyurea. In April 2020 patient presented skin lesion on the forehead, skin horn on the left forearm and hyperkeratosis on the rims of both ears. In the patient's history, in October 2019, a complete excision of the skin lesion in the central area of the forehead was performed. After 4 months, a new skin lesion appeared at the same area of forehead, which in May 2020, after resection in the histopathological examination was diagnosed as recurrence of squamous cell carcinoma.

The aim of the case is to draw the clinician's attention to the increased risk of squamous cell carcinoma and basal cell carcinoma in patients treated with hydroxyurea. Increased vigilance would make it possible to recognize them earlier, and thus potentially reduce the undesirable effects associated with delayed radical treatment of these skin cancers. Randomized clinical trials assessing the potential benefits of oral retinoids for chemoprevention of non-melanoma skin cancers in the hydroxyurea-treated population should also be considered.

A hyperkeratosis of hands and feet in patient with syphilis and AIDS: a case report

Hiperkeratoza dłoni i stóp u pacjenta z kiłą i AIDS: opis przypadku

Magdalena Pogorzelska, Magdalena Łyko, Karolina Świerczyńska

Trustee of the paper: dr hab. n. med. Alina Jankowska-Konsur

In developed countries, syphilis has recently reappeared with a continuously increasing number of cases coinfected with HIV. Both diseases have a sexual mode of transmission. Previous studies strongly indicate that AIDS may modulate not only the symptoms of syphilis but also the clinical response to syphilis treatment.

A 31-year-old male with AIDS diagnosed 6 years prior presented to the GP due to weakness and the presence of skin lesions. The patient reported casual intercourse with a syphilis positive woman 10 months earlier, and serological tests were negative then. The ordered treponemal and nontreponemal tests were positive. The patient was referred by an infectious disease specialist to the Dermatology Department. At the admission patient presented hyperkeratosis and erythema of the palms and soles, scaly plaques on the face and scalp, alopecia, pain of feet, oedema and papules on the penis. Due to the fact that at the time of admission stage of syphilis was uncertain, the patient was treated according to the treatment regimen for neurosyphilis. During hospitalization massive skin desquamation on the hands and feet was observed. The treatment resulted in improvement of local and general condition.

HIV infection affects the presentation of syphilis. The severe cutaneous symptoms of syphilis are rare findings nowadays unless coexisting with AIDS. In patients with sexually transmitted diseases, especially with severe or atypical course, it is important to always consider the possibility of coinfections.

Skin cancer and human papilloma virus infection in kidney transplant recipient

Nowotwór skóry i zakażenie wirusem brodawczaka ludzkiego u biorcy przeszczepu nerki

Katarzyna Czuj

Trustee of the paper: Simona Frățilă PhD

The most common cutaneous complications after solid-organ transplantation are warts and squamous cell carcinomas. Human papillomavirus (HPV) infection is involved in the development of nonmelanoma skin cancer, and as studies show multiple HPV types are frequently present in single skin biopsies in post transplant patients.

A 42 year-old female patient presented to the dermatological department with vulvar erosions for 5 months and intense pruritus onset 3 years ago. The patient received a kidney transplant 16 years ago kidney transplant (2002) due to kidney failure. After transplantation, the patient started pharmacological therapy with Tacrolimus 3 mg/day and Mycophenolic acid 1000 mg/day.

The patient was examined in the gynecological department and was colposcopically negative, without a therapeutic recommendation for the vulvar reg. She was referred to dermatology by her nephrologist. After skin lesion biopsy in the dermatology office, diagnosis of vulvar infiltrative keratinized squamous cell carcinoma Grade 1 and High-grade common vulvar intraepithelial neoplasia (VIN3) were established. In the dermatological department was performed Pap test which revealed HPV genotyping – increased risk 45, 51, 56; low risk: 42.

After diagnosis oncological surgical treatment was induced. Vulvectomy with lymphadenectomy was performed. Follow up every 4 months for VIN.

The study showed that it is necessary to integrate dermatologists in the interdisciplinary kidney transplant team. The role of the dermatologist is important first of all in the identification of patients at risk, education of the patient, skin prevention measures as well as early treatment of skin lesions caused by HPV or malignancy.

Unusual skin complication after EGFR inhibitor treatment – SDRIFE syndrome

Nietypowe powikłanie skórne po zastosowaniu inhibitora EGFR, afatynibu – zespół SDRIFE

Maja Kotowska, Wiktoria Kotusiewicz, Maja Żołnierek

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The baboon syndrome is a rare cutaneous reaction developed several hours or days after systemic exposure to contact allergens. It is manifested by erythematous lesions localized on the gluteal area and the major flexures. It develops several hours or days after the exposure to contact allergens. SDRIFE (symmetrical drug-related intertriginous and flexural exanthema) is a special variant of the baboon syndrome, specified for patients with no previous local allergen immunization.

The aim of the study is to present a case of a patient who developed SDRIFE syndrome during afatinib treatment.

A 68-year-old woman presented to the dermatology department due to persistent erythematous-ulcerous lesions localized on the intertriginous areas that occurred during the afatinib treatment. Discontinuation of afatinib and treatment with corticosteroids and antifungals did not result in an improvement. After antibiotic therapy with intensive topical treatment, the lesions improved, and the previous oncological therapy was resumed. However after 12 months the same lesions, the same location reappeared; in addition left breast ulceration was found. On the basis of patients' history, clinical manifestation and histopathological examination, the patient was diagnosed with SDRIFE syndrome. After discontinuation of afatinib, with continuation of topical steroid therapy, the lesions resolved.

The erythematous skin lesions localized on the intertriginous areas that occurred after the introduction of a new drug may be due to the SDRIFE syndrome.

Complications after treatments with hyaluronic acid

Powikłania po zabiegach z użyciem kwasu hialuronowego

Paulina Ciepły, Piotr Nawrot

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Nowadays aesthetic medicine is one of the fastest--growing branches of the industry. Each year the number of treatments rises. With this rise the complications, which doctors of different specializations encounter in their practice, grow in number too. An illusion of easy job and high income allures many medical students to plan their future in this field. Since there are no clear guidelines nor strict regulations as to who can perform treatments with hyaluronic acid the internet offers basic training to almost anyone. This in turn leads to growth in number of people with no medical background conducting this type of treatment. The lecture shall discuss case studies of patients with complications after hyaluronic acid injection. Furthermore, an analysis will be made of how the doctor's reaction time in case of complication may affect the patient's further prognosis. Moreover, there will be topic of consequences of performing such interventions in inappropriate conditions using products of unknown origin and by people with insufficient knowledge of facial anatomy.

Aesthetic medicine is a fascinating and constantly evolving field. Nonetheless, one must remember that it is easy to be deceived by the vision of simple and profitable occupation. In qualified hands treatment in question can, and surely is, a great tool for correcting blemishes. In any other cases, it may have the opposite effect doing more harm than good by even causing irreversible damages.

Treatment of acne vulgaris with different doses of isotretinoin. What dose to choose?

Leczenie trądziku zwyczajnego różnymi dawkami izotretynoiny. Jaką dawkę wybrać?

Wojciech Modzelewski, Maria Orzeł

Trustee of the paper: dr hab. n. med. Joanna Czuwara, lek. Agata Szcześniak

Acne vulgaris is one of the most common skin diseases, especially among adolescents and young adults. The important factor of acne pathogenesis is hormonal-driven sebum overproduction and cornification and clogging of the follicular duct of the sebaceous gland. This results in abnormal sebaceous duct keratinization and bacterial colonization with *Cutibacterium acnes* leading to the follicular and perifollicular inflammatory response.

Acne topical treatment includes retinoids, benzoyl peroxide, and antibiotics and is the first therapy for mild or moderate acne. However, in severe cases with a tendency for scarring or in the lack of improvement on topical treatment, systemic isotretinoin is frequently introduced.

This retinoid is highly effective as it suppresses sebum production, normalizes keratinization, reduces bacterial proliferation, and decreases inflammatory response.

Since isotretinoin introduction on the market in 1982, there were many studies conducted to determine the most appropriate daily dose or total dose of the drug. The increasing number of studies has shown the advantage of using low doses of isotretinoin over standard high doses introduced in the nineties. Low doses of isotretinoin appear to be equally effective and better tolerated with reduced number and severity of the side effects. In the presentation, the advantages of acne treatment with low doses of isotretinoin will be discussed.

Cutaneous manifestations of insulin resistance

Manifestacje skórne w insulinooporności

Paulina Laskus, Milena Baran

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Insulin resistance (IR) is a systemic disorder characterized by reduced tissue insulin-stimulated glucose uptake despite of normal blood insulin levels. It leads to excessive insulin production to maintain normal blood glucose level. Pathomechanism of IR remains unclear, but the most important risk factors are obesity, sedentary lifestyle and high glycemic diet. This disorder causes dysregulation of many insulin-regulated pathways and affects many organs, including the largest human organ – the skin.

Cutaneous manifestations may be the first observed signs of decreased insulin sensitivity. Hyperinsulinemia alters skin physiology by stimulating insulin-like growth factor receptors expressed in keratinocytes and fibroblasts leading to their proliferation and local hyperkeratosis, hyperplasia and hyperpigmentation – it results with acanthosis nigricans and acrochordons. Also, insulin binds to its cognate receptors located on ovaries modulating their steroidogenesis, leading to hyperandrogenism with its typical skin manifestations – acne, hirsutism and androgenic alopecia.

Moreover, studies show that the disorder is connected with psoriasis. Hyperinsulinemia promotes abnormal differentiation of keratinocytes and may lead to psoriasis exacerbation. On the other hand, psoriasis pro-inflammatory mediators like TNF-α induce insulin signaling defect.

The majority of IR associated skin manifestations are reversible when properly treated by low glycemic load diet, exercise, weight loss and drugs improving insulin sensitivity.

The aim of the study is to discuss the association between insulin resistance and skin diseases focusing on the most common conditions and their mechanisms.

Let's play *CARD14* – mutations in patients with severe inflammatory skin conditions

Zagrajmy w *CARD14* – mutacje genu u chorych z ciężkimi zapalnymi chorobami skóry

Michał Niedźwiedź

Trustee of the paper: prof. dr hab. n. med. Aleksandra Lesiak

The *CARD14* gene provides instructions for making a protein that activates group of interacting pro-

teins known as nuclear factor-κB (NF-κB), which regulates the activity of multiple genes, including those that control the body's immune responses and inflammatory reactions. Expression of CARD14 (caspase activation and recruitment domain) protein is particularly abundant in epithelial cells of skin and mucosal tissue. The role of *CARD14* mutations in the pathogenesis of several inflammatory skin conditions was initially described with its identification as a responsible gene at the Psoriasis Susceptibility 2 (PSORS2) locus associated with psoriasis. Since then, several rare mutations have been found and associated with different phenotypes of psoriatic skin diseases e.g., psoriatic arthritis, pustular and erythrodermic subtypes. In pityriasis rubra pilaris (PRP), autosomal dominant mutations in *CARD14* are thought to cause autoinflammatory subtype V of the disease, however other mutations were also reported in other subtypes of the disease. Loss of function mutations in *CARD14* resulted in an unusually severe form of atopic dermatitis (AD). In 2018 a new dermatological condition, CARD14-associated papulosquamous eruption (CAPE) was introduced to describe a group of patients with clinical features of psoriasis and PRP and bearing some resemblance to atopic dermatitis or even ichthyosis. *CARD14* mutations in patients with severe forms of autoinflammatory skin diseases are currently a subject of research (POWR.03.05.00-00-z065/1) in our department with the Human Research Ethics Committee approval (number RNN/180/20/KE). Mutations of *CARD14* are a fascinating and emerging field of research in several dermatological autoinflammatory diseases.

Field of cancerization and its significance for therapeutic decisions

Obszar zagrożenia nowotworowego – znaczenie dla podejmowania decyzji terapeutycznych

Maria Orzeł, Wojciech Modzelewski

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Actinic keratosis is a precancerous condition derived from epidermal keratinocytes. It is located on the skin damaged by UV radiation. There is a zone of subclinical changes around it, known as the field of cancerization (FC).

Withdrawal from the treatment of microscopically altered dysplastic cells in the FC may lead to skin cancer development, squamous cell carcinoma in particular, or primary tumor's local recurrence and reduce the effectiveness of skin cancer prevention approach. The methods of imaging of the FCs size are therefore crucial for choosing the right treatment method, which may significantly affect the patient's prognosis.

For this purpose, non-invasive methods are used: dermatoscopy, confocal microscopy (CM) and optical coherence tomography (OCT). In doubtful cases, semi-invasive methods such as skin biopsy followed by histopathological or immunohistochemical examination of the affected skin are crucial.

Depending on the extent of keratinocyte atypia, we can distinguish treatment aimed at the visible lesions (cryosurgery) or directed against the FC (imiquimod, 5-fluorouracil, diclofenac, ingenol mebutate, photodynamic therapy), combination therapy with the aforementioned ones can be also used with retinoids utilization as well.

Can systemic lupus erythematosus be diagnosed in a patient who has only circulating antinuclear antibodies?

Czy toczeń układowy można rozpoznać u pacjenta, który ma tylko krążące przeciwciała przeciwjądrowe?

Katarzyna Wawrzyszko, Natalia Kucy

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Antinuclear antibodies (ANA) are a group of proteins directed against autologous cellular components, primarily nucleic acids and histones. They are assessed using immunofluorescence on Hep-2 cells or a solid-phase ANA screening immunoassay to subsequently obtain titer value with a positive cut-point of ≥ 1 : 80. Based on the American studies ANA can be found in 13.3% of the general population. They are usually associated with autoimmune disorders, such as systemic lupus erythematosus (SLE), systemic sclerosis, Sjögren's syndrome, mixed connective tissue disease, juvenile idiopathic arthritis, or inflammatory myopathies. ANA detection is crucial for SLE. Their presence serves as an obligatory entry diagnostic criterion. Furthermore, two types of SLE-

specific antibodies (anti-Sm and anti-dsDNA antibodies) are the additive classification criteria.

With increasing patient screening for ANA, it is important to determine that alone, positive ANA cannot confirm nor deny any disease. To classify their presence as a marker of a disease it is required to satisfy additional clinical or immunological criteria approved in 2019 by the European League Against Rheumatism/American College of Rheumatology. The diversity of clinical manifestations described by EULAR/ACR, makes SLE diagnosis challenging. Therefore, the guidelines are vital to not overestimate the positive ANA values in clinical practice.

In conclusion, the positive ANA test may be a basis for diagnosis of SLE, when additional symptoms occur, but alone does not hold any diagnostic significance.

The efficacy of using photodynamic therapy in the treatment of oral lichen planus

Skuteczność zastosowania terapii fotodynamicznej w leczeniu liszaja płaskiego jamy ustnej

Klaudia Lewandowska, Justyna Szałkowska, Aleksandra Strączek, Grzegorz Mazurek

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Lichen planus is a chronic autoimmune disease of the skin and mucous membranes. Changes in the oral mucosa coexist with the skin changes in 50% of patients. Based on the analysis of the results of histopathological examinations of patients coming to the Department of Oral Medicine of the Medical University of Lublin in 2010–2020, oral lichen planus (OLP) was confirmed with it in 101 patients. This problem mainly affected women aged 40–60 years, and its most common location was the buccal mucosa.

Treatment of oral lichen planus is a therapeutic challenge. Conventional treatment includes the use of anti-inflammatory, immunosuppressive drugs, what may lead to problems with oral mucosa, systemic complications and drug resistance. An alternative method is a photodynamic therapy (PDT), which uses photosensitizing substances and a light beam of an appropriate length, the synergistic effect of which leads to the destruction of abnormal cells. PubMed article analysis demonstrated that PDT showed similar or better results in the treatment of OLP with minimal side effects compared to topical glucocorticosteroids. Reduction of erythema, ulceration, burning mouth sensation and the size of lesions were noted. Its non-invasiveness, selective toxicity and slight discomfort during therapy may be an indication for the use of PDT in the elderly, people with numerous lesions and burdened with general diseases.

Photodynamic therapy is a valuable alternative to other treatments for oral lichen planus. Further research on this form of treatment will allow for its better understanding, as well as provide information on the pathogenesis of the disease.

Androgenetic alopecia as an indicator of cardiovascular risk

Zaburzenia kardiologiczne u pacjentów chorujących na łysienie androgenowe

Julita Młynarska, Jan Kościan

Androgenetic alopecia is considered to be the most common cause of hair loss in both men and women. The connection between androgenetic alopecia (AGA) and cardiovascular disorders was first suggested in the 1970s and since then, multiple studies were carried out to examine the connection between androgenetic alopecia and risk of coronary artery disease. Patients with androgenetic alopecia have been identified to have elevated parameters, which are typically considered to be the subclinical markers of cardiovascular impairment. The well-known cardiological risk factors are pulse wave velocity (PWV), carotid intima-media thickness (CIMT), homocysteine and lipoprotein A, body mass index (BMI), waist circumference, hyperglycemia, dyslipidemia, hypertension presence of insulin resistance and metabolic syndrome. The aim of this study is to investigate the relation between androgenetic alopecia and cardiovascular risk factors and to determine the significance of certain parameters on this relationship. In the review we referred to the studies, which investigated only male populations. The exact pathophysiological mechanisms of the following connections are still poorly known and need further investigation. Despite that, the severity and early onset of androgenetic alopecia are considered factors of the increased cardiovascular risk.

Molluscum contagiosum – the benign cousin of the smallpox

Mięczak zakaźny – niegroźny kuzyn wirusa ospy prawdziwej

Ewelina Kozłowska, Aleksandra Ostrowska, Anna Wieczorek, Katarzyna Kanclerz

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Molluscum contagiosum (MC) and smallpox are both highly contagious infectious diseases with different clinical course, caused by viruses belonging to the Poxviridae family. The MC, caused by the Molluscum contagiosum virus, is one of the most common viral infections in childhood with incidence rate ranging from 12 to 14 episodes per 1000 children per year. This exanthematous disease most often affects children between 0 and 14 years and it is transmitted by autoinoculation or by close physical contact with an infected skin. MC manifests usually as small, smooth, pink to skin-colored, dome-shaped, umbilicated papules or nodules. Usually one to dozens of lesions are observed. The lesions are often grouped and most often occur on the neck, armpits and groins, sometimes the patches appear in genital area. They usually resolve spontaneously, but in some cases treatment with cryotherapy or chemical destruction may be implemented. Smallpox was caused by two forms of the smallpox virus - Variola major and Variola minor. Presentation of the more common infection (Variola major), was severe with visible lesions on mucous membranes of the mouth, tongue, palate and throat and rash on the skin. Its mortality rate was about 30%. Nowadays, due to the common vaccination, smallpox is considered to be an eradicated disease since 1980.

In conclusion, despite the close relationship between etiological factors of smallpox and molluscum contagiosum, there is a significant difference in severity and mortality of these conditions.

The possibilities of Raynaud phenomenon management

Opcje terapeutyczne w leczeniu objawu Raynauda

Magdalena Lichy

Trustee of the paper: lek. Aleksandra Wielgoś

Raynaud phenomenon (RP) is a paroxysmal spasm of blood vessels in fingers or toes induced by cold and emotions. We differentiate its primary form – without an apparent reason, and secondary to other diseases, predominantly systemic sclerosis.

The basis for the management of RP is following the recommendations for avoiding the triggers of episodes, such as cold or smoking. These procedures are most often sufficient in patients with primary RP, while people with secondary RP usually require pharmacotherapy. According to the EULAR and Polish Dermatological Society guidelines, the first line of RP treatment are calcium channel blockers, mainly nifedypine and amlodypine. The second group of significant clinical importance are phosphodiesterase type 5 inhibitors (e.g. sildenafil). Inpatient treatment methods with intravenous alprostadil and iloprost are also very effective. Adding topical vasodilators to standard therapy may be beneficial. Some reports indicate that statin use may be advantageous. Riociguat and aminaphtone are new-emerging remedies for RP. Many clinical trials have confirmed the improvement of symptoms after the use of botulinum toxin. In the case of treatment resistant RP form, sympathectomy may be considered. Several studies describe alternative ways of RP management in the form of beetroot juice intake, topical rosemary oil and Chinese herbal medicine.

Despite the drugs' variety, none of them treats RP but they only diminish its manifestations. The challenge for dermatologists is the proper selection of treatment method based on the available guidelines and new therapeutic options, so that the patient's quality of life is not reduced by RP.

Cutaneous manifestations in multiple myeloma and monoclonal gammopathies

Manifestacje skórne szpiczaka mnogiego i gammapatii monoklonalnych

Gabriela Zdunek, Natalia Szyłkajtis

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Plasma cell dyscrasias are a range of monoclonal gammopathies of various severity that derive from malignant B lymphocytes. They are characterized by producing clonal immunoglobulin proteins secreted into the bloodstream and/or urine. Common plasma cell dyscrasias include disorders such as multiple

myeloma, Waldenström macroglobulinemia as well as monoclonal gammopathy of undetermined significance or POEMS syndrome. The disorders have various cutaneous manifestations. Some of them may be the first, prodromal signs of the dyscrasias, and some appear gradually with disease progression. Those associated skin conditions include scleroderma, scleromyxedema, Schnitzler syndrome, xanthomatosis, pyoderma gangrenosum and others. The mechanism responsible for the skin manifestations results from protein deposition, amyloid fibrils deposition, abnormal cytokine secretion or, in the case of scleroderma, scleromyxedema or eosinophilic fasciitis activation of TGF beta producing cells – the most potent profibrotic cytokine. Herein, we review the skin conditions associated with monoclonal gammopathies which may appear in the course of plasma cell dyscrasias.

The role of microbiome in folliculitis decalvans

Rola mikrobiomu w patogenezie wyłysiającego zapalenia mieszków włosowych (*folliculitis decalvans*)

Aleksandra Jedlecka, Małgorzata Grabarczyk, Kinga Kubicka, Aleksandra Kasperowicz

Folliculitis decalvans (FD) is an inflammatory cicatricial alopecia. The etiology is still unknown but it seems the imbalance of skin microbiota plays the special role in the pathogenesis. The normal subepidermal microbiota with a reservoir in hair follicles (in which *Cutibacterium acnes* is almost an exclusive component) assure balance of the skin and guard against opportunistic infections or abnormal flora. Many publications suggested *Staphylococcus aureus* plays the main role in the pathogenesis of folliculitis decalvans but recent findings show it plays an opportunistic rather than a specific role in folliculitis decalvans. *Staphylococcus aureus* colonizing FD patients are not more virulent than those present in the general population and not always triggers patient's innate immune system and its inflammatory response. No response to standard anti-staphylococcal antibiotic treatment suggests Gram-negative folliculitis. An antibiotic therapy may be effective in reducing the bacterial load below the threshold that triggers the immune system. Unbalanced microbiota with the reservoir of commensal and opportunistic bacteria in hair follicles of FD patients may explain the chronic character of the folliculitis decalvans; the microbiota seen in FD after antibiotic treatment is not entirely restored to that of healthy control skin but rather includes transient abnormal flora, suggesting the persistence of a defect in the epidermal barrier and a lack of integrality of the skin layers. The specific immune system response and antibiotic-resistant bacterial infections may play an important role in FD pathogenesis.

Scalp metastasis from internal malignancy

Przerzuty nowotworów narządów wewnętrznych do skóry głowy

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Cutaneous metastases from internal malignancies have an incidence ranging from 0.22% to 10.4%. They are often associated with the final stage of the disease, indicating that underlying cancer has spread extensively. The scalp is a rare metastatic site with a lack of characteristic clinical manifestations.

The study aimed to review the literature for scalp metastasis of internal tumors. In total 33 articles from the years 2010–2020 were analyzed.

The scalp lesions account for 4% to 6.9% of all cutaneous metastases and occur in less than 2% of patients with metastases. Metastatic lesions may grow unnoticed for a long time, manifesting as papules, plaques, ulcers, or alopecia neoplastica. They might be movable, exudative, or extending deeply into the subcutaneous tissue. However, predominantly they occur as multiple, painless nodules that appear suddenly and grow fast. Thus, they could be confused with an infection. There is typically a delay in diagnosis of 4–10 months.

Scalp metastasis could be the first symptom of cancer. In one study lung cancer (23.53%) has been recognized as the primary tumor most frequently metastasizing to the scalp, followed by colorectal (11.76%), liver (7.84%), and breast (7.84%) cancer. The origin of 29.41% of metastatic scalp tumors was undetermined. Dermoscopy illustrates abnormal vascular structures. In some cases of alopecia neoplastica, dermoscopy shows erythematous plaques with telangiectasias and the lack of hair follicle openings.

In conclusion, the clinical presentation of scalp metastasis is not specific. Any suspicious scalp lesion should be biopsied for histopathological examination.

Is dermatomyositis a malignancy revelator?

Czy zapalenie skórno-mięśniowe jest rewelatorem nowotworów narządów wewnętrznych?

Ada Szepelska, Miłosz Starczyński

Trustee of the paper: lek. Aleksandra Wielgoś

Although dermatomyositis is the most common idiopathic inflammatory myopathy, it is a relatively rare autoimmune connective tissue disease. Its manifestations include classic skin lesions e.g. Gottron's sign and heliotrope sign, as well as progressive weakness and soreness of muscles. The course may be also amyopathic.

Since the beginning of the 20th century when first reports of dermatomyositis coexisting with malignancies were published, numerous studies have confirmed this correlation. Therefore dermatomyositis, altogether with other myopathies is classified as a paraneoplastic syndrome. The reported prevalence of mentioned co-occurrence varies widely, from 10% to 30%. The correlation is observed only in adults, over 50 years of age with a male predominance, which contrasts with the overall higher prevalence of this condition among women. The most common associated malignancies include ovarian, lung, breast, gastrointestinal and nasopharyngeal cancers, as well as lymphomas. Malignancy may be diagnosed before or after the onset of dermatomyositis. The highest risk of detecting a malignant tumor is during the first year of the disease and it decreases over time. Risk factors include the presence of severe skin lesions, certain antibodies, rapid onset of muscle weakness and high creatine kinase activity.

Considering the strong and well-documented correlation of dermatomyositis with the occurrence of malignancies, a comprehensive but age-, gender-, and ethnic- specific oncologic diagnostics should be an indispensable part of the therapeutic management, especially in patients recalcitrant to typical treatment or in case of disease recurrence.

Tattoo-related skin infections

Zakażenia skóry związane z tatuażami

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Aesthetic tattooing involves implantation of pigment into the upper and middle dermis. Tattoo prevalence is rising, approximately 21% Americans and 10% Europeans have at least one of them. Infectious complications after tattooing range from 0.5% to 6%. Most patients complain of skin lesions (67.5%) and purulent changes within the tattoo (0.4%).

Common infectious agents include Staphylococci (mainly *S. aureus*), Streptococci and less widespread: Pseudomonas, Clostridia species and *E. coli*, causing mostly local skin infections, ranging from erythema, pustules, papules, cellulitis, abscesses to necrotizing fasciitis. Systemic complications – bacteriaemia, endocarditis, necrotizing pneumonia, toxic shock syndrome, and septicaemia are potential threats. Viral infections (hepatitis B and C viruses, human immunodeficiency virus, human papilloma virus, herpes viruses) are mainly due to improper sanitary conditions in the tattoo studio. As asymptomatic, they may remain undetected for years. Fungal and parasitic infections should be considered, however they are rare. In addition, a recent study showed that 10% of new inks were contaminated with both non-pathogenic and pathogenic bacteria, whereas they should remain sterile. Certain colours of the ink are more likely to be contaminated with specific organisms – black with Treponema pallidum and papilloma virus and grey with non-tuberculous mycobacteria (NTM).

Awareness of tattoo-related skin infections is important as the popularity of tattoos is growing. In conclusion: tattoo-related infections are common. It is crucial to follow hygiene procedures as well as to raise awareness of complications after tattoos. Adverse events should be also reported to prevent future infections.

Scabies in children – from diagnosis to treatment

Świerzb u dziecka – od rozpoznania do leczenia

Katarzyna Klaja

Trustee of the paper: dr n. med. Marta Kurzeja

Scabies is a common skin infestation occurring in childhood. The prevalence is higher in resource-poor tropical countries and it is estimated by 5–10%. Scabies is caused by the female itch mite Sarcoptes scabiei var hominis, which burrows into the outside layers of the skin. Scabies in infants and young children differs from scabies in adults and is commonly misdiagnosed. In infants, the most frequently affected sites are head, neck, palms and soles. Furthermore vesicles and secondary bacterial infection may occur more commonly. In older children the signs of the disease are similar to that of adults. The classical signs of scabies are pruritic papules, vesicles, pustules and linear burrows most commonly localized in the finger webs, on wrists, elbows, breasts and scrotum. Secondary lesions include the following symptoms excoriations, eczematisation and secondary infections. Itch is typically more severe at night and could disturb the sleep. The diagnosis of scabies is commonly made on a basis of clinical picture. It could be confirmed by dermoscopy or light microscopic examination. Differential diagnosis of scabies includes papular urticaria, atopic dermatitis, lichen planus, dermatitis herpetiformis and infantile acropustulosis. Treatment of scabies depends on the age of the patient. In neonates 6% sulphur ointment may be used. Infants over 2 months of age could be treated with 5% permethrin cream. 10% crotamiton cream can be used from the age of one. Summing up in childhood many particular features regarding the clinical picture and treatment of scabies should be taken into consideration by the clinician.

Head pediculosis among children

Wszawica u dzieci

Katarzyna Kanclerz, Anna Wieczorek,
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Pediculosis is an infestation of lice, which are blood-feeding ectoparasites. We distinguish three species that may infect humans: head, crab and body louse.

Head pediculosis is a benign disease, common among school-age children. Prevalence in Polish primary schools is about 2%. The parasite can be transmitted by head-to-head contact or by sharing objects.

First sign of pediculosis is a severe itching that appears a few days after infestation. Other symptoms are excoriations of the scalp or neck and appearance of lice or nits. Complications including crusted papules and secondary bacterial infection may occur. The diagnosis is based on finding living lice on the patient. Hair combing allows to detect them more effectively.

The treatment includes anti-parasitic agents such as permethrin or pyrethrin. All household members and other close contacts should be examined. During treatment, activities requiring direct contact should be avoided.

In conclusion, pediculosis capitis is a benign condition that affects 2% of school-age children. As the symptoms are benign, children may not report their symptoms to parents. Due to the fact that lice or nits can be omitted during the examination the diagnosis may be challenging.

The use of I-PRF as an alternative treatment of oral mucosa lesions

I-PRF jako alternatywa w leczeniu zmian w błonie śluzowej jamy ustnej

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Injectable platelet rich fibrin (I-PRF) is an autogenous material, which with its healing properties has been widely used in dentistry. Continuous clinical research and development proves I-PRF effectiveness in increasing healing of oral mucosa tissues. The aim of this paper is to present application of I-PRF for pathological changes of mucosa membrane of oral cavity.

The latest data since 2018 from the clinical research contained in scientific articles on the topic of the work were analysed.

Oral cavity is an anatomical structure consisting of numerous elements. Mucosa membrane, which lines the surface of oral cavity, is distinguished among them. Platelet Rich Fibrin initiates sustained release of platelet-derived growth factor (PDGF), crucial for angiogenesis, which is needful to healing process, essentially in proliferative phase. I-PRF injection is a simple method to improve the healing of lesions in the oral mucosa especially erosive lesions in lichen planus and oral mucositis. This procedure consists in injecting the agent into the area of the lesion. Contraindications to consider are low platelet count, HGB

count and fibrinogen count. The main advantage of PRF is a sustained release of PDGF for more than 7 days after application. Their presence accelerates the healing process, especially in the critical phase. The patient feels less pain and convalescence is quicker.

Injection methods with PRF are an alternative to treatment by corticosteroids. Results of the clinical research suggests positive impact of PRF for healing process of pathological changes of oral mucosa.

Tar treatment of psoriasis – the past or the future?

Terapia dziegciem w łuszczycy – przeszłość czy przyszłość?

Aleksandra Jaroń

Tar has been used in medicine since ancient times. It may be divided into two main types: wood tar and mineral tar, that is generated by dry distillation of coal or wood. Earlier used coal tar is now replaced by higher safety wood tar with smaller skin irritant potential. The best known and most commonly used wood tar are pine tar and birch tar. Many times wood tar has been used in the treatment of skin diseases, in particular in psoriasis and eczema.

Tar exerts an antipsoriatic effect by reducing cell proliferation. The main active substances in tar are aromatic hydrocarbons which, through the aryl hydrocarbon receptors (AhR), that have the greatest influence on keratinocytes. Activation of AhR receptors inhibits the inflammation of skin. The anti-inflammatory effect in tissues is revealed in normalizing abnormal differentiation of epidermal cells, improving the condition of the epidermal barrier, and also influencing the oxidative stress pathway. They are involved in keratoplasty and keratolysis. Receptor stimulation also increases the concentration of filaggrin and NADPH expression.

The role of AhR receptors in the pathogenesis of psoriasis has also been confirmed. They are involved in the differentiation of Th17 lymphocytes. Activation of the receptors by the tar results in anti-inflammatory effect in order to improve clinical situation of patient with psoriasis.

The anti-inflammatory action of wood tar it has been applied in autoimmune dermatological diseases. According to the recommendations of the Polish Dermatological Society, tar is still an important element of adjunctive therapy of psoriasis.

The correlation between skin diseases and inflammatory bowel disease. Do skin lesions have a diagnostic value?

Korelacja między chorobami skóry i nieswoistymi zapaleniami jelit. Czy zmiany skórne mają wartość diagnostyczną?

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Inflammatory bowel diseases including ulcerative colitis and Crohn's disease, are chronic disorders characterized by episodes of gastrointestinal tract inflammation. The pathogenesis remains unclear, but immunological abnormalities, genetic, microbial, and environmental factors contribute to the disease development. Besides typical gastrointestinal symptoms, up to 15% of patients experience cutaneous manifestations associated with inflammatory bowel disease. Skin lesions may be specific, like in metastatic Crohn's disease, and exhibit the same histopathological features as the intestinal lesions.

Reactive skin manifestations, such as erythema nodosum, pyoderma gangrenosum, and Sweet's syndrome, probably share similar pathogenic mechanisms with intestinal disease. Among inflammatory bowel disease patients, 14% of erythema nodosum, 14% of pyoderma gangrenosum, and 20% of the Sweet's syndrome cases appear before inflammatory bowel disease diagnosis. Research has shown that erythema nodosum usually parallels the course of intestinal disease and is associated with its exacerbations, but not always with the severity. Similarly, the Sweet's syndrome correlates with active phases of underlying intestinal disease. The results of studies on the correlation between pyoderma gangrenosum and inflammatory bowel disease activity are inconsistent.

In conclusion, the occurrence of reactive skin manifestations should prompt physicians to screen for intestinal disease, which can decrease diagnostic delay, change therapeutic management, and improve patient prognosis. If cutaneous disease parallels inflammatory bowel disease activity, the primary aim should be to control the underlying intestinal disease.

COVID-19 and the skin

COVID-19 a skóra

Samuel Jung, Magdalena Mehel

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Coronavirus disease (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has been spreading quickly throughout the world, mainly affecting respiratory system. Except pulmonary symptoms, skin lesions may also occur. The precise percentage of patients with confirmed COVID-19 who presented cutaneous manifestations is still unknown (1.8–20.4%). Part of the skin lesions could be drug-induced. Cutaneous manifestations in the course of the disease could be divided into 5 main groups: chilblain-like lesions, vesicles, urticaria, maculopapular rash and livedo with necrosis. The most common skin lesions are maculopapular eruption (44–47%) and urticaria (18.4–19%). Trunk was the most affected location (51%). Furthermore, skin lesions were first symptoms in 14–18% patients. 43% of patients with cutaneous manifestations had pain, itching or burning. Skin lesions resolved after 4–9 days without treatment, whereas administration of drugs such as antihistamines caused 1–3 days earlier regression of the cutaneous symptoms. Moreover, patients with chilblain-like lesions have better prognosis in comparison to severe course of COVID-19 among patients who developed livedo with necrosis (10% mortality rate). In the future, doctors should pay attention to patients who present skin symptoms which can be connected with COVID-19.

The role of cytokines in alopecia areata

Rola cytokin w łysieniu plackowatym

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Alopecia areata is an autoimmune form of non-scarring hair loss. The pathogenesis of the disease in not fully elucidated. However, the role of cytokines in alopecia areata have been suggested. The aim of the study was to summarize the role of serum and local cytokines in patients with alopecia areata. A review of the literature was conducted using the PubMed database. The search terms included 'alopecia areata' combined with "cytokine", "interleukin" or "chemokine". Of 102 articles retrieved, 65 studies were considered eligible for the quantitative analysis. In patients with alopecia areata, increased serum levels of Th-1 cytokines (IL-2, IL-12, IFN-γ, TNF-α) compared to healthy controls were observed. Moreover, serum levels of Th-2 cytokines (IL-5, IL-10, IL-13) and Th17 cytokines (IL-6, IL-17, IL-23) were elevated in patients with alopecia areata compared to healthy individuals. On the contrary, in patients with alopecia areata, serum TGF-β level was found to be significantly decreased compared to healthy controls. Local concentrations and gene expression of cytokine IL-2, IFN, IL-22 were increased in skin specimens from patients with alopecia areata in comparison to healthy control group. In conclusion, in patients with alopecia areata altered level of various cytokines, both serum and local, is observed. This observation may be helpful in better understanding pathogenesis of alopecia areata and developing new therapies.

Skin-specific methylome analysis algorithm as a new tool to screen and validate therapeutics for healthy skin aging

Algorytm analizy metylacji specyficznej dla skóry jako nowe narzędzie do obrazowania i weryfikacji lecznictwa dla fizjologicznego starzenia się skóry

Kinga Filipek, Natalia Zalewska

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Skin aging is a physiological process including integumentary laxity, stem cell depletion, healing and immune deficiencies, carcinogenesis or disrupted interaction with microorganisms. It is caused by both chronological and environmental factors such as UV radiation, infectious agents and air pollution. The epigenetic changes lead to the accumulation of cellular damage and loss of biological functions.

Methylation is a process in which methyl groups are being added or removed at position five of cytosine in DNA. The pattern of DNA methylation is a arguably a promising marker for studying human development, aging and cancer. External factors such as exposure to sun, lifestyle, air quality, nutritional habits, history of diseases or living conditions

may affect the DNA methylation and aging process itself. Promising results have been obtained by analyzing skin-specific methylome, which might be a future tool to evaluate healthy aging and rejuvenation therapies.

Highly accurate skin aging evaluation gives new possibilities to validate therapeutics for healthy skin aging, which might novel senotherapy and alter pathological aging. Healthy skin aging is not only important for aesthetic reasons but also may have implications with various systemic conditions.

Intralesional rituximab – a new therapeutic approach in dermatology

Doogniskowe zastosowanie rituksymabu – nowa strategia w leczeniu chorób dermatologicznych

Martyna Gójska, Anna Bohdziewicz

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Rituximab (RTX) is a well-known chimeric monoclonal antibody against CD20, causing B-cell depletion which has become a potential therapeutic strategy in recent years. RTX was originally used to treat lymphomas, but nowadays its use is widespread in many fields of medicine (gastroenterology, oncology, ophthalmology). Numerous pieces of evidence confirm the efficacy and safety of intravenous RTX in patients with dermatological diseases, whereas this review aims to give an overview of current indications for intralesional RTX (ILR). It was reported that effectiveness of intralesional rituximab is comparable to triamcinolone in pemphigus vulgaris (PV). Its administration has many advantages, such as allowing local delivery of the drug and reducing the amount of drug administered compared with the intravenous administration in patients with refractory oral PV. ILR is increasingly used in the treatment of indolent primary cutaneous B-cell lymphomas (PCBCL) i.e. marginal zone lymphoma (MZL) and follicular lymphoma (FL). According to many studies, lesions in patients with primary cutaneous MZL and FL responded well to ILR treatment. Moreover, ILR demonstrated good safety and tolerability in PCBCL cases. Another possible indication for ILR may be granuloma faciale however further studies with larger sample sizes should be conducted. It is also worth mentioning that lower dose intralesional administration may be a significant advantage in COVID-19 pandemic leading to shorter duration of immunosuppression. The costs of intralesional RTX in comparison with intravenous RTX given to patients are also significantly lower. ILR seems to be a promising therapy in dermatological diseases that needs further investigation.

Proactive therapy – a classic and an experimental approach in dermatology

Terapia proaktywna – podejście klasyczne i eksperymentalne w dermatologii

Joanna Nowaczyk, Karolina Makowska

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Proactive treatment in dermatology is defined as a long-term preventive management of intact skin to maintain the remission of disease or to decrease the severity of expected flare-ups. The primary objective is to reduce the subclinical dermatitis remaining after reactive therapy.

The classical definition of proactive treatment is well-established for atopic dermatitis, in which disease remission is sustained by intermittent application of low-dose topical anti-inflammatory drugs after achieving remission to the previously affected areas of skin. This approach has been experimentally used in psoriasis, vulvar lichen sclerosus, and seborrhoeic dermatitis. Proactive therapy may be also introduced as a sequential treatment of anogenital warts. Depending on the type of disease, various topical and systemic medications can be administered.

Proactive therapy is an increasingly popular concept to pre-emptively limit the need for long-term and aggressive treatments. Moreover, it improves the patients' quality of life in regard to chronic dermatological conditions. Further investigations in search for proactive treatment may warrant its implementation in other chronic inflammatory dermatoses.

In search for biological treatment options in systemic sclerosis

Terapie biologiczne w twardzinie układowej

Anna Bohdziewicz, Katarzyna Pawlik

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Systemic sclerosis (SSc) is an autoimmune connective tissue disease characterized by vasculopathy and both cutaneous and organ fibrosis of diverse intensity. The pathogenesis of SSc is complex and involves an interplay between the immune system, especially subpopulations of T and B cells, and fibroblasts. Molecules produced by these cells are involved in the inflammatory process. A large area of current studies focuses on biological drugs, which are closely related to biologically active molecules naturally present in the human body. They act by influencing the mechanisms mediated by those molecules. Data indicate that blockage of CD20 by a monoclonal antibody called Rituximab has a beneficial effect on lung function and skin fibrosis in SSc-ILD (interstitial lung disease) patients. MEDI-551 (anti-CD19 monoclonal antibody) causes a depletion of circulating B cells, plasma cells and has a clinical effect on the affected skin, measured by mRSS (the modified Rodnan skin score). Well-known tumor necrosis factor α (TNF-α) inhibitors: Infliximab, Adalimumab, Etanercept cause a remarkable improvement in the skin, joints, and myopathy in SSc patients. Moreover, it was reported that Tocilizumab (anti-Interleukin 6 receptor antibody) treatment might cause the preservation of lung function as well as maintenance of pulmonary structure in patients with early diffuse SSc-ILD. Understanding the mechanisms is crucial to design drugs that may stop the inflammatory cascade and protect the tissues. This review aims to give an overview of possible therapeutic targets, and ongoing research to find a new efficient drug in SSc.

How artificial intelligence and deep learning systems can improve the diagnostic process in dermatology?

W jaki sposób sztuczna inteligencja i systemy głębokiego uczenia mogą usprawnić proces diagnostyczny w dermatologii?

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Around 1.9 billion people suffer from skin conditions at any given moment in time. Due to observed shortage of dermatologists around the world many of these cases have to be seen by general practitioners. Moreover, as studies demonstrate, there is a significant gap in diagnostic accuracy between these specialists, which may lead to misdiagnosis. Our main aim is to involve DLS-based (Deep Learning System) Artificial Intelligence (AI) into the diagnostic process of skin conditions which would result in higher accuracy rate and a faster process.

Deep Learning methods have already been proven effective in dermatology. Originally this area of AI was inspired by the complex processes in the human brain whereas now it may surpass expert performance in some tasks. DLS architecture is built upon an infinite number of layers, which create neural networks that are able to separately analyze different features of the given data and then provide a consistent output relatively fast. Hence, they are particularly useful for image recognition and classification, the crucial parts of skin condition diagnosis.

The research reviewing literature has been performed in PubMed, using the combination of keywords: "Artificial Intelligence", "Deep Learning", "Dermatology". There has been significant progress in this field over the years, latest articles suggest using a variation of DLS able to differentiate between 419 skin conditions using 1-6 photographs and 45 metadata variables (ex. age, sex and medical history). All of the published studies suggest the growing potential of AI in medicine. Therefore, its implementation in the dermatological diagnostic process may lead to faster and more accurate diagnosis and treatment of different skin conditions.

Safety – efficacy of biological treatment in pediatric psoriasis

Bezpieczeństwo i skuteczność leczenia biologicznego w łuszczycy u dzieci

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Psoriasis is an inflammatory non-infectious skin disease with a genetic and autoimmune background. It is estimated that approximately 1-3% of the global population is affected by psoriasis, with one-third diagnosed in childhood. Despite various approaches, the treatment of pediatric psoriasis remains a chal-

lenge. The biological treatment brings promising results, however, due to a small number of guidelines in the pediatric group and the risk of adverse effects, the use of biological treatment is limited.
Side effects include allergic reactions, infections of the upper respiratory tract, skin and mucosal candidiasis, increased risk of activation of latent infections, or reduced effectiveness of vaccinations. Moreover, an insufficient long-term study has been performed on the impact of biological treatment on children. It is recommended to treat the patient with two non-biological medications before biological ones such as acitretin, cyclosporin A or methotrexate. There are studies on the use of etanercept, adalimumab, ustekinumab, secukinumab, infliximab, brodalumab, ixekizumab, and guselkumab in pediatric psoriasis. At present, the most common biological medication used in childhood psoriasis is etanercept, which can be used in children aged four years. Adalimumab is a human monoclonal antibody with greater efficacy than methotrexate. Another medication is ustekinumab, although it can be used in children aged 12 years and older. In conclusion, biological treatment can significantly reduce skin lesions and ameliorate the quality of life of children suffering from severe psoriasis, however, further follow-up studies are required.

Maternal and neonatal herpes simplex virus infection: may the small vesicle be the cause of child's death?

Opryszczka u matki i noworodka: czy mały pęcherzyk może być przyczyną zgonu dziecka?

lek. Carlo Bieńkowski

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Maternal and neonatal herpes are both infectious diseases caused by herpes simplex viruses 1 or 2 (HSV-1, HSV-2). It is estimated that 25-65% of pregnant women are infected with the HSV-1 or HSV-2. The infection spreads through droplets, direct contact or during sexual activity. In adults, HSV-1 usually causes cold sore, conjunctivitis, herpetic stomatitis, gingivitis, and less commonly genital infection. HSV-2 usually affects genital organs, but it may also affect facial area. First contact with genital HSV usually occurs between 16-29 years of age. There are three types of infection: primary, non-primary first episode, and recurrent (depending on the onset of the disease). The initial presentation of primary genital infection may be severe, with painful genital ulcers, pruritus, dysuria, fever, tender inguinal lymphadenopathy, and headache. However, most patients have only mild symptoms or remain asymptomatic. Transmission to the fetus can result in serious morbidity and mortality in the neonate. Infection of the newborn occurs in 1/3,000-20,000 living births, in most cases perinatally (85%). Congenital infection may manifest as: skin/eye/mucous membrane infection (SEM) involvement with erythematous vesicles on the skin and conjunctivitis (onset: 7–14th day of life), central nervous system infection (onset: 14–21st day of life), or disseminated form (onset: 5–10th day of life). Treatment with acyclovir should be administered immediately. Antiviral therapy reduces mortality from 85% to 31% among infants with disseminated disease. Pharmacological prophylaxis should be considered in the case of frequent recurrences of herpes. Due to high mortality early diagnosis and implementing appropriate treatment is crucial.

Cutaneous manifestations of polycystic ovary syndrome

Zmiany skórne w przebiegu zespołu policystycznych jajników

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Polycystic ovary syndrome (PCOS) is an endocrine disorder affecting 5% to 10% of females in reproductive age. Most often, burdensome skin changes or the impairment of reproductive functions lead to supplementary diagnostics. It usually results in identifying hyperandrogenism, one of the main diagnostic features of PCOS. Hyperandrogenism contributes to the incidence of clinical manifestations such as hirsutism, acne vulgaris, seborrheic dermatitis and androgenetic alopecia. Other signs of virilization can also occur. Obesity, present in 75% of women with PCOS, has a major role in developing insulin resistance and increasing androgen levels, which, in turn, promote further accumulation of the adipose tissue and alter skin physiology. Acanthosis nigricans, striae distensae, and acrochordons are typical findings in hyperinsulinemia, an effect of hormonal and metabolic disturbance in PCOS. Disruption of the regula-

tory mechanisms of the skin may also be associated with less common conditions, including hidradenitis suppurativa and pyoderma gangrenosum.

Dermatologists are usually first specialists visited by patients with PCOS who seek medical help. Therefore, the ability to recognize characteristic cutaneous signs of this disease should not be underestimated, as it may have a great meaning in the diagnostic process and early management of PCOS.

MIRM – a new described clinical entity associated with Mycoplasma pneumoniae infection

MIRM – nowo opisana jednostka kliniczna związana z infekcją *Mycoplasma pneumoniae*

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Mycoplasma pneumoniae is not only a common cause of community-acquired atypical pneumonia, but it also may lead to associated extrapulmonary complications as mucocutaneous eruptions in 25% of cases. The most common dermatological complication associated with Mycoplasma pneumoniae infection is erythema multiforme major, but a distinct clinical entity called Mycoplasma-pneumoniae-induced rash and mucositis (MIRM) has been described recently. The difference between MIRM and other mucocutaneous eruptions caused by this infection is the prevalence of mucositis with limited or absent cutaneous expression. The clinical presentation, pathophysiology and disease outcomes are factors enabling to distinguish this syndrome from other disorders such as erythema multiforme (EM), Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN). It is thought to be caused by the production of immunoglobulins in the response to M. pneumoniae infection. It leads to the deposition of immune complexes in the mucocutaneous tissues. MIRM should be considered in patients with oral (94% of patients), ocular (82% of patients) and urogenital lesions (63% of patients). As a new clinical entity, it poses a diagnostic and therapeutic challenge for dermatologists but also pediatricians on the grounds that the condition affects predominantly children and adolescents.

Prurigo nodularis – from diagnosis to treatment

Świerzbiączka guzkowa – od rozpoznania do leczenia

Magdalena Eksmond, Katarzyna Zabłocka

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Prurigo nodularis (PN) is a chronic dermatologic condition characterized by pruritus, prolonged scratching and pruriginous lesions. It is most common in patients at middle age or later and the both sexes are equally affected. The clinical presentation of PN usually includes multiple, symmetrically distributed itchy nodules that vary in size and colour. The areas of the skin accessible to scratching like extensor surfaces of extremities are usually involved. Diagnosis of PN is clinical, based on characteristic manifestation but in uncertain cases it can be confirmed by a skin biopsy. PN occurs as a distinctive reaction to vicious itch-scratch cycle but the pathogenesis remains not fully explained. The inflammatory infiltrations and dysregulation of several neuropeptides in the skin, increased number of dermal nerves fibers and decreased intraepithelial nerve fiber density are considered to play crucial role in pathogenetic mechanisms. The underlying condition is not easy to find but many of the patients with PN have a history of atopic dermatitis, asthma, neurotic excoriations, xerosis cutis and psoriasis, eating disorders and self-harm, HIV infection, Crohn's disease and different autoimmune disorders. They are also in a group of higher risk of dialysis or heart failure. No gold standard for management of PN exists. The therapy should be individually adjusted to a patient and requires a multifaceted approach. Treatment options include topical steroids, calcineurin inhibitors, calcipotriol, capsaicin, triamcinolone acetonide, phototherapy and systemic therapies with methotrexate, cyclosporin A, gabapentinoids, antidepressants, opioids or antihistamines and emerging therapies with dupilumab, nemolizumab and neurokinin-1 receptor antagonists.

Oral minoxidil in dermatology

Minoksydyl stosowany doustnie w dermatologii

Wiktoria Stańska

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Minoxidil is well known vasodilator, introduced in 1970s as a drug for severe refractory hypertension. It is considered to be a golden standard in hair loss therapy. In almost every kind of alopecia disrupted hair cycle is observed. Minoxidil affects hair cycle by shortening telogen phase, elongating anagen phase and increasing blood flow. Its topical form has been widely used for a long time. Aim of this study is to assess therapeutic effect of its oral form. Low dose oral minoxidil was found to be effective and well tolerated in treating male and female androgenic alopecia (FAGA and MAGA), alopecia areata (AA), alopecia universalis (AU), chronic telogen effluvium (CTE), lichen planopilaris (LPP), loose anagen hair syndrome, moniletrix and permanent chemiotherapy-induced alopecia. For a long time, systemic minoxidil has not been used for treatment of hair loss because of its reported severe side effects, when it was used as a hypertensive agent in doses 10–40 mg. Nowadays, in dermatology it's used in low doses between 0.25–5 mg, which overcomes these limitations. The most often encountered side effects is hypertrichosis (20.5%), lower limb edema (2.2%), hypotension (1.8%), EKG changes (0.9%). The frequency is dose dependent and severity is generally mild and well tolerated. Minoxidil is now used effectively in monotherapy as well as combined with other medications such as spironolactone in FAGA and tofacitinib in AA, being a great alternative choice for unresponsive patients and those discouraged by effects of topical minoxidil.

The use of narrow-band imaging (NBI) in diagnosing oral squamous cell carcinoma

Zastosowanie obrazowania wąskopasmowego (NBI) w diagnostyce raka płaskonabłonkowego jamy ustnej

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There are alarming data about incidence of more than three hundred and fifty thousand new lip and oral cavity cancer cases each year.

Squamous cell carcinoma is the most common cancer in the oral cavity and frequently diagnosed at advanced stages. This type of cancer begins in the flat epithelial cells that form a thin layer of tissue on the surface of the oral structures. Neoplastic lesions are often located on the tongue, but also occur on the floor of the mouth, buccal mucosa, gingiva, soft palate and lower lip. Invasive oral squamous cell carcinoma is often preceded by the presence of clinically identifiable premalignant changes of the oral mucosa.

To improve the diagnostic accuracy of this type of cancer, new technologies and tools are used and their results are described in scientific database. The analysis of recently published articles showed that narrow-band imaging (NBI) is a noninvasive optical diagnostic tool that has a high effectiveness for the detection of oral squamous cell carcinoma. This method uses the fact that there is a process called neoangiogenesis, that occurs in premalignant and malignant lesions. Narrow-band imaging allows seeing these lesions by using the blue light at a short wavelength, that penetrates the oral mucosa superficially and highlights the novel vasculature. All data indicated that this method can prepone the diagnostics of the OSCC and improve the prognosis for the patients. But complete visual examination, appropriate imaging, and biopsy as the initial protocol are still widely accepted for appropriate management.

Cutaneous manifestations of COVID-19: a review

Manifestacje skórne w przebiegu COVID-19: przegląd literatury

Katarzyna Makowska

Trustee of the paper: dr n. med. Magdalena Misiak-Gałązka

The pandemic of coronavirus disease (COVID-19) is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The most common are symptoms from the respiratory system, but dermatological findings become more noticeable. Even though 20.4% of patients may present cutaneous manifestations of COVID-19, these features are still barely characterized. Our study aimed to discuss the most common cutaneous manifestations of COVID-19.

A review of the literature was performed using words "COVID-19" and "coronavirus" in combination with "skin" and "cutaneous manifestations", by searching the PubMed, Scopus, and EBSCO databases, complemented by a thorough hand search of reference lists. Observational studies and case reports were included in the study. In total 215 articles were analyzed.

A polymorphism in cutaneous clinical patterns was found. The most common manifestation was maculopapular exanthem. Other clinical manifestations included: urticaria and urticaria-like rash, chickenpox-like vesicles, acral ischemic lesions, a papulovesicular rash, livedo reticularis lesions, and petechiae. The trunk was the most often involved site of the body, followed by hands and feet. Correlation between infection of COVID-19 and its severity and cutaneous manifestation has not been found in most of the studies.

The overview of all the different dermatological manifestations of COVID-19 infection presents a great variety in the clinical presentations. The most common skin manifestation was maculopapular exanthem. The knowledge about COVID-19 skin lesions may lead to an earlier diagnosis.

Therapy with angiotensin-converting enzyme inhibitors as a factor influencing the course of psoriasis vulgaris

Terapia inhibitorami konwertazy angiotensyny jako czynnik wpływający na przebieg łuszczycy zwyczajnej

Karolina Demczuk

Trustee of the paper: lek. Joanna Bartkowiak

Psoriasis is a chronic inflammatory skin disease of multifactorial etiology. Drugs, including angiotensin-converting enzyme inhibitors (ACEi), play a significant role in triggering and exacerbating the disease. The frequent co-occurrence of psoriasis with cardiovascular disease and metabolic syndrome results in the use of ACEi as drugs commonly administered among patients with psoriasis. Expression of the gene encoding angiotensin-converting enzyme has been shown on fibroblasts and keratinocytes, thus blocking the enzyme effect by ACEi also affects the skin. It leads to accumulation of proinflammatory P-substance in the skin and impaired arachidonic acid metabolism. It has been proved that genetically determined lower activity of the enzyme, resulting from polymorphism of angiotensin converting enzyme gene, is associated with higher risk of psoriasis, which emphasizes the possible role of the enzyme in normal functioning of the skin.

Cases of first spreading of psoriatic lesions and exacerbation of the existing disease process associated with ACEi use have been reported in the literature. Moreover, analysis of reports collected in the French National Pharmacovigilance Database indicates that psoriasis, including erythrodermic psoriasis, has been reported among the adverse effects occurring during the use of ACEi. Therefore, the authors suggest including appropriate information in the Summaries of Product Characteristics (SmPCs) of angiotensin-converting enzyme inhibitors.

The aim of this review is to draw attention to the fact that the knowledge of rare, but possible, cutaneous side effects may be necessary to determine the cause of exacerbation of psoriasis or ineffectiveness of applied therapy.

The clinical manifestations and probable pathomechanism included in the development of DRESS syndrome

Prawdopodobny patomechanizm oraz manifestacje kliniczne związane z obrazem zespołu DRESS

Aleksandra Hajduk, Anna Wójcik

Trustee of the paper: lek. Danuta Fedorczuk

Drug reaction with eosinophilia and systemic symptoms (DRESS) is a serious, potentially life-threatening syndrome, involving internal organs and causing various clinical manifestations like rash, lymphadenopathy, fever, pneumopathy, hepatitis and others according to the organs engaged. Symptoms can vary depending on the type of drug provoking the reaction, its implementation time and mechanism of action. Pathomechanism of DRESS is vastly complex and still unknown. Studies have shown that mutations in epoxide hydroxylase, polymorphism in genes encoding cytochrome P450 enzyme and N-acetyltransferase result in the accumulation of toxic metabolites and then elicit hypersensitivity

reactions. Now it is known that DRESS syndrome tends to occur in genetically predisposed patients with certain haplotypes influencing their response to drugs. Viruses also have a critical role in the generation and activation of drug-specific T cells involved in DRESS. Moreover, viruses are reactivated within DRESS and their DNA level correlates with manifestation of symptoms. Immunohistochemical study of skin biopsies revealed positive results for interleukin 5, perforin, granzyme B, FasL, and IFN-γ, which supported the notion that DRESS syndrome belongs to type IVb/IVc hypersensitivity reaction. Due to the high rate of mortality, a quick diagnosis is of crucial value. Most important is a detailed anamnesis, immediate withdrawal of the causative drug, therapy with systemic corticosteroids, cyclosporine, IVIG or plasmapheresis. The aim of our research is to summarize the present-day studies regarding all mechanisms involved in the pathogenesis of DRESS syndrome and its clinical manifestations. It is hoped it will spread awareness, aid diagnosing and treating the patients.

What do we know about side effects of botulinum toxin after years of experience in aesthetic dermatology?

Co wiemy o skutkach ubocznych toksyny botulinowej po latach doświadczeń w dermatologii estetycznej?

Piotr Nawrot, Paulina Ciepły

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The use of botulinum toxin for facial enhancement is one of the most common nonsurgical procedures currently undertaken in aesthetic dermatology. Botulinum toxin injections are used for the treatment of facial wrinkles of the forehead, eyebrow lifting and so-called crow's feet. The toxin is also applied around the mouth, on the chin, neck and nasolabial folds.

Although the injectable treatments with botulinum toxin are relatively safe, side effects can occur. This study aimed to review the adverse events associated with the cosmetic use of botulinum toxin. Most of them are temporary and occur within a few days after application. Mistakes in the course of therapy related to improper preparation of the drug are among the most common causes of side effects. We can divide them into local or systemic. Local side effects are related to overdose and migration of the drug into adjacent tissues. The injection may cause pain, redness, swelling, or bleeding. Symptoms such as nausea, vomiting, fever, rash and hypersensitivity reactions are rare and classified as systemic effects. However, these effects are the result of an action and metabolism of the drug.

It is worth emphasizing that botulinum toxin injections should be performed only by the well-qualified doctor. Appropriate knowledge of the anatomy of the muscles and the pharmacology of the drug allows to minimize the risk of side effects. Nevertheless, any medical intervention carries inherent risks. It is important that the treating physician is well verse with the various botulinum toxin complications and their management.

Photodynamic therapy in dermatology – advantages and disadvantages

Terapia fotodynamiczna w dermatologii – zalety i wady

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Photodynamic therapy (PTD) is novel therapeutic method that is applied to treat miscellaneous dermato-oncologic conditions like actinic keratoses (AK), basal cell carcinoma (BCC), Bowen's disease, squamous cell carcinoma in situ, hidradenitis suppurativa, acne vulgaris, localized scleroderma and viral warts. The therapy is a 2-step procedure. Firstly, photosensitizer is administered to the patient topically, orally or intravenously. The most often used photosensitizers are aminolevulinic acid (ALA) and methylaminolevulinate (MAL). Then the photosensitizer is activated in the presence of oxygen by a specific wavelength of light. The goal of this study is to assess advantages and disadvantages of that therapeutic method by evaluating three case reports and literature research. We found that photodynamic therapy is highly effective in treating AK, BCC, Bowen's disease and hidradenitis suppurativa. It is proved that application PTD to AK localized at face or neck has 90% chance to complete removal. In BCC therapy it is even 92–97% of efficiency. Furthermore, thanks to PTD it is possible to avoid surgical inter-

ventions, that's why it is especially recommended for patients with coagulation disorders or other medical contraindications. This type of therapy shows favorable cosmetic effects. Another benefit of PTD is that it can be used in outpatient treatment, which is more convenient for the patient.

Nevertheless, negative aspects of PTD application were found and among them as the most prevalent adverse effect was inflammation manifested by erythema, exudation and urticaria. Less often are scars, altered hair growth, pigmented skin lesions and allergic reactions.

PD-1 inhibitors in dermatology

Inhibitory PD-1 w dermatologii

Anna Ziobro, Mateusz Ziomek

Trustee of the paper: lek. Anna Stochmal

Programmed cell death (PD-1) inhibitors are used in the treatment of advanced metastatic or unresectable melanoma. These agents are members of immune checkpoint inhibitors drug family and act via blocking PD-1 receptors localized on lymphocytes T cells resulting in an inactivation of PD-1 ligands which are upregulated in melanoma cells. This interaction leads to increasing immune system activity against tumor cells.

Nivolumab and pembrolizumab are representatives of PD-1 inhibitors and may be used in monotherapy or in combination with other monoclonal antibodies directed against different antigens. These monoclonal antibodies are considered a breakthrough in the therapy of melanoma. However, PD-1 inhibitors may cause multiple side effects involving skin and internal organs. The most common immune-related dermatologic adverse events include macular rash and pustulosis exanthem. Less common skin complications comprise lichenoid dermatitis, psoriasis, eczema and vitiligo.

An increasing availability of PD-1 inhibitors is associated with an improvement of prognosis of patients with melanoma and their clinical condition. In spite of the general efficacy of these medications, cutaneous and internal organ complications during PD-1 inhibitors therapy require an interdisciplinary approach. The current goal is to find a balance between therapeutic effect and toxicity.

Androgenetic alopecia and COVID-19

Łysienie androgenowe i COVID-19

Aleksandra Pechcińska, Anna Ziobro, Anna Gorajek

Trustee of the paper: dr n. med. Marta Kurzeja

The type II transmembrane serine protease (TMPRSS2) is a key component to facilitate entry of severe acute respiratory syndrome coronavirus 2 (SARS-Cov 2) in the host organism. TMPRSS2 gene expression is stimulated through androgen receptor, and increases upon exposure to androgens, what may reveal increased susceptibility and more severe course of COVID-19 in men. The aim of this study was to demonstrate the relationship between the course of COVID-19 infection and androgenetic alopecia. The systematic review of the literature was conducted using PubMed, Scopus and Wiley Online Library databases. The search terms included "COVID-19" with "androgenic alopecia", "androgenetic alopecia", "TMPRSS2" or "androgen receptor". TMPRSS2 is expressed in different tissues such as the lungs, liver, kidneys, and prostate. SARS-Cov-2 infectivity depends on its entry via binding of its viral spike protein to angiotensin-converting enzyme 2 (ACE2) receptor, and on S protein priming by the type II transmembrane serine protease (TMPRSS2). In the recent study of 175 hospitalized patients with confirmed COVID-19 were evaluated, the frequency of AGA in men was 79% while in women 42%. The prevalence of androgenic alopecia in age-matched male-population was 31% to 53%, while in female-population over 69 years old was estimated to be 38%. Also the severity of COVID-19 was correlated with the stage of androgenetic alopecia. The hypothesis of androgen-mediated COVID-19 severity demands further studies. Antiandrogen drugs may be theoretically used in the treatment and prophylaxis of severe COVID-19 infection.

Methotrexate – orally or parenterally?

Metotreksat – doustnie czy pozajelitowo?

Karolina Opala, Klaudia Drewnowska

Trustee of the paper: dr n. med. Mariusz Sikora

Methotrexate is a folic acid analogue, known of its anti-proliferative and anti-inflammatory properties. It is widely used in inflammatory skin diseases especially in severe psoriasis. Methotrexate can be administered orally or parenterally (subcutaneous and intramuscular).

At this point several studies have shown that parenteral methotrexate is characterized by greater bioavailability and better therapeutic effect compared to oral pills. Moreover, switching from oral to parenteral methotrexate was associated with reduced side effects, especially from gastrointestinal tract. Subcutaneous administration allows for increased doses without developing the likelihood of adverse effects.

Most of the studies with subcutaneous methotrexate have been performed in rheumatoid arthritis patients. Although this drug is an approved treatment of psoriasis there is still a limited amount of research conclusively showing the superiority of the parenteral administration in this disease.

Though methotrexate is an old drug there are still new propositions how to improve its administration. One of the limitations of using parenteral methotrexate is poor skin penetration, which leads to searching for ways to topical delivery of this drug. Microemulsion based MTX hydrogel may solve this problem, as it attained maximum drug concentration in all layers of skin. Another problem is pain associated with injections of subcutaneous methotrexate. In recent study comparison of prefilled pen versus syringe showed that use of pen is characterized by reduction of fear and pain in pediatric patients.

Ultimately these findings suggest that parenteral administration of methotrexate may overcome the limitations of the oral pills.

Infantile hemangiomas in dermatology

Naczyniaki niemowląt w dermatologii

Katarzyna Pawlik, Agnieszka Sienicka

Trustee of the paper: dr n. med. Marta Kurzeja

Infantile hemangiomas (IHs) are the most common vascular tumors of infancy. IHs usually appear in the first few weeks after birth and undergo regression over time, mostly by the age of four. They are more common in female, white neonates, in twins as well as in infants born preterm or with low birth weight. The pathogenesis of IHs is incompletely understood however multiple studies suggest that intrinsic factors (such as angiogenic and vasculogenic factors) and extrinsic factors (including tissue hypoxia and developmental field disturbances) play a key role in IH development. IHs may be classified based on their depth as superficial, deep, and combined or based on the anatomic configuration as focal, segmental, indeterminate and multifocal. Superficial IHs appear as a red macule or patch, while deep IHs appear as a bluish papule or nodule. The diagnosis of IH is based on the clinical picture. If patients have 5 or more cutaneous IHs abdominal ultrasonography should be performed to rule out hepatic involvement. Magnetic resonance imaging should be performed in infants at risk of PHACE or LUMBAR syndrome. The differential diagnosis of IHs include vascular malformations, pyogenic granuloma, rhabdomyosarcomas, or Kaposiform hemangioendothelioma. In the majority of cases IHs do not require treatment. Only 10-20% of IH need to be treated due to complications such as disfigurement, ulcerations, feeding impairment, airway involvement or obstruction or congestive heart failure. Propranolol is the treatment of choice, other treatment modalities include corticosteroids, laser therapy, and surgical excision.

Metabolic factors' dysregulation in systemic sclerosis

Zmiany metaboliczne w twardzinie układowej

Anna Zając, Maja Cieślik

It is a common misconception that the exclusive purpose of adipose tissue is to store excess energy. The other important role of adipose tissue is to act as an endocrine gland and secrete adipocyte-derived hormones – adipokines, which were recently reported to play a significant role in the pathogenesis of several autoimmune diseases including systemic sclerosis. The purpose of the review is to present the existing link between an impaired serum concentration of adipokines and clinical manifestations of systemic sclerosis.

Adiponectin, which level in patients with systemic sclerosis is decreased, presents anti-fibrotic, vasodilatory and anti-inflammatory properties. Resistin, elevated in systemic sclerosis, exhibits contradictory to adiponectin features as it promotes autoimmunity, triggers vasoconstriction and smooth muscle cells proliferation through stimulating endothelin-1 production.

The synthesis of pro-inflammatory cytokines is mediated also by leptin, which concentration depends on the stage of the disease. Level of vaspin is decreased particularly in patients with digital ulcerations. Importantly, it reduces the expression of leptin and resistin. Increased chemerin levels are associated with skin sclerosis and impaired renal function. Decreased level of omentin leads to perivascular infiltrates of lymphocytes, vasoconstriction and its further complications including pulmonary hypertension.

To conclude, dysregulation in levels of aforementioned adipokines can contribute to the pathogenesis and various clinical conditions in systemic sclerosis. Detailed research is essential to clearly assess these associations and to allow the development of new treatment strategies.

The role of gut microbiome in the etiopathogenesis of alopecia areata: literature review

Rola mikrobiomu jelitowego w etiopatogenezie łysienia plackowatego: przegląd piśmiennictwa

Karolina Brzychcy

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The etiology of alopecia areata is still not fully understood. There is an intriguing link between alopecia areata and gut dysbiosis. Imbalances in the gut microbiota, which is described as dysbiosis, may trigger several disorders through the alternation of activity of T-cells that are both near to and distant from the site of their induction. Both the innate and adaptive immune systems have been implicated in the pathogenesis.

Culturing and characterization of human commensal bacteria gave the possibility to assess their influence on the host's immune system as well as provide new tools for defining which cell types and signaling tracks are relevant for inducing the distinct immune response

Evidence linking gut microbiota and immunologic effects in the host is still growing. A recent study looked at microbiota as the basis for the increased incidence of autoimmune conditions in developed countries. Short-chain fatty acids (SCFAs), produced by gut microbiota, contribute to maintaining immunological homeostasis via modulating the function of regulatory T cells (Tregs) and release of IL-10, which play also a critical role in the induction of alopecia areata. Therefore, controlled studies analyzing the possible links between the gut microbiome and AA correctly predicted disease status in 80% of patients, based on the number of bacterial counts of Parabacteroides distasonis and Clostridialesvadin BB60 group sequencing the 16SrRNA of the stool sample.

Therefore, controlled studies analyzing the possible links between gut microbiota and the evolution of AA are necessary.

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Acne fulminans – etiology, clinical presentation and treatment

Trądzik piorunujący – przyczyny, obraz kliniczny i leczenie

Michał Kowalewski

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Acne fulminans is very rare and the most severe type of acne. Mainly occurs in caucasian male teenagers with a history of mild to moderate acne. The etiology of acne fulminans remains obscure; an impact of genetics, abnormal immunologic response, hormonal imbalance and drugs intake has been suggested.

It often manifests as an abrupt development of painful erosions and hemorrhagic clinical form of acne that can lead to disfiguring scars. Skin lesions can be associated with systemic symptoms such as fever and polyarthritis. Acne fulminans may also cause bone lesions and laboratory abnormalities.

The condition usually is resistant to acne antibiotics. Currently, combination of systemic corticosteroids and isotretinoin is the first choice of treatment. High potency topical corticosteroids in high risk areas may also be considered. Other drugs such as: cyclosporine, dapsone, azathioprine, methotrexate and biological agents can be administered as alternative therapies in selected cases.

Acne fulminans is a devastating systemic disorder with severely disfiguring skin lesions; the right diagnosis and treatment should be immediate.

Pityriasis alba – from diagnosis to treatment

Pityriasis alba – od rozpoznania do leczenia

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Pityriasis alba is a benign skin condition that occurs mainly in children and adolescents. Although its etiology is still unknown, there are many factors which are considered to be involved in the pathogenesis of this disorder like an excessive sun exposure without protection, poor hydration of the skin, zinc, copper and iron deficiency or long and frequent baths. Many patients with pityriasis alba have also a history of atopy as well as pityriasis alba could be a manifestation of atopic dermatitis. Pityriasis alba is characterized by multiple round or oval-shaped faintly erythematous macules or patches, which subside, leaving hypopigmented areas. Lesions are mostly located on the face, neck, upper trunk and shoulders. The differential diagnosis of pityriasis alba includes principally tinea versicolor, vitiligo, nevus depigmentosus, nevus anemicus, psoriasis, mycosis fungoides, hypomelanosis of Ito or Fitzpatrick patches. If the diagnosis is uncertain, examination using a Wood's lamp or punch biopsy may be helpful. A histopathologic examination shows features of a mild, chronic, nonspecific dermatitis with decreased melanin in the basal layer of the skin. Also spongiosis, acanthosis, hyper- or parakeratosis, sebaceous gland atrophy, follicular plugging and perivascular infiltrates may be visible on biopsy specimens. Pityriasis alba regresses spontaneously within several months to a few years. The affected areas should be protected from sun exposure. Low-potency topical steroids, calcitriol and calcineurin inhibitors (tacrolimus, pimecrolimus) have been reported to be effective treatment. Other treatment options, especially in extensive cases, include photochemotherapy and phototherapy with a 308-nm excimer laser.

The role of Staphylococcus aureus in primary cutaneous T-cell lymphoma

Rola *Staphylococcus aureus* w pierwotnym chłoniaku skórnym T-komórkowym

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Cutaneous T-cell lymphoma (CTCL) is a heterogeneous group of non-Hodgkin T-cell lymphomas, characterized by the accumulation of malignant T cells in chronically inflamed skin lesions. The most prevalent clinical variants of CTCL are mycosis fungoides and Sézary syndrome. Staphylococcus aureus (SA) is known to colonize the skin of patients with CTLC and the majority of patients die from infectious complications rather than from the lymphoma per se. A number of studies suggested that SA infections play a role in treatment and progression the CTCL. SA manipulates the host's immune system by secreting staphylococcal enterotoxins (SEs) also known as superantigens, which are source of chronic stimulation and indirect proliferation of malignant T cells. Superantigen triggers expansion of malignant T cells via a novel mechanism involving crosstalk between malignant and benign T-cell populations. Furthermore, SE-mediated crosstalk activates oncogenic STAT3 pathway and induces Il-2R and IL-17 expression by neoplastic T cells. Dysregulated STAT3 is an important factor in malignant cell proliferation. Treatment for SA infection by antibiotics is associated with significant clinical improvement as decrease of erythroderma or tumor size in patients with CTCL. Moreover, recent studies demonstrated reduction of STAT3 signaling and IL-2Rα expression.

Supporting that staphylococcal superantigens are potential factors of CTCL progression, antibacterial therapy should be considered in patients with clinically relevant and verified infections with S. aureus.

Erysipelas – clinical forms and possible complications

Róża – postacie kliniczne i możliwe powikłania

Mateusz Jakubczak, Aleksandra Rykucka, Anna Grzeszczuk

Trustee of the paper: lek. Carlo Bieńkowski, dr hab. n. med. Maria Pokorska-Śpiewak

Erysipelas is an acute bacterial infection of the skin, commonly caused by group A β-hemolytic Streptococci, mainly Streptococcus pyogenes. The pathogen usually enters the skin through a local trauma or abrasion. The prevalence of the disease in European countries is estimated at 9–24 per 10 000 inhabitants. Prodromal symptoms, such as malaise, chills, and high fever, often begin about 48 hours before the skin lesions appear. A typical clinical manifestation represents raised, well demarcated erythema, usually affecting the lower extremities or the face. The following clinical forms of erysipelas are distinguished: erythematous, bullous, hemorrhagic, gangrenous, migratory, and recurrent. The diagnosis is based mainly on the clinical symptoms, supplemented by laboratory tests (elevated inflammatory markers) and microbiological examination. Antibiotic therapy (penicillin), frequently combined with topical antiseptics, antipyretics, and anti-inflammatory drugs, constitute conventional treatment and in some cases also low-molecular-weight heparin may be used. Despite its high efficacy, local recurrence has been reported in up to 20% of patients with predisposing conditions. Severe complications, including deep venous thrombophlebitis, elephantiasis, necrotizing fasciitis, septicemia, are rare and tend to affect mainly patients aged over 50 or with the following comorbidities: diabetes mellitus, chronic venous insufficiency, lymphatic edema, immunodeficiency. Local complications, e.g. local skin necrosis or abscess formation, occur more frequently, even in one-third of hospitalized patients. In summary, erysipelas is a common disease, that can present in different clinical forms. Although most streptococcal infections are relatively mild, they may seldom result in severe, even life-threatening complications. Early diagnosis and appropriate antimicrobial treatment are crucial.

Cutaneous manifestations of sarcoidosis

Skórne manifestacje sarkoidozy

Zuzanna Sitkowska

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Sarcoidosis is a chronic multisystemic disease affecting people at every age all around the world. It is characterised by the presence of epithelioid non-caseating granulomas. It can involve every organ, but most commonly lesions occur in the lungs, lymph nodes, skin, eyes, bones, liver, spleen, heart, upper respiratory tract and nervous system. In this review, we would like to focus on its clinical features in the skin.

Cutaneous eruptions affect up to 30% of patients with systemic sarcoidosis and may be the first sign of the disease. In Europe, the most frequent skin manifestation of sarcoidosis is erythema nodosum presenting with tender 1–2 cm bumps, mainly located on the extensor surface of the shins, often accompanied by fever and arthritis, forming Löfgren syndrome. Other common features include infiltrated plaques, maculopapular eruptions, subcutaneous nodules (Darier-Roussy disease), and lupus pernio, which is considered to be pathognomonic of sarcoidosis. The illness can also involve the skin of the scalp, causing scarring or nonscarring alopecia.

Dermoscopy is a useful tool in sarcoidosis. This method usually reveals structureless orange or yellowish-orange areas with overlying linear or branched vessels. Because cutaneous lesions in the course of the disease may exhibit various morphologies, sarcoidosis is known as one of the great imitators in dermatology. In differential diagnosis we should consider such entities as tuberculosis, granuloma annulare, lupus erythematosus, syphylis, necrobiosis lipoidica and other illnesses, depending on the clinical feature. A histopathological examination is necessary to establish the correct diagnosis and determine the appropriate treatment.

Cellular senescence – a new perspective for human skin diseases

Starzenie komórkowe – nowa perspektywa w terapii chorób skóry człowieka

Marta Jezierska, Aleksandra Karpuk

Trustee of the paper: lek. Anna Pasierb

Throughout its life, every cell of the organism is exposed to harmful internal and external factors. To prevent destruction, cells have developed a mechanism of cellular defence. Cellular senescence is a process that results from a variety of stresses and leads to a state of irreversible growth arrest. This mechanism underlies many physiological processes, including embryogenesis, immune response, and wound repair. Despite their importance in ensuring the body homeostasis, their role in tissue remodelling, injury, cancer, and aging remains unclear. As senescent cells may also accumulate, they have been implicated in the development a variety of age-related diseases. Therefore, the identification and characterization of key features of senescence, the induction of senescence in cancer cells, or the elimination of senescent cells by pharmacological interventions in aging tissues is gaining consideration in several fields of research. Knowledge regarding the impact of cellular senescence on skin ageing can potentially be integrated into dermatology research, especially to limit the appearance of senescent cells after phototherapy, chemotherapy or in age-related skin diseases. In this review, we outline the key features and molecular basis of cellular senescence and attempt to discuss the functional role of this fundamental process in different contexts in light of the development of novel therapeutic targets. Better understanding of cellular senescence will provide insights into the development of powerful strategies to control this process for therapeutic benefit.

Is bullous pemphigoid associated with higher morbidity of internal malignancies?

Czy pemfigoid jest rewelatorem nowotworów narządów wewnętrznych?

Barbara Bożek

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Bullous pemphigoid (BP) is an autoimmune skin disease characterized by the formation of blisters between the epidermis and dermis. It has been suggested that BP is associated with an increased risk of malignancy, but evidence is inconsistent. Therefore, a comprehensive review of the literature from the last 5 years was conducted to find out whether there is some new evidence that evaluate the relationship between BP and internal malignancies. MEDLINE was searched for studies that investigate this association. There were no exclusion criteria related to the study design.

The review consists of 17 studies, most of which are case studies.

There are several limitations that make the analysis difficult.

The majority of data is of low-quality, problems range from incorrectly constructed controls to lack of control of confounding variables. Furthermore, same studies analyse only the event rate of malignancy – without dividing it into internal and hematologic malignancies. Additionally, patients suffering from BP are usually elderly and have comorbid conditions, which causes significantly higher overall malignancy risk. The paucity of well-designed studies hindered the possibility of proving or disproving the association between BP and internal malignancies.

As for now, data analysis points to the conclusion that there is no association between BP prevalence and internal malignancies.

In summary, further investigation of this association is needed.

A good-quality studies that include analysis of important confounding variables such as age, gender, tobacco smoking and obesity are necessary.

Clinicopathological correlation in psoriasis

Korelacja kliniczno-patologiczna w łuszczycy

Aleksandra Ostrowska

Trustee of the paper: dr n. med. Magdalena Misiak-Gałązka

Psoriasis is a chronic inflammatory skin disease, which affects 1% to 3% of the world's population. It usually manifests with localized or generalized, symmetrical red papules and plaques typically on the elbows, knees, and scalp. In dermoscopy, the most frequent features are dotted vessels and white scale. Histopathology findings include acanthosis, uniform elongation of the rete ridges, thinning of suprapapillary plate, parakeratosis, dilated blood vessels in dermal papillae, and the presence of neutrophil aggregates in the epidermis. The diagnosis is usually based on clinical manifestation. However, in doubtful cases, the correlation of clinicopathological features is necessary to make a diagnosis.

An Auspitz sign is a presence of point bleedings on the removal of the plaque. In histopathology, it correlates with dilated superficial dermal capillaries and overlying suprapapillary epidermal thinning. Clinical presentation of guttate psoriasis comprises multiple papules on the trunk and proximal part of extremities. In histopathology, there present Munro's microabscesses and capillary vasodilation, usually without acanthosis. In plaque psoriasis with thick scale histopathology shows marked regular acanthosis with hyperkeratosis and parakeratosis. In pustular psoriasis painful erythematous patches or thin plaques covered with numerous small sterile pustules are present. In histopathology, there is an intraepidermal sterile pustule with slight epidermal hyperplasia.

In conclusion, as the histopathological picture of psoriasis evolves, the clinical manifestation changes. Therefore, knowing this relationship is useful to make a proper diagnosis at different stages of the disease.

Is bullous pemphigoid a revelator of internal organs neoplasms?

Czy pemfigoid jest rewelatorem nowotworów narządów wewnętrznych?

Anna Wieczorek, Aleksandra Ostrowska

Trustee of the paper: lek. Magdalena Jasińska

Bullous pemphigoid (BP) is a rare autoimmune sub-epidermal blistering disease, which usually affects people aged over 60. A typical picture of pemphigoid includes erythematous or urticaria-like lesions accompanied by blisters. In this condition, there are present autoimmune antibodies against hemidesmosomes, which triggers an inflammatory process. Data on the relationship between bullous pemphigoid and malignant neoplasms are inconclusive. Some studies show an increased risk of malignancies in patients with BP compared to the general population, while others report that only few neoplasms (cancer of the larynx, kidneys and hematological malignancies) are associated with a heightened risk of developing BP. There are several theories that try to explain the possible connection between BP and the development of malignant tumors (cross-reaction between tumor and hemidesmosome antigens, tumor mediated basement membrane damage and subsequent antibody response, common predisposing genetic background (HLA-B13)). Although a clear-cut association between BP and malignancies cannot be demonstrated, some researchers have identified certain groups of patients with BP (e.g. patients with early-onset of pemphigoid; patients with a former oncological history or with signs/symptoms that could be related to a neoplasm; patients with BP refractory to common immunosuppressive therapy), for whom oncological screening is particularly justified. Because of these ambiguities, it is postulated that the term pemphigoid associated with malignancies (PAM) should be used in place of the term paraneoplastic pemphigoid, what underlines the temporal rather than the causal correlation between BP and malignancies. Therefore, further research is needed to clarify the nature of the relationship between those conditions.

Many faces of polymorphous light eruption in children – clinical presentation and differential diagnosis

Oblicza polimorficznej osutki świetlnej u dzieci – obraz kliniczny i diagnostyka różnicowa

Justyna Janicka, Małgorzata Sankowska

Trustee of the paper: dr n. med. Magdalena Misiak-Gałązka

Polymorphous light eruption (PMLE) is a photodermatosis with an immunologic mechanism. It is one of the most common diseases among children with a prevalence of 20%. This review is focused on clinical presentation and differential diagnosis of a polymorphous light eruption in the pediatric population.

It is characterized by pruritic or tingling erythematous papular or plaque lesions of sunlight-exposed skin on the V-area of the chest, forearms, and lower legs, occurring in spring or early summer. The first signs of PMLE typically appear several hours to days after the first exposure to intense sunlight as an irritable rash, last few days, and subside within a week or two with minimal or no scarring. The variants of clinical manifestations of PMLE are very heterogeneous. One of the most frequent is juvenile spring eruption which is typical of young boys and affects exposed external ears.

The differential diagnosis includes other skin lesions, which are induced or exacerbated by solar irradiation, such as cutaneous lupus erythematosus, solar urticaria, actinic prurigo, erythema multiforme, and photocontact allergic dermatitis.

The diagnosis is based on the patient's and family history, clinical presentation, and phototesting. In doubtful cases, a histopathological examination can be performed. The first line of treatment includes sun avoidance, sunscreens, and topical corticosteroids.

In conclusion, although polymorphous light eruption is a benign condition, it's recurrences may cause emotional distress, especially in children. Considering the prevalence of the disease, it is crucial for healthcare professionals to know how to educate and treat the patients.

Anagen effluvium

Łysienie anagenowe

Małgorzata Piejak, Katarzyna Kołodziejczyk

Anagen effluvium is defined as a sudden, scattered and noncicatrical alopecia, occurring in the hair growth phase. An indirect factor leading to hair loss is the stoppage of mitotic or metabolic activity of the hair follicle. Anagen alopecia is mainly an adverse effect of chemotherapy, although numerous other factors were also reported as causative agents. These include cytotoxic (alkylating antineoplastic drugs, vinca alkaloids, cyclophosphamide) and non-cytotoxic pharmaceuticals (levodopa, cyclosporine) intake, heavy metals poisoning (thallium, boron, mercury), radiotherapy, inflammatory diseases affecting hair follicles (alopecia areata, secondary syphilis), autoimmune diseases (pemphigus) and extreme malnutrition (kwashiorkor). Loose anagen hair syndrome, which is determined genetically, may be also the cause of alopecia. Hair loss is usually observed several days following the action of the antiproliferative factor. Importantly, total hair loss may emerge in less than 2 months. In order to diagnose anagen effluvium, anamnesis and physical examination including pull-test and trichoscopy, are sufficient. In trichoscopy black and yellow dots, Pohl-Pinkus constrictions and tulipoid hair are observed. Essential for the therapy is an eradication of the causative factor of anagen effluvium. Regarding that the hair regrowth starts in 2–6 months since the harmful factor is removed and there are no effective medications for the management, only supportive therapy (e.g. minoxidil, scalp cooling) is currently used. Further research is warranted to develop successful methods of treatment for anagen effluvium.

The relationship of acne vulgaris and fungal microflora of human skin

Związek zmian trądzikowych z florą grzybiczą skóry

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Malassezia spp. create the dominant fungal microflora of human and animal skin co-existing with Cutibacterium acnes and other bacterial species. Growth of Malassezia is limited by an inability to synthesize lipids, which entitle residency of a large population in follicular contents – mainly on the skin rich in sebaceous glands (face, back or breast). Malassezia is known for hydrolyzing triglycerides present in the sebum to produce free fatty acids, which can affect the abnormal keratinization of hair follicular ducts and promote a secretion of proinflammatory cytokines from keratinocytes and monocytes. Malassezia has been associated with several skin conditions, such as atopic dermatitis, folliculitis, pityriasis (tinea) versicolor and seborrheic dermatitis. Malassezia folliculitis clinically manifests as monomorphic papules and pustules or closed comedones often on the chest, back, posterior arms, and face, which can be misdiagnosed with the most common skin disease of a young people which is acne vulgaris. Furthermore, folliculitis may be concomitant to other skin conditions, such as atopic dermatitis, seborrheic dermatitis, systemic corticosteroid-induced acne and tinea versicolor. Differential diagnosis should be careful due to a similar clinical appearance. Patients with Malassezia folliculitis are often exposed to prolonged and unnecessary antibiotics therapy, while oral antifungals cause significant improvement in most cases.

Skin microbiome in rosacea

Mikrobiom skóry w trądziku różowatym

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Rosacea is a chronic skin disease that typically affects the central face. The National Rosacea Society (NRS) estimates that 415 million people suffer from rosacea worldwide. Although the pathophysiology

of rosacea isn't well understood, the efficacy of antibiotics in rosacea treatment suggests the role of microbiota in the development and aggravation of skin lesions. The aim of our study is to present the current knowledge of the possible role of skin microbiota in rosacea. The methods used in this review are the analysis of the literature available on the PubMed and Google Schollar platform. Recent studies indicate an association between occurrence of rosacea and the changes in the skin microbiome. What's more, this changes depending on rosacea intensity. In erythematotelangiectatic rosacea observed depleted microbiota in *Actinomyces europaeus, Prevotella* spp. Whereas, in papulopustular rosacea microbiota was depleted in some bacteria species but part of them was in excess. In a comparative study performed in 60 twins discordant for rosacea, the most abundant phyla retrieved from the facial skin were: *Firmicutes, Proteobacteria, Actinobacteria, Bacteroidetes.* Studies indicate Demodex as a significant risk factor in the rosacea development. Further studies aiming to assess a skin microbiome composition and microbe-host interactions will contribute to clarify the mechanism of development of rosacea and possibly will provide innovative effective therapies.

Trichoscopy as a diagnostic method of trichotillomania

Trichoskopia jako metoda diagnostyczna w trichotillomanii

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Trichotillomania is a dermatological disorder associated with psychiatric illnesses such as anxiety disorders, depression or obsessive-compulsive disorders.

It is characterized by repetitive and compulsive pulling and plucking one's own hair. This problem affects 0.5–2% of the general population with a predominance of women. This medical condition occurs also in children at the age of 7–13. Trichotillomania may involve any hairy area of the body, mostly scalp but also beard, eyebrows and eyelashes.

The diagnosis of trichotillomania is usually based on clinical findings. Similar manifestations in other hair and scalp disorders such as alopecia areata, androgenetic alopecia, frontal fibrosing alopecia, traction alopecia, tinea capitis, make a whole diagnostic process a big challenge for dermatologists.

The method which helps us identify above mentioned diseases is the trichoscopy. It has been increasingly important in recent times. It can detect any hair and scalp abnormalities, specific and non-specific for trichotillomania. The most suggestive findings for trichotillomania include flame hair, V-sing hair, tulip hair, hook hair, hair powder and newly discovered Mace sign, branched hair and concentric hair. Broken hair at different levels, short vellus hair, black dots, trichoptilosis and yellow dots are less specific but may be also presented.

Mutacje kolagenu VII – diagnostyka, obraz kliniczny, leczenie

Type VII collagen mutations – diagnosis, clinical picture, treatment

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Type VII collagen is a fibrillar protein encoded by the *COL7A1* gene, a main component of anchoring fibrils in the dermo-epidermal junction area. To date over 700 various mutations of COL7A1 have been reported. These lead to dystrophic *epidermolysis bullosa* (DEB) – rare, but severe and disabling mucocutaneous disease manifesting as skin fragility, blisters formation and erosions. Diagnosis is established on clinical examination followed by histopathologic examination of skin specimen, showing abnormalities in type VII collagen staining and genetic tests. According to recommendations published in 2014, major clinical subtypes of DEB are distinguished: autosomal recessive dystrophic *epidermolysis bullosa* (RDEB) and autosomal dominant dystrophic *epidermolysis bullosa* (DDEB). Generalized RDEB is the most severe form. Concomitant cutaneous findings are scarring, nail dystrophy, milia, keratoderma. Extracutaneous manifestations include involvement of mucosa of oral cavity, gastrointestinal tract, genitourinary tract, respiratory tract, or ocular lesions. Dilated cardiomyopathy and pleural effusion were described. The disease leads to numerous sequelae: skin infections, adhesions and contractures, pseudosyndactyly, microstomia, periodontal changes, caries, esophageal stricture, loss of vision, malnutrition, anemia, growth disturbance.

The most severe *complication of* DEB is significantly increased risk of squamous cell carcinoma (SCC), especially of aggressive form, being common cause of death in this patients group. There is currently no cure for DEB. Management include wounds care, symptomatic treatment to maintain pain, prevention of complication. Promising results of novel modalities, including cell therapy, bone marrow transplantation or gene therapy, although challenging, give hope for improvement of patients' duration and quality of life.

Ophthalmological changes in autoimmune blistering skin diseases

Zmiany okulistyczne w przebiegu autoimmunologicznych chorób pęcherzowych

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Autoimmune blistering skin diseases (AIBD) are cutaneous and mucosal diseases including pemphigus, bullous pemphigoid (BP), mucous membrane pemphigoid (MMP), paraneoplastic pemphigoid (PNP), epidermolysis bullosa acquisita (EBA) and linear immunoglobulin A bullous dermatosis. AIBD are potential life-threatening and sight-threatening diseases. The underlying cause of those conditions are autoantibodies directed against desmosomal proteins and keratinocytes. AIBD are manifested as flaccid bullous lesions on the skin or mucous membranes. Furthermore, ocular signs can be found in the condition such as pemphigus, paraneoplastic pemphigus (PNP), MMP or linear immunoglobulin A bullous dermatosis. Among clinical symptoms we may mention dry eye syndrome, autoimmune conjunctivitis, conjunctiva congestion, inflammation of eyelid margin or even cicatrization and blindness. Rapid diagnostic and adequate treatment are required in prevention of scarring and corneal perforation. Treatment typically bases on systemic immunosuppressive therapy, nevertheless in the advanced stages surgical intervention might be necessary. During the whole process, patients should stay under proper ophthalmological and dermatological care.

Sildenafil use in dermatology

Zastosowanie syldenafilu w dermatologii

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Since the discovery and introduction of sildenafil, the inhibitor of phosphodiesterase 5 (PDE-5i), the fields of clinical use are increasing. The purpose of this review is to describe potential benefits of using sildenafil in dermatology field.

A meta-analysis of randomized clinical trials indicates that sildenafil effectively reduces the frequency and severity of Raynaud's phenomenon in patients with Systemic Sclerosis. The data has shown that PDE-5 inhibitors not only improve the healing process, but also prevents the development of new digital ulcers among patients with Systemic Sclerosis. Also a topical sildenafil cream may act as an adjuvant therapy for Raynaud phenomenon. Wortsman *et al.* found that that 5% sildenafil cream can significantly improve digital arterial blood flow in patients with secondary Raynaud phenomenon. Another study recently performed by Dayyih *et al.* suggests that 5% sildenafil-containing ointment can provide an advantage in wound healing by promoting wound contractions and resistance to wound breakage in healthy and diabetic mice. Interestingly, some studies demonstrate the significant therapeutic potential of sildenafil on hair growth and its potential use in treatment of alopecia. Choi *et al*. confirmed high expression of PDE5 in human dermal papilla cells and human hair follicles. Their study showed that sildenafil accelerates anagen induction by stimulating perifollicular vessel formation after topical application in mice. Although the use of inhibitor of phosphodiesterase 5 in in vitro and animal alopecia areata models has been promising, in human alopecia areata patients results have been under- whelming.