THE FOURTH INTERNATIONAL SCIENTIFIC – PRACTICAL VIRTUAL CONFERENCE “MODERN MEDICINE: INNOVATIONS, PROBLEMS AND PROGNOSES."

CONFERENCE PROCEEDINGS

AZERBAİJAN-ESTONIA-KAZAKHSTAN-TURKEY

KAZAKHSTAN, ALMATY MAY 28-29, 2021

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Opening ceremony	Aytan Huseynova, Namig Isazade
19.00-19.30	**Gulmira Zhurabekova** Department of fundamental Medicine, Higher School of Medicine. Al Farabi Kazakh National University. Associate Professor.
	Davit Tophuria Tbilisi State Medical University. Head of International Students Academic Department, Associate Professor.
	Tamara Abaeva Kyrgyz state medical academy named after I. K. Akhunbaev. Professor. Kyrgyzstan
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20.30-20.50	**Dr. Aylin Ozturk** A PERSISTANT BULLOUS PEMPHIGOID CASE STARTING AFTER COUMADIN USE
20.50-21.10	**Бекзат Тажиметов, Марина Жаналиева, Айгуль Алмабаева, Балкия Абдрахманова** ОПЫТ ПРИМЕНЕНИЯ ТРАНСФЕР ФАКТОРА ПРИ БРОНХИАЛЬНОЙ АСТМЕ НА ФОНЕ ДИСБАКТЕРИОЗА КИШЕЧНИКА.

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22.10-22.30	**Толеугали Адайбаев, Марина Жаналиева, Айгуль Алмабаева** СТРУКТУРА БРЫЖЕЕЧНЫХ ЛИМФАТИЧЕСКИХ УЗЛОВБЕЛЫХ КРЫС В РАННЕМ ОНТОГЕНЕЗЕ.
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Closing ceremony	

ABSTRACTS AND THESES

RELATION BETWEEN TYPE 1 DIABETES MANAGEMENT AND INTERACTIVE DIABETES EDUCATION

[1,2]Marina Gordeladze, [2]Ekaterina Patsatsia, [3]Besik Kochlamazashvili
[1,2]D. Zhvania Pediatric Academic Hospital of the Tbilisi State Medical University
[3]Tbilisi State Medical University.

Background: Type 1 diabetes mellitus (T1DM) is the most widespread metabolic/endocrine condition among children/adolescents in Georgia. T1DM patients aged 0-18 yrs are treated both in- and outpatiently. In 2015-2019 totally 533 patients were hospitalized, 211 of them had fresh T1DM. Special attention is paid to interactive diabetes education (IDE) of patients/their caregivers, that is very important for adequate diabetes management. IDE is initiated from the day of admission. **Our aim** was to assess the effect of continuous, structured IDE on quality of metabolic control and acute complication incidence in children/adolescents with T1DM. Goals of IDE are - teaching about signs/symptoms, progression, acute complications (causes, signs/ symptoms, prevention and treatment) of T1DM; developing insulin injecting, self-monitoring/self-control skills (result interpretation; bread-units; physical activity, etc).

Methods: Patients treated/supervised at our Hospital were separated into 3 groups (Gr.): 211 patients with fresh T1DM (Gr.1); 150 patients with poor (Gr.2) and 361 patients with satisfactory (Gr.3) glycemia control. Following parameters: HbA1c, hyper-/hypoglycemic coma and ketoacidosis incidence, insulin doses were studied and compared before/after IDE course and psychologist counseling.

Results: Data obtained before IDE for Gr. 1, 2,3: HbA1c (%) - 13.5±2.1; 12.5±2.3; 7.0±2.5, respectively; hyperglycemic coma (%) – 17; 30; 5, respectively; ketoacidosis (%) – 78; 20; 0, respectively; hypoglycemic coma (%) -22; 35; 0, respectively; insulin doses (U/kg) – 1.7±0.1; 1.3±0.4; 0.7±0.4, respectively; QOL/Relation to Condition Questionnaire/RCQ (%) scores were 100; 80; 35, respectively. Post-education data: HbA1c (%) -7.0±2.1; 8.0±2.2; 6.4±0.8, respectively; hyperglycemic coma (%) – 0; 4; 0, respectively; ketoacidosis (%) – 3; 8; 0, respectively; hypoglycemic coma (%) – 0; 0; 0, respectively; insulin doses (U/kg) – 0.7±0.1; 0.9±0.4; 0.7±0.12, respectively; QOL/RCQ (%) scores – 95; 87; 97, respectively.

Conclusion: IDE, initiated at the moment of diagnosis, that lasts throughout in-hospital period, is regularly repeated out-patiently and tailored to individual patient needs gives knowledge, develops skills, creates motivation, helps to achieve good diabetes control, reduces and/or avoids acute complications and improves QOL of children and adolescents with T1DM. Lately the first book for children, adolescents and their caregivers "Diabetes Mellitus for Children and Adolescent" was published in Georgian, it discusses all aspects of life with diabetes and management of the condition in a simple and attractive way. The book is delivered free of charge.

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A PERSISTANT BULLOUS PEMPHIGOID CASE STARTING AFTER COUMADIN USE

Dr. Aylin Ozturk
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Bullous pemphigoid is an autoimmune blistering disease characterised by subepidermal bullous eruption. Its majör property is having autoimmune antibodies targeted to hemidesmosomes BP230 and BP180[1]. A 64 year-old woman came to our clinic having painful bullous leisons widespread on trunk and all extremities. There were also painful erosions in oral mucousa. Most of her bullous lesions were eroded. She gave a history of many drug use because of her chronic diseases. These were multi antibiotics, antidiabetics, NSAIDs,and oral coumadin treatment.

Introduction: Bullous pemphigoid is an otoimmune blistering disease characterised by subepidermal blisters. Its majör property is having autoimmune antibodies targeted to hemidesmosomes BP230 and BP180 [1].

Case: A 64 year-old woman came to our clinic having painful bullous leisons in oral mucousa, on trunk and all extremities for a few months. Most of the bullous lesions were large, tense and were turning to eroded and crusted wounds after a few weeks of survival. She gave a history of a persistan erytema, intractable pruritus and urticarial lesions for two months before the onset of bullous lesions. She was prescribed topical steroids and oral antihistaminic drugs before. As she told this treatment didn't work and the lesios changed and many painful blisters developed in months. She had frequently repetative urinary system infections due to persistant urethral stricture formed after as a complication of total hysterectomy operation. She had to use many antibiotics, antidiabetics, cardiac drugs for her comorbidities. In her last hospitalization she had to use coumadin for the first time. She definitely says the pruritic eczematous lesions started a few weeks after the start of this drug. Her urologist stopped the drug after lesions, but lesions didn't regress. After the exacerbation of the pruritus and blistering lesions patient came to dermatology outpatient clinic. She was given topical potent steroid ointments. She gave a history of using about one month of topical ointment alone, but didn't work. When she came to our clinic a skin biopsy and a sample for direct immune flourescent staining was taken. Topical potent corticosteroid, oral doxicycline (100 mg/day) and nicotinamide (1000 mg/day) was started as a first line systemic treatment. In laboratory results WBC: 9100, Sedimantation: 20, BUN:35.5 creatinine :1,25 AST: 12.7 ALT: 11.5 Total IgE: 5.41 and IgA: was 88.1. Her lesions didn't regress after 2 weeks. She was started oral prednisolone treatment of 48 mg and azathioprine after consulting to nephrology. Lesions started to regress. In this duration the patient had to be hospitalized because of ileus by general surgery and couldn't take the systemic dermatologic treatment for a few weeks. Her lesions were exacerbated widely. Her skin biopsy was resulted and reported as bullous pemphigoid. Since she had osteoporosis, diabetics and not well cured by first-line and second -line bullous pemphigoid medications she was started to be treated by intravenous immune globülin (IVIG) treatment and her systemic steroid dosed decreased to lower the risk of comobidities but wasn't totally leaved. Her lesions started to regress in a few months. But flare up was observed as the treatrment of IVIG was postponed a few days or weeks. She is under this medication for about 1,5 years.

Discussion: Bullous pemhigoid is a common seen autoimmune blistering disease in eldery. Its etiology is not totally found out. Most of the cases were reported to have relations with the

medications. The medications related to disease were[2,3] Antirheumatics amphiciline[4] , antiaritmik drugs, antihypertensives (Ca canal blockers, amlodipine, nifedipine), ACE inhibitors (kaptopril, enalapril, lisinopril), beta blockers (nadolol, proctolol) ,Angiotensin II antagonists (losortan),vaccines (influensa, Swine flu, Tetanous toxoid, HZV; Hexavalented combined vaccines, NSAIDs[5] (azopropan, diclophenactopical, ibuprofen, mefanamik acid, fenasetins,Saliciylates (aspirin, sulphasalazin, Salisalazosulphapyrid), diuretics (furosemid, spironolactone), antidiabetics (sitagliptin, tolbutamide, vildagliptin Anti TNF-a drugs(Adalimumab Efalizumab, Etanersept) Antirheumatics (D-penicillamin,tiobutarit) arsenic ,clonidine ,erlotinib, fluoxetine, flupenthixol, gabapentine[6] ,galantamine hydrobromide, gold thiosulphate, Interleukin-2, levetiracetam, methyldopa, terbinafine thiopronin ,omeprazole, psoralen placental extracts, potasyum iodid, risperidon, sulphonamid [7].

Conclusion: In our case as our patient was using many drugs as urologic systemic drugs, antibiotics, antidiabetics and for other chronic diseases. But she definetely gave a history of onset of pruritus and urticarial lesions starting after approximately two weeks of using oral coumadin. Oral coumadin treatment can be one of the drugs triggering bullous pemphigoid.

EPIDERMOLYSIS BULLOSA AND STEM CELL THERAPY

Maia Matoshvili, Davit Tophuria, Natia Kvizhinadze
Dermato-Venerology Department, Human Normal Anatomy Department, Pharmacy Department, Tbilisi State Medical University.

The main goal of regeneration or sustained genetic correction of damaged tissue, advanced tissue-engineering techniques are especially applicable for many dermatological diseases including wound healing, genodermatoses (like the severe blistering disorder epidermolysis bullosa) and chronic (auto-)inflammatory diseases. This review summarizes general aspects as well as current and future perspectives of stem cell therapy in dermatology.

Introduction: Stem cells (SCs), common to all multicellular organisms, are specified as undifferentiated self-replicating cells possessing the ability to generate, sustain and replace terminally differentiated cells. They show two key features: self-renewal (cell divisions with maintenance of the undifferentiated state), and capability of in vivo and in vitro reconstitution of a given tissue via differentiation into specialized cell types1. SCs are commonly subdivided into two main entities, embryonic stem cells (ESCs) (pluripotent) and adult SCs (multipotent or unipotent).

Methodology: 1. MSC-cell therapies SC therapies are increasingly established in the experimental treatment of genetic diseases, recently also in patients with recessive dystrophic EB (RDEB), a rare genetic blistering disease. RDEB patients lack genes for synthesis of Collagen VII. These symptoms mainly account for more severe disease complications, such as mitten deformities of hands and feet and aggressive epithelial cancers.Therapeutic approaches, either with intravenous infusion or direct local administration of MSCs to chronic wounds have started however, to provide novel insight into key BM cells and mechanisms germane to repair and regeneration of the epithelium. Initially, intradermal injections of human BM-MSCs showed a dose-dependent, significant higher production and in loco deposition of type VII collagen associated with restoration of immature anchoring fibrils

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and superior dermal-epidermal integrity compared to controls with intradermal phosphate-buffered saline-injections in DEB mouse models. In line with this preclinical data, Conget et al.126 described the replenishment of type VII collagen at the dermal–epidermal junction upon intradermal BM-MSC injection provided from healthy donors into chronic wounds of two RDEB individuals3. The administration led to a reduced blister formation (up to 6 months) and an increased reepithelialisation of chronic ulcers. Tissue remodeling activity of the transplanted MSCs, owing to both, their integration into the skin and their secretion of growth factors and cytokines participating in the regulation of tissue regeneration, might activate self-healing mechanisms in RDEB skin.

POST COVID-19 NEUROLOGICAL SYNDROME (PCNS) IN AN 11 YEARS OLD BOY, A CASE REPORT

Alili Ademi L.[1], Duma F.[1], Sofijanova A.[1], Bojadzieva S.[1], Ademi B.[2], Muaremoska-Kanzoska Lj.[1], Nonkulovski D.[1], Abraseva K.[1], Vesna Fidanoska Jovichikj[1]

[1]University Clinic for pediatric diseases, Department of neurology, Skopje, North Macedonia
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By now more than 92.6[1] persons have been reported to be infected with COVID-19, of which significant part are children. Although children experience milder symptoms compared with adults at the time of the infection, cases of post-covid-19 complications have been reported (2, 3, 4, and 5). Complications might also include the CNS, in our case with cerebellar ataxia-like and polyneuritis-like signs and symptoms.
A 13 year old boy was presented in our clinic with signs of ataxia, occasional vomiting, impaired gait, impaired patellar reflexes on the right leg, incomplete Babinski reflex on the right leg, paresis of the left facial nerve and mild hypertension. Based on the clinical appearance and the parameters that showed past COVID-19 infection, a diagnosis of Post-COVID19 Cerebellar Ataxia-like and Polyneuritis-like was made, meaning a Post Covid-19 Neurological Syndrome (PCNS). Treatment was conducted with antibiotics and immunoglobulins resulting in significant improvement in the following days.
There are few reported cases about neurological complications caused by COVID-19 in children and adolescents, without any other symptoms of the virus. This is one of the first cases of Post-COVID19 Cerebellar Ataxia and Polyneuritis in a child as a result of COVID-19 and the first case in our country.
Keywords: Post-COVID19 complications, Post Covid-19 Neurological Syndrome, cerebellar ataxia, polyneuropathy, children

GENETIC INVESTIGATIONS - MODERN PREVENTIVE HEALTHCARE DIRECTIONS IN OCCUPATIONAL MEDICINE

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Department of Environmental Health and Occupational Medicine, TSMU, Tbilisi, Georgia

The steady growth of industry and scientific and technical progress create opportunities for the emergence of new professions as well as new enterprise factors. This contributes to the increase in the incidence of certain forms of occupational diseases and the emergence of new occupational

pathologies. The nature and structure of occupational pathologies have changed significantly in the face of the rapid and steady growth of the use of chemical compounds in many industries. Health disorders developed by chemical compounds are apparently dependent on their concentrations and exposure in enterprise settings.

High chemical concentrations cause acute and chronic intoxications, while low concentrations reveal allergen properties and lead to the development of occupational allergic diseases. Despite the reduction of dust pollution and gaseous pollution in enterprises, the exposure to the sensitizing effects of chemical compounds has been increased, including the frequency of its most severe forms - occupational bronchial asthma. Consequently, the development of occupational allergy prevention methods and implantation in practice has acquired special importance.

Among the occupational respiratory allergic diseases, occupational bronchial asthma occupies second place in the Structure of Occupational Diseases of Georgia, after the vibration disease. Consequently, the introduction of new directions for the prevention of occupational bronchial asthma will reduce the incidence of the disease as well as the development of invasive forms.

In modern clinical medicine, great importance is attached to the study of hereditary factors. The importance of hereditary predisposition to non-occupational allergic diseases is not in doubt (1,2). Hereditary load is undoubtedly important in the complex action of environmental factors, including leading environmental factors - chemical, physical and biological, as hereditary background determines the body's response, specific

IMMUNOGENETIC MECHANISMS OF OCCUPATIONAL ALLERGIC DISEASES

Tsimakuridze Mar., Khachapuridze N., Mathoshvili M., Baratashvili R.,Tsimakuridze Maia
Department of Environmental Health and Occupational Medicine.

In recent years, the use of chemical compounds has been increased both in everyday life as well as in manufacturing processes. Consequently, as the area of their impact on the population in general and the employed population, in particular, is increasing, the number of cases and manifestations of various health problems in the population is increasing as well.

In the recent decade, a growing trend of allergic diseases has been observed in Georgia. In particular, the number of new cases of bronchial asthma has been steadily increasing: in 2008 - 3189 cases, in 2010 - 3285, in 2015 - 3261 cases, and in 2019 the total prevalence of cases with asthma and asthmatic status registered in Georgia equals to 286.7 and the incidence rate - 59 [1].

Simultaneously, the number of such cases is increasing in the employed population. Among the leading causes of allergic diseases appear chemical compounds.

Individuals exposed to chemical compounds may develop both their own occupational and conditional occupational pathologies (both diseases and intoxications). However, in recent years, under the background of the increase of allergic cases in the population in general, the pathologies have developed as a result of the sensitization to chemical compounds, in particular, allergic diseases of the respiratory system - occupational bronchial asthma and asthmatic bronchitis, as well as allergic skin diseases.

The directions for the prevention of occupational pathologies in employed populations are being developed based on scientific achievements and medical research. Therefore, it is important to implement the research results into practice and to include them in the scheme of primary and secondary preventive measures.

Respiratory system pathologies take a leading position in the structure of occupational diseases in Georgia, while allergic diseases of the respiratory system, in particular occupational bronchial asthma, take the second most common place after the vibration disease; while occupational skin pathology is the fifth on the list, almost half of them (48.6%) appear to be contact dermatitis, 27.8% - occupational eczema, and 19.7% - allergic dermatitis.

MELANOCYTIC DISEASES

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It was traditionally assumed that cancer cells of melanoma arise from melanocytes. Recently, however, a hypothesis was posed that melanoma could also descend in extrafollicular SCs altered by harming factors such as ultraviolet (UV) A and UVB 5. Experimental studies are currently ongoing to investigate the mechanisms capable of causing damage to the DNA of SCs, as to ascertain this hypothesis

Introduction: McSCs are essential to maintain melanocyte populations in human skin and its appendages. Studies on McSCs have elucidated molecular mechanisms underlying ordinary melanocytic development as well as melanocyte-related pathological conditions like vitiligo and melanoma, although still many questions regarding the characterization of McSCs remain unsolved 3. . Human iPSCs may be useful for the characterization of human McSCs, since this application allows the acquirement of a sufficient amount of patient-specific melanocytes along the differentiation of iPSCs. These cells could then be applies for disease modeling and evaluation of potentially therapeutic approaches156. The use of HSCs transplantation, adjuvant to chemotherapy and immunotherapy for patients with metastatic melanoma, has been already evaluated in clinical trials. These strategies should allow the use of increased chemotherapy doses for more efficient eradication of tumor cells. However, definitive results are still missing A distinct type of pluripotent, non-tumorigenic (in vivo) MSCs refer to the term multilineage-differentiating stress-enduring cells (Muse cells). These cells can be conveniently obtained from mesenchymal tissues (such as dermis and bone marrow) and human mesenchymal cultured cells (such as dermal fibroblasts). After culturing in a specific differentiation medium containing ten factors (Wnt3a, stem cell factor, endothelin-3, basic fibroblast growth factor, linoleic acid, cholera toxin, L-ascorbic acid, 12-O-tetradecanoyl-phorbol 13-acetate, insulin–transferrin–selenium, and dexamethasone), Muse cells derived from dermal fibroblasts have been shown to readily transform into functional melanocytes 2. These differentiated Muse cells expressed melanocytic markers, grew in 3D cultured skin and produced melanin after transplantation to the back skin of immunodeficient mice 1. However, in contrast to other pSCs such as ES cells and iPS cells, Muse cells show low telomerase activity and are not able to grow tumors in vivo. This technique might be the basis for new treatment approaches to melanocytic diseases like vitiligo.

Methodology: 1) Cancer stem cells Several years ago, it was discovered that a small sub-population of acute myeloid leukemia cells could reestablish tumors in severe combined immunodeficiency mice, while the vast majority of the tumor cells could not 5. This study underlies the cancer SC hypothesis, which implicates that cancer SCs have characteristics comparable to the SC population of their tissue

of origin (i.e., self-renewal, differentiation potential) 6. They are assumable very rare within the tumor and are thought to produce progenitor cells that can generate all types of cells comprising the tumor. CSCs pose a challenge for cancer therapies, because eradicating the bulk tumor usually does not include all CSCs, leaving enough of them at liberty to re-establish the complete heterogeneity of cancer tissue. In addition, these SCs might be more resistant to chemotherapy, and even targeted molecular therapies via their relatively high expression of the multi-drug resistance genes (e.g., MDR-1, BRCP1), a common feature of many SCs. Furthermore, owing to their ability to rapidly induce DNA repair mechanisms, CSCs are often highly resistant to radiation therapy. Finally, they appear to be particularly adept in stimulating angiogenesis, nurturing tumor development CSCs can switch between quiescence (tumor dormancy) and active cell division with subsequent varying chemosensitivity, a behavior that mainly depends on changes in the microenvironmental niche and involves complex signaling pathways regulating tumorigenic growth and dormant arrest 10. CSCs further possess the capability to create new niches during the metastatic process160,161. These “metastatic niches” are defined by specific locations (e.g., metastatic cells occupying native SC and perivascular niches), signaling pathways (e.g., PI3K-AKT pathway as a critical survival input for metastatic cancer cells), incorporated stromal (e.g., endothelial) cell types and ECM proteins (e.g., tenascin C which strongly promotes SC functions). The components of this micromilieu support the survival, self-renewal and expansion of disseminated metastatic CSCs. Beside melanocytic SCs or melanoma cancer SCs probably involved in the pathogenesis of melanoma, CSCs have also been demonstrated in non-melanoma skin cancer such as squamous cell carcinoma (SCC) in mice. The proliferation and expansion of these CSCs are markedly influenced by their ability to respond to TGF-β receptor II and integrin/focal adhesion kinase-mediated signaling at the tumor–stroma interface. This pathway is crucially important in human cancer 6. It acts initially tumor suppressive (inhibition of proliferation) but promotes metastasis in later stages in response to a tumor associated altered cellular context and variable environmental signaling profiles. Studies have revealed that several distinct CSC populations coexist in SCC and that tumor initiation and metastatic potential of these populations can be uncoupled 7. Therefor understanding CSC biology it is critical to develop novel CSC-targeted therapies, especially for patients with cancer and a poor prognosisNew therapeutics may be designed to specifically target these cells to block cancer progression. At the moment many chemotherapeutics attack rapidly dividing cells, so that it is easy for slowly dividing cancer SCs to evade these therapies40. Whether skin tumors like melanoma follow a cancer SC model for tumor development or a hierarchical model of tumor growth and progression (or combinatory/ other models) remains to be determined. These features of tumor dynamics, however, have implications on drug development in order to increase the efficacy of CSCs targeting 9. Cancer SCs from solid tumors usually express organ-specific markers. However, many caveats impede the discovery and identification of cancer SC markers for diagnostic and therapeutic purposes, to include the potential that the expression of these cell surface markers is not stable, that daughter cells may express different markers, that markers may not be unique to the cancer SCs but expressed in other cell types as well and that these surface protein markers may not have any role in cancer SC biology 8. Beside the isolation of CSCs by flow cytometry according to CSC-specific cell surface markers, CSCs can be identified by so-called “side population chains (SP)” within a tumor. The latters refer to a subpopulation of tumor cells that is highly conserved in human cancer cell lines and linked to SC characteristics (clonogenic). It further features drug transport property with multidrug resistance and might serve as a “evolutionary backup” to keep alive at least a sub-fraction of cells when exposure to cytotoxic compounds occurs. SP show differential efflux activity to the main cell population usually measured by efflux of the fluorescent DNA binding

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dye Hoechst 3334. Moreover, CSCs may be determined through sphere assays, since tumorigenic cells showing SC characteristics have the ability to grow as floating spheres in serum-free medium The significant role of aberrant Wnt signaling in cancer and CSC has engendered substantial efforts into the development of therapeutic approaches to target this pathway 9. Several small molecules, involved in tumor signaling, have been identified that selectively block the p300/β-catenin interaction, thereby increasing the CBP/β-catenin interaction, which maintains long-term pluripotency in a variety of SC populations. Thus the therapeutic potential of CBP/β-catenin antagonists (e.g., ICG-001) has been studied in various preclinical tumor models, where it has demonstrated the ability to safely eliminate drug-resistant tumor-initiating cells.

ROLE OF HEALTHCARE SERVICES IN MODERN MEDICINE

Vladimer Korghanashvili
International Black Sea University.

The accumulation of large amounts of healthcare information is in progress, and society is about to enter the Healthcare services. Medical professionals' daily tasks in clinical practice have become more complicated due to information overload, accelerated technological development, and the expansion of conceptual frameworks for medical care. Further, their responsibilities are more challenging and their workload is consistently increasing. As medical professionals enter the Health Big Data era, we need to reevaluate the fundamental significance and role of medicine and investigate ways to utilize this available information and technology.
For example, a data analysis on diabetes patients has already shed light on the status of accessibility to physicians and the treatment response rate. In time, large amounts of health data will help find solutions including new effective treatment that could not be discovered by conventional means. Despite the vastness of accumulated data and analyses, their interpretation is necessarily conducted by attending physicians who communicate these findings to patients face to face; this task cannot be replaced by technology.
As medical professionals, we must take the initiative to evaluate the framework of medicine in the Healthcare, study the ideal approach for clinical practitioners within this framework, and spread awareness to the public about our framework and approach while implementing them.
Keywords: Essence of medical care, Care range expansion, Data interpretation and traps, Initiative by professionals

CORRELATIONS BETWEEN GROUND-LEVEL OZONE CONCENTRATION AND COVID-19 CASES IN TBILISI

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We live in the midst of a global health crisis - a similar pandemic the world has not experienced for more than 100 years.
According to modern approaches, differentiation of solid dust particles into fractions, according to their aerodynamic diameter size are used to assess and normalize the impact on human health. Namely,

PM10 (particles with an aerodynamic diameter of 10 μm) and PM2.5 (particles with an aerodynamic diameter of 2.5 μm). The latter are considered the most dangerous to health because they have the ability to penetrate into the peripheral areas of the bronchioles and prevent airway into the lungs. These are carbon monoxide, lead, nitrogen dioxide, particles (very small solid or liquid particles in the air), sulfur oxides, and ground ozone (ozone does not escape directly into the air but is formed by exposure to sunlight, nitrogen oxides, and volatile organic compounds. There are two categories of particles: 10 micrometers (μm) or less (1 μm = 10m6 meters) and 2.5 μm or less in size.
They adopt a 2030 emissions inventory that accounts for fully implementing anthropogenic emissions controls required by federal, state, and/or local policies, which is projected to strongly influence future ozone levels. We quantify a comprehensive suite of ozone-related mortality and morbidity impacts including emergency department visits, hospital admissions, acute respiratory symptoms, and lost school days, and estimate the economic value of these impacts. Both GCMs project average daily maximum temperature to increase by 1-4°C and 1-5 ppb increases in daily 8-hr maximum ozone at 2030, though each climate scenario produces ozone levels that vary greatly over space and time.
Near-term changes to the climate have the potential to greatly affect ground-level ozone. Using a 2030 emission inventory with regional climate fields downscaled from two general circulation models, we project mean temperature increases of 1 to 4°C and climate-driven mean daily 8-hr maximum ozone increases of 1-5 ppb, though each climate scenario produces ozone levels that vary significantly over space and time. These increased ozone levels are estimated to result in tens to thousands of ozone-related premature deaths and illnesses per year and an economic burden of hundreds of millions to tens of billions of U.S. dollars (2010$).
Air pollution, the release of various gases into the atmosphere, finely divided solids, or finely dispersed liquid aerosols at speeds that exceed the natural capacity of the environment to disperse and dilute or absorb them. O&NG emissions are predicted to affect surface ozone across a large geographical scale.[5]
Empirical assessment shows that ambient PM2.5, nitrogen dioxide, ozone, pressure, dew, Windgust, and windspeed increase the spread of COVID-19, high relative humidity and ambient temperature have mitigation effect on COVID-19.

Methods: For several years now, we have been conducting between the troposphere (surface) ozone level and the incidence of various non-infectious-infectious diseases in Tbilisi. Given the current unorthodox situation, when the Covid-Pandemic swept through all aspects of our lives, we wondered if we could judge the frequency of Covid-pandemics and the relationship between ozone and the troposphere ozone. We conducted an epidemiological study between the troposphere ozone level and the frequency of co-infected cases in Tbilisi.
The study was conducted with a German-made ozonometer at a frequency of three to three minutes, every hour, in the Vake-Saburtalo district of Tbilisi, every day, continuously. Here is the material on how the frequency of co-infection cases in Tbilisi varied by months.
Correlations were determined by Spearman correlation analysis using the statistical package SPSS-23

Results: The first study showed that there was a reliable correlation between ozone level and coovid-19 morbidity ($p < 0.05$)
However, to draw final conclusions at this stage is impossible. The issue is still under investigation.determine the interesting result - the level of covidination decreases when the ozone level of the troposphere decreases too.

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STEM CELL NICHES AND SKIN DISORDERS

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Skin SCs reside in specialized morphological and functional units with a specific microenvironment. These so-called niches may contain various SCs as well as supportive cells providing framework or signaling to the SCs. Within human skin, at least five different niches have been delineated (basal layer of the epidermis, HF bulge, base of sebaceous gland, dermal papillae and dermis), that harbor different types of skin SCs:

Introduction: a) Interfollicular epidermal SCs are scattered singly across the dermal-epidermal junction. In the mucosa and on the palms and soles, SCs are located at the base of the rete ridges. They constitute about 1%~7% of epidermal basal cells. Several human SC markers have been described, including high surface expression of α6 and β1 integrins that may be relevant for sustaining the attachment of epidermal SC to their basement membrane through hemidesmosomes 1. Progenies from epidermal SCs that withdraw from the cell cycle, show a suppression of integrin α6 expression, before they start differentiating and moving towards the skin surface, where they slough off along terminal differentiation after approximately 4 weeks33. Furthermore, p63 (a homologue of tumor suppressor p53), a low expression of transferring receptor (CD71) and desmoglein 3 as well as LRIG1, the scaffold protein FERM lineated (basal layer of the epidermis, HF bulge, base of sebaceous gland, dermal papillae and dermis), that harbor different types of skin SCs 2:
a) Interfollicular epidermal SCs are scattered singly across the dermal-epidermal junction. In the mucosa and on the palms and soles, SCs are located at the base of the rete ridges. They constitute about 1%~7% of epidermal basal cells. Several human SC markers have been described, including high surface expression of α6 and β1 integrins that may be relevant for sustaining the attachment of epidermal SC to their basement membrane through hemidesmosomes. Progenies from epidermal SCs that withdraw from the cell cycle, show a suppression of integrin α6 expression, before they start differentiating and moving towards the skin surface, where they slough off along terminal differentiation after approximately 4 weeks33. Furthermore, p63 (a homologue of tumor suppressor p53), a low expression of transferring receptor (CD71) and desmoglein 3 as well as LRIG1, the scaffold protein FERM domain-containing protein 4A (FRMD4A), and CD46 have been established as interfollicular SC markers.
b) Beside tissue regeneration interfollicular SCs have been shown to be invested with the ability of generating hairs32. In HFs, several distinct SC-types have been identified. One multipotent SC population resides in the bulge located at the base of the HF (during telogene phase of hair development) or beneath the HF-associated sebaceous gland (in anagen phase). This follicular component is established during embryonic hair morphogenesis and resists periodic degeneration during the hair growth cycle. Stimulation of these SC to exit their niche as well as their proliferation and differentiation to form mature HFs is closely linked to the hair growth cycle 3. HF bulge SC show expression of the molecular markers such as cluster of differentiation 200 (CD200), keratin 15 (K15), Lgr5+ and pleckstrin homology-like domain family A, member 1 (PHLDA1) as well as transcription

factors Sox9+, Lhx2+ and NFATc126,36,37 Beside these epidermal SCs, another multipotent precursor cell population resides in HFs and dermal papillae that originate from the embryonic neural crest. These epidermal neural crest SCs (EPI-NCSCs) hold clonal multipotency that can give rise to melanocytic, neuronal and myogenic cell lineages in vitro and show differentiation potential toward mesenchymal lineages, as they are able to give rise to adipocyte, chondrocyte, and osteocyte progeny. Because of their advantageous physiological plasticity, multipotency, simple accessibility and non-controversial ethical issues, these EPI-NCSCs are considered promising donor cells for the repair of nervous system injuries 4.

Methodology: a) Sebaceous glands, attached to the HFs, are supposed to descend from different follicle SC populations, including Krt15+ bulge cells, LGR6+ and junctional zone SCs. Other studies describe the existence of periglandular Blump1-expressing sebaceous progenitors and a SC population within the gland itself 5. Progenitors give rise to terminally differentiated sebocytes that degenerate along holocrine secretion, releasing lipid-rich sebum into the hair canal that maintain an adequate lubrication of the skin surface 5.
b) Melanocyte SCs derive from the neural crest and permanently reside in the HF bulge, basal epidermis and probably also in the dermis 6. They give rise to pigment-producing melanocytes in the epidermis and the hair matrix. The fate of the melanocytes within the follicle is connected to the HF phases, where melanocytes proliferate and differentiate during anagen, and diminish through apoptosis in catagen 7. Dysfunction of this SC population results in pigmentation defects that phenotypically manifest as hair graying. The latter underlies an increased apoptosis of melanocyte SCs due to higher oxidative stress subsequent to the deficiency of anti-apoptotic Bcl2 protein that occurs with aging 8.
c) The steady remodeling of the dermis and fibroblasts as their primary cellular component is managed via mesenchymal SCs. They are located in the connective tissue within the dermis, surround HFs (especially in the follicular sheath and papillae) or are found among pericytes around blood vessels. Beside fibroblasts, dermal mesenchymal SCs generate myofibroblasts, endothelial cells, nerves, blood vessels, osteoblasts, chondrocytes and adipocytes 9. Morevoer, they are crucial for the coordination of the complex process of wound healing by attracting other host cells, growth factors and extracellular matrix (ECM) secretory proteins. Dermal SCs lack uniform distinctive markers but adhere to plastic in contrary to other SCs 10.
Keywords: Stem Cells, Dermal niches, Skin.

STRESS AS AN OCCUPATIONAL HAZARD

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Changes in the body during stress are a combination of protective physiological reactions that arise in response to the effects of harmful environmental factors in the body for protection. Stress is the cause of many diseases; it harms human health, disturbs the well-being of people, and affects human activities. The daily professional activities of modern man are accompanied by an increase in mental and intellectual loads. The rhythm of modern tense life increases the possibility of developing professional stress and the number of "stressful" professions. One of such professions appears medical field. The study aimed to identify occupational stressors and identify health-related changes in medical professionals and develop recommendations for coping with occupational stress. The research has

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shown that the work environment of medical staff, particularly nurses, can be considered as a place where the employees are exposed to stressful factors; Stress factors can be considered as stressors:. dealing with overburdened and responsible work, the process of taking care of seriously ill patients, in particular, the need to make the right decision in a short time, as well as the need to carry out well-organized emergency medical interventions in a short time.
Keywords: occupational medicine, occupational stress, medical personal.

STUDY OF THE RELATIONSHIP HOMOCYSTEINE LEVELS WITH POLYMORPHISMS OF FOLIC ACID AND VITAMIN B 12 METABOLISM GENES IN PATIENTS WITH RECURRENT MISCARRIAGE

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Introduction: Recurrent miscarriage is described as two or more consecutive pregnancy loses up to 22 weeks of gestasion.It is believed that the main causes of this problem are the level of homoysteine,as well as polymorphism in the genes that regulate the metabolism of folic acid and vitamn B12:MTHFR,MTRR,MTR.

Purpose of study: Study of the relationship of recurrent miscarriage with polymorphisms in genes that regulate homocysteine metabolism,as well as with the concentration of homocysteine.

Materials and methods: The study included 58 women with a history of miscarriage and who applied to the Azerbaican Medical University's Surgery Clinic for medical care.All of them were tested to determine polymorphisms in the genes for the metabolism of folic acid and vitamin B12:MTHFR677,MTHFR 1298,MTRR66,MTR2756 and their homocysteine level was also determined.At the same time,the criterion for inclusion in the study was the period after the last miscarriage of 3-9 months,and the exclusion criterion was the intake of folic acid and vitamins B6 and B12.The obtained data were processed using the methods of non parametric statistics:the Mann-Whitney U-test and Spearman's rank correlation using the computer statistics 10.0.Depending on the level of homocysteine, the patients were divided into 2 groups:group 1(control)-24women in whom the level of homocysteine did not differ from normal values(4,44-8,0 mc/mol),group2-34 women with hyperhomocysteinemia.

Results: The indicator of spontaneous abortions in the group with hyperhomocysteinemia was 2 abortions per woman,the similar indicator in the group of women without homocysteinemia was-1,the significiance of diferences when comparing these groups for this feature was significant(p=0,000015).Correlation analysis revealed the dependence of non-developing pregnancies on the presence of polymorphisms in the MTHFR 677 gene;no correlations with other polymorphisms(MTHFR 1298,MTRR,MTR)were found.Also,correlation analysis did not reveal any dependence of the homocysteine level on the presence of polymorphisms in the genes of folate and vitamin B12 metabolism in patients,which is important to take into account when examing women.

Conclusions: In the course of the study it was found that an increased level of homocysteine is a risk factor for the formation of reccurent miscarriage syndrome.At this level of homocysteine does not depend on the presence of polymorphisms in genes:MTHFR677,MTHFR1298,MTRR66,MTR2756.
Keywords: recurrent miscarriage, homocysteine, folic acid, metabolism genes

THE STATE OF MORPHO-FUNCTIONAL AND HEMODYNAMIC PARAMETERS IN THE LUNGS AND LIVER, A DAY AFTER PULMONECTOMY IN DOGS

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Relevance: Currently, the terms "pulmonary-heart failure", "hepatopulmonary syndrome" or "multiple organ failure" are quite often used (Schroeder R.A., 2000; Kato H., 2003). And this is quite justified, from the point of view of a systemic, organ or cellular approach to the levels of regulation of the vital activity of the body as a whole.
Hepato-pulmonal syndrome is observed in patients with liver pathology in about 4-29% of cases, and its specific manifestations are intra-pulmonary vascular dilatation and arterial hypoxemia.
Hypoxemia is the result of a low ventilation-perfusion ratio in capillary dilation and in the case of anatomical shunting, in the presence of direct arteriovenous shunts (Kahler C.M., 2000 Hoeper M.M.,2003). Some researchers (Ovcharenko S. A., 2001), consider the main and main pathogenetic link of pulmonary hypertension to be volemia of the small circle of blood circulation, against the background of port - pulmonal bypass grafting of the blood flow, combined with hypoxia and hypoxemia.
However, other researchers (Belyavsky V. S., 1993), the cause of pulmonary hypertension is associated with thromboembolism and vasoconstriction of capillaries, against the background of the release of a large number of vasoactive substances such as histamine, renin, epinephrine and serotonin. We tend to consider the second option the most likely.
This, however, does not exclude the influence of volemia of the small circle of blood circulation.
Porto-pulmonalny and hepato-pulmonalny syndromes are characterized by high mortality. Currently, these syndromes are a serious and almost unsolved problem. Further and comprehensive study of the pathogenesis of disorders and factors affecting the state of the microcirculatory bed and its reconstruction after lung resection will contribute to the successful solution of this issue (Cotton C.L., 2002; Colle J.O., 2003).
Materials and methods: Experimental studies were conducted on 50 mongrel adult dogs, from 7 to 14 kg.
All studies were strictly carried out in accordance with the requirements of the European Convention for the Protection of Vertebrates Used for Experiments and Other Scientific Purposes (Strasbourg, 18.03.1986).

Results of the study: On the first day after resection of 43% of the left lung, there was a maximum increase in pressure in the pulmonary artery (42±2.7 mm Hg, in the control group -20±1.0 mm Hg). However, at the same time, the pressure in the pulmonary vein decreased by 6.5%. In turn, an increase in the pressure of the pulmonary artery led to an increase in the pressure in the right ventricle by 91.3% (44±1.4 mmHg). The pressure in the right atrium increased by 61.8%.

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Such a significant increase in blood pressure in the right parts of the heart, naturally affected the increase in pressure in the posterior vena cava (95%).
One day after the lower lobe, left-sided pulmonectomy, the pulmonary arterial blood flow index corresponds to 79±3.4 ml/min/100g (counter 128±4.8), the pulmonary tissue blood flow index is 61±2.7 ml/min/100g (counter 84±3.7), the hepatic tissue blood flow index is 20±1.2 ml/min/100g (counter 29±1.2) and the portal-venous blood flow index was 52±2.7 ml / min/100g (counter 60±2.0)
It should be noted that a day after the experiment, the greatest changes occur in the precapillaries. There is a very significant increase in the diameter or colibre of the terminal arteriole. Compared with the initial values, the outer diameter of the terminal arterioles of the lungs increases by more than half (52.8%). On histological preparations of the lung, full-blooded precapillaries are determined, and hemostasis is noted in the lumen. In addition, the precapillaries are also expanded and their diameter in the lungs is increased by 47.9%, 28.7±0.52 microns in the experiment, and 19.4±0.80 microns in the control.
In the liver, 1 day after the experiment, there is an uneven expansion of the biliary plexus, and the structure of capillaries and arterioles, after impregnation with silver nitric acid, is revealed in fragments. The arterioles are also unevenly expanded, but the endothelial lining is not disturbed.
The diameter of the terminal hepatic arteriole increases by 17.6%, and the diameter of the liver precapillaries increases by 14.2% compared to the control figures.

As a result of the study, we found that a day after pulmonectomy, the diameter of the capillaries of the remaining lung also increases by 11.3%. Pericapillary edema is noted along the periphery of the vessel, as well as thickening and edema of the interalveolar septa, which is associated with the expansion of the functioning and opening of the reserve capillaries.
In the liver, the average capillary diameter increased by 9.8% compared to the control. The size of the sinusoids also increased. The diameter of the sinusoid capillaries of the liver averaged 27.7±1.7 microns, with a control of 17.3±1.5 microns.
The trend we noted, a day after pulmonectomy, extends to both postcapillaries and venules. In the postcapillaries of the lung, the diameter increases by 38.2%, there is an expansion of the lung venules to 64.2±0.67 microns, with a control of 42.1±0.86 microns. The diameter of the terminal hepatic venules is 78±5.2 microns, which indicates an increase of 17.6%.
On preparations stained according to Van Gieson, loose connective tissue is detected in the venules. There are phenomena of perivascular edema, fullness of blood and hemostasis. Microscopic examination of the liver shows not only an increase in the diameter, but also an uneven expansion of the lumen of the sinusoid capillaries.
During the experiment, it was also found that during the first three days after pulmonectomy, the pressure in the pulmonary artery increased in the range from 25 to 110%, compared with the initial indicators. The most critical terms, in this regard, are the 1st and 3rd days after the operation. Severe pulmonary arterial hypertension leads to an increased load of the right parts of the heart.

Conclusions: Morphological and morphometric changes in the remaining lung after pulmonectomy are most pronounced on the first day. Among these changes, intravascular disorders in the form of stagnation and hemostasis can be distinguished. Extravascular disorders in the form of pronounced foci of perivascular edema, stretching of the alveoli with thinning of the interalveolar septa. In the structure of the liver, there is an increase in the diameter of all the links of the hemomicrocirculatory

bed. This is probably due to increased pressure in the right half of the heart and in the posterior vena cava system.

КЛИНИЧЕСКИЙ СЛУЧАЙ: ВТОРИЧНАЯ В-ЗРЕЛОКЛЕТОЧНАЯ ЛИМФОМА У РЕБЕНКА ПОСЛЕ ЗАВЕРШЕНИЯ ПРОТИВООПУХОЛЕВОЙ ТЕРАПИИ ПО ПОВОДУ ОСТРОГО МИЕЛОБЛАСТНОГО ЛЕЙКОЗА

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Актуальность: В лечении онкологических больных в последние годы достигнуты существенные успехи. Изменения привели к улучшению показателей выживаемости и более длительной продолжительности жизни. В связи с этим все большую актуальность приобретает изучение риска развития вторых первичных опухолей. Больные, получившие лечение по поводу первого злокачественного новообразования, остаются в группе повышенного риска развития второй опухоли на протяжении всей последующей жизни. Риск развития вторых и последующих опухолей у пациентов с уже выявленными опухолями примерно в 1,3 раза выше, чем у лиц, у которых ранее не было новообразований.
Ключевые слова: ОМЛ, вторые опухоли у детей, В-лимфома, опухоли, противоопухолевая терапия.

Цель: ознакомить педиатров, ВОП врачей, детских онкологов-гематологов со случаем развития второй первичной опухоли у ребенка, ранее перенесшего злокачественное новообразование.

Основная информация: Ежегодно в последние годы регистрируется около 70–80 детей и 20 подростков с диагнозом злокачественного новообразования.
У детей ОМЛ составляет около 20% острых лейкозов. Ежегодно заболевают 0,5- 0,7% на 100.000 детского населения (12-15 детей) в год и имеют худший прогноз (71% -долгосрочно выживших). В абсолютном большинстве случаев ОМЛ является спорадическим заболеванием, причиной которого являются многоэтапные кооперирующие мутации (точечные, аномалии числа копий, транслокации) в гемопоэтических клетках-предшественниках, результатом которых является прекращение линейной гематологической дифференцировки и неконтролируемая пролиферация злокачественных аналогов миелоидных предшественников.
Частота: У детей в структуре злокачественных опухолей первое место занимает лейкозы (32-34,0%), второе — опухоли ЦНС (14-17,0%), третье – ЛХ и НХЛ (11-14,0%), а четвертое — солидные опухоли (нефробластома, нейробластома, остеогенные саркомы, опухоли мягких тканей и др.)

Заболеваемость: В настоящее время показатели заболеваемости детей в возрасте от 0 до 15 лет колеблется 15-20% в год. Так, в Германии этот показатель в 1992 г. — 14,6%, и подобная тенденция просматривается, как в европейских странах, так и в США [5].

Стабильная заболеваемость детей лейкозами — около 4,0% детей в год, зарегистрированная в течении последних 15-20 лет, позволяет экстраполировать эти данные на следующее десятилетие. Аналогичные процессы регистрируются и в Казахстане, где за последние 8-10 лет показатель заболеваемости детей лейкозами составил от 2,8% до 3,2% в год. [4].

EXPERIENCE IN THE USE OF TRANSFER FACTOR IN BRONCHIAL ASTHMA AGAINST THE BACKGROUND OF INTESTINAL DYSBIOSIS

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Relevance: In recent years, there has been a frequent combination of respiratory and digestive diseases, which creates additional difficulties in justifying complex therapy. In this regard, it is important to identify risk factors for the development of intestinal dysbiosis in various categories of patients with bronchial asthma to clarify the significance of the state of the intestinal microbiotope in the mechanism of development of this pathology.

The aim of the study: Our goal was to restore the normal intestinal microflora in patients with bronchial asthma and to study the immune status.
Materials and methods of research. Patients were prescribed Transfer Factor, which is registered as a dietary supplement and is allowed for use as a universal corrective agent of normal intestinal microflora, it is also used for the prevention and treatment of diseases of the gastrointestinal tract. The main function of transfer factors (cellular mediators) in the body is to provide immune protection against pathogenic microflora, cancer cells and other antigenic substances that can disrupt vital processes in the body.

The results of the study: It is noted that the "Transfer Factor", offered by the company 4 Life, stimulates the cellular link of the immune system, in particular, killer lymphocytes, activates the production of immunocytokines, regulates the function of immunity. As Academician of the Russian Academy of Medical Sciences A. A. Vorobyov notes, the advantage of "Transfer Factor" over other immunomodulators is that it has a wide spectrum of action, is absolutely safe and harmless, is used orally, has no contraindications to use, does not cause side effects, is equally effective for adults and children. As a universal immunocorrector, transfer factor induces or weakens the immune response.
Conclusions: Thus, there are wide possibilities of using the oral version of transfer factors in practice with bronchial asthma against the background of intestinal dysbiosis for preventive purposes.

TWO CASES WITH SKIN REACTIONS BECAUSE OF INACTIVATED SARS-COV-2 VACCINATION

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SARS-CoV-2 vaccine (CoronaVac, by Sinovac Life Sciences, Beijing, China) is an inactivated vaccine against coronavirus disease (COVID-19). Although various skin reactions have been reported

because of COVID-19, skin reactions because of inactivated vaccine are rare for now but it is expected that there will be more publications on this topic in the future. Here, it's aimed to present two cases with skin reactions because of inactivated SARS-CoV-2 vaccine (CoronaVac).

A 22-year-old health worker female case applied to dermatology outpatient clinic because of erythematous macules on her nape and back appeared three days after 2nd dose vaccine of inactivated SARS-CoV-2 vaccine (CoronaVac). This skin rash had been for six days at the time of the case's outpatient clinic application. The patient didn't have any diseases. Spongiotic skin reaction was determined at biopsy. Nonspecific exanthema was thought clinically (figure 1-2). She had no complaints due to rash. Moisturizer was suggested to the case. The skin rash appeared to heal completely on the ninth day. (vaccine 1st dose: 01.14.2021, 2nd dose: 02.14.2021, onset of the rash: 02.17.2021, application to dermatology outpatient clinic: 02.23.2021)

A 73-year-old female case with rheumatoid arthritis, applied to dermatology outpatient clinic because of wounds on her hands appeared four days after 1st dose vaccine of inactivated SARS-CoV-2 vaccine (CoronaVac). These wounds had been for ten days at the time of the case's outpatient clinic application on the palms and backs of the hands were observed (figure 3-4). She had no complaints due to rash. The patient refused to be taken biopsy. Betamethasone dipropionate- gentamicin sulfate containing ointment was suggested for the case. (vaccine 1st dose: 03.08.2021, onset of the rash: 03.12.2021, application to dermatology outpatient clinic: 03.22.2021)

Adverse reactions due to vaccines can appear against any excipient used in the preparation or any active component of the vaccine. These side effects can exist because of host immunodeficiency. In the literature, for now, there is one publication about skin reactions because of inactivated SARS-CoV-2 vaccine (CoronaVac). In this publication, Temiz et al. have been reported acral chilblain-like lesions of two cases. As far as is known, reports about cutaneous manifestations due to inactivated SARS-CoV-2 vaccine (CoronaVac) have been found in the literature very rarely. Therefore, the aforementioned cases were deemed worthy of presentation.

Keywords: inactivated SARS-CoV-2 vaccine, COVID-19, skin reactions.

РАЗВИТИЕ ИЛИ УКРЕПЛЕНИЕ СИСТЕМ ЗДРАВООХРАНЕНИЯ И ОБРАЗОВАНИЯ

Нана Джикия

Развитие или укрепление систем здравоохранения включает выявление проблем, которые препятствуют предоставлению качественных медицинских услуг, и «наращивание потенциала в важнейших компонентах систем здравоохранения для достижения более справедливых и устойчивых улучшений в отношении медицинских услуг и результатов в отношении здоровья».

Система оказания медицинской помощи включает четыре функциональных компонента - финансирование, страхование, доставку и оплату, или четырехфункциональную модель.

Системы оказания медицинской помощи различаются в зависимости от расположения этих компонентов.

Устранение социальных норм с такими негативными последствиями, как коррупция, воровство, неформальные платежи и кумовство, также может укрепить системы здравоохранения. Кроме того, частный сектор влияет на национальную политику, а также играет значительную роль в предоставлении медицинских услуг и медицинских принадлежностей.

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Новые способы мышления и работы, подкрепленные сложными адаптивными системами и наращиванием местного организационного потенциала, открывают потенциал для развития устойчивых и ориентированных на человека систем здравоохранения, поскольку мы стремимся определить повестку дня после достижения ЦРТ. Однако необходимо отказаться от основного внимания к редукционистским подходам, которые делают упор на одну болезнь, и вместо этого направить усилия на системные подходы, которые улучшают институты и помогают укрепить организационный потенциал в странах, а также развивать местное лидерство и инновационные решения. Только тогда мы можем рассчитывать на развитие сильных систем здравоохранения, которые смогут эффективно и справедливо бороться с бременем болезней, с которым сталкиваются страны с низкими доходами.
Как улучшить систему образования

1.Лучшие стандарты: Политика и программы в структуре образования должны разрабатываться таким образом, чтобы ставить перед собой более высокие стандарты и цели. Стандарты - это официальные документы, устанавливающие единые образовательные критерии, методы, процессы и практики, разработанные в процессе аккредитованного консенсуса. Стандарты должны разрабатываться на основе руководящих принципов открытости, баланса, консенсуса и надлежащей правовой процедуры и должны быть должным образом установлены для удовлетворения технических, нормативных, социальных и рыночных потребностей, а также должны быть катализаторами технологических инноваций и глобальной рыночной конкуренции.

2.Больше ответственности: Учреждения, преподаватели, руководство - это люди, которые предоставляют студентам инструкции, учебные программы и демонстрации и тем самым прокладывают путь к результатам. Должна существовать стратегия подотчетности, в соответствии с которой учреждения, показывающие выдающиеся результаты, должны быть вознаграждены, а учреждения с более низкими результатами должны быть наказаны. Короче говоря, создание подотчетности в государственном или частном образовании чрезвычайно сложно. Ни один разработчик политики или поставщик медицинских услуг не несет ответственности за неуспеваемость учащихся; скорее, ответственность за это несет сложная сеть политиков и провайдеров. Некоторые потенциальные способы усилить подотчетность - это усилить голос клиента, улучшить управление, предоставить клиентам более качественную информацию, уточнить роли и обязанности, а также усилить стимулы и последствия.

3.Вовлечение родителей: В целом исследования неизменно показывают, что участие родителей в обучении детей действительно положительно влияет на успеваемость учеников. У большинства детей в жизни есть два главных воспитателя - родители и учителя. Родители являются главными учителями до тех пор, пока ребенок не пойдет в первый класс или не пойдет в школу, и они по-прежнему оказывают большое влияние на обучение своих детей в школе и за ее пределами. И школа, и родители должны сыграть решающую роль. Дети добиваются большего, когда школы и родители работают вместе. Родители могут помочь более эффективно, если они знают, чего школа пытается достичь и как они могут помочь. Успешная система поддерживает большее участие родителей в выборе процесса обучения и обучения детей. Школа играет важную роль в определении уровня участия родителей в учебе. В частности, школы могут изложить свои ожидания в отношении родителей и регулярно

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сообщать родителям о том, что изучают дети. Кроме того, школы могут предоставить родителям возможность поговорить со школьным персоналом о роли родителей в образовании их детей посредством посещений дома, семейных вечеров, а также хорошо спланированных собраний родителей и учителей и дней открытых дверей, регулярно запрашивая отзывы и предложения родителей относительно школы рабочая система.

4. Автономная структура: Некоторые страны проявляют новаторский подход в своем поиске оптимальной школьной структуры, в то время как другие проводят политику с небольшим отклонением от ортодоксальной модели местной или общественной школы. Исследования показывают, что переход к более автономной школьной структуре приводит к значительному улучшению качества приема учеников и значительному улучшению успеваемости учеников. Успешная система поддерживает автономную структуру, позволяющую школам свободно определять свои рамки и ресурсы, необходимые для их выполнения.

5.Адаптируйтесь к новым технологиям: Образовательные учреждения должны адаптироваться к новым технологиям, если они хотят оставаться конкурентоспособными. Технологии стали неотъемлемой частью учебного процесса большинства студентов, и учебные заведения должны предлагать новейшие технологии. Некоторые преимущества использования информационных технологий в образовании: Он способствует развитию научной, экономической, технологической, информационной и многокультурной грамотности и глобальной осведомленности, способствует изобретательному мышлению, развивает эффективное общение, стимулирует личную, социальную и гражданскую ответственность и в конечном итоге приводит к высокой производительности. Это также дает учащимся ощущение использования реальных инструментов с эффективными, актуальными и высококачественными результатами. Студентов будут привлекать те компании или учреждения, которые могут идти в ногу с технологическими изменениями. Использование современных технологий и оборудования улучшит процесс обучения, а также повысит производительность.

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