

Анотації наукових робіт

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FEATURES OF MOTIVATIONAL TYPES OF MEDICAL STAFF AT HEALTH CARE INSTITUTIONS

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The aim of the research: to determine the motivational types and leading internal motives of the medical staff at health care institutions.

Materials and methods: The psychological testing of 54 doctors and 52 nurses of Kherson health care institutions was performed by the method for determination of motivational types by *Herchakov V. I.*

Results: It was found that a professional motivational type prevailed in doctors' group, and a patriotic motivational type prevailed in nurses' group. The leading internal motive for doctors, which can create the feeling of job satisfaction, is the recognition of their professional success, for nurses – an involvement in socially important work of the institution. Doctors in comparison with nurses had significantly higher average index of professional motivational type and significantly lower index of a lumpenized type. The determined features revealed different ways of motivation for the work of doctors and nurses.

Conclusions: In conditions of limited funding and high demands for quality of medical care, an effective motivational system in health care institutions can only be built on the basis of determination of the leading internal motives and characteristics of motivational types of doctors and nurses.

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STUDYING DYNAMICS OF PREFERENCES IN PRESCRIBING MEDICATIONS FOR PATIENTS WITH ACUTE CEREBROVASCULAR ACCIDENTS

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The aim of the research: The improvement of drug supply for patients with acute cerebrovascular accidents (CVA) (using ischemic stroke (IS) as an example) based on the improvement of medication selection system.

Materials and methods: Study objects included the information in questionnaires for expert assessment of medications prescribed for pharmacotherapy (PT) of IS. The studies were performed in 2010 and 2013. The methodological approaches for expertise of medication and the structure of the questionnaire were detailed in the previous article². The design of the introduction and the data part of the questionnaire was similar. The expert part of the questionnaire had some special characteristics. The previous questionnaire (2010) included the list of 130 medications from various pharmacotherapeutic groups. The questionnaire of 2013 included 128 medications. Both assessments of the obtained results were performed with the account of the experts' competence.

Results: The physicians' preferences in prescribing medications for patients with acute CVA (using IS as an example) were studied by expert evaluation method in dynamics (2010 and 2013). The following parameters were assessed: the accessibility of information about new medications, the attitude to the new medications, factors that influence the choice of medications (type of health technology documentation, medication origin, patients' solvency etc.). The effectiveness, safety and rates for medication prescribing were assessed (with account of the experts' competence) for the PT of IS and their weighted-average score was calculated. The results showed that these scores for most medications *decreased* by approximately *one-half* in 2013 in comparison with 2010 that indicated the variability of physicians' preferences.

Conclusion: The physicians' preferences in prescribing medications for patients with acute cerebrovascular accidents (brain infarction (ischemic stroke, IS) as an example) were studied in dynamics (2010 and 2013). The following parameters were assessed: the accessibility of information about new medications, the attitude to the new medications, factors that influence the choice of medications (type of health technology documentation, medication origin, patients' solvency etc.). The effectiveness, safety and rates for medication prescribing were assessed (with account of the experts' competence) for the pharmacotherapy (PT) of IS and their weighted-average score was calculated. The favourable tendencies of approaches for PT of IS were revealed. These changes seem to be related to the commitment to the best global practice for treatment of patients with this condition.

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NEW APPROACHES TO ANTIMICROBIAL AND ANTI-INFLAMMATORY THERAPY OF UROGENITAL INFECTIONS

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The aim of the research: To assess the expediency of treatment of urogenital mixed infections in women with antimicrobial and anti-inflammatory drug Tamistol®.

Materials and methods: The study involved 72 patients of reproductive age complaining of excessive discharge from the genital tract, pain, itching, burning sensation in the perineum. Examination of vaginal microflora and pathogen identification were carried out according to current clinical protocols. The patients were divided into two statistically identical groups due to therapy methods.

Results: Dynamic observation of the treatment revealed that subjective complaints disappeared and objective symptoms diminished in every studied woman. However, the rate of positive dynamics differed due to the therapy methods (group A and group B). Combined therapy of patients with Tamistol® improved the subjective state, on average on the second day of treatment. Itching, burning and abnormal discharge from the urogenital tract stopped in 4-5 days of treatment (group A), and in 2 days (group B), pain in the vagina – in 4-5 days (group A), and in 2-3 days (group B). The study revealed objective diminishing of symptoms on average in 4-5 days of therapy in both groups, mucous congestion and infiltration — in 3 days, epithelization of erosions was observed in 7-8 days of treatment (group A) and in 6-7 days (group B).

Studying bacterioscopic and cultural results in 10 days of treatment proved efficiency of treatment in 91.7% of patients

Conclusions: Combined therapy of urogenital infections with Tamistol® reduced the duration of treatment and increased the efficiency of treatment.

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TECHNOLOGICAL RESEARCH AND STANDARDIZATION OF NETTLE JUICE IN THE PROCESS OF DEVELOPING HERBAL REMEDY FOR HAIR LOSS TREATMENT

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The aim of the research: Development of nettle juice laboratory technology and studying biologically active substances composition, their quantitative analyses and substantiation requirements for identification and quantitative content.

Materials and methods: The peculiarities of fresh raw material pressing, conditions of enzyme inactivation, preservation and purification method of the juice were studied during the process of obtaining stable nettle juice. The analysis of the nettle juice was performed due to the following parameters: description, density, pH, dry residue, identification and quantification of biologically active substances (BAS) (hydroxyl cinnamic acids, carotenoids, chlorophyll). The relative density of the juice was determined with pycnometer method according to the Article 2.2.5. of Ukrainian State Pharmacopoeia (USP) 2; pH determination was carried out by

potentiometric method in accordance with the Article 2.2.3. of USP 2; the juice dry residue was established in accordance with the Article 2.8.6 of USP2. To identify hydroxyl cinnamic acids in the nettle juice, the thin layer chromatography was carried out. To identify carotenoids and chlorophyll from the juice extract, spectrophotometric measurement was applied. Assessment of the nettle juice BAS quantitative content was performed with spectrophotometric method with a spectrophotometer Specord 200.

Results: The laboratory technology for obtaining nettle juice from the fresh aerial parts was developed at the first stage of work. It involved the following steps: procurement of raw materials, grinding, pressing, re-grinding and pressing, inactivation of enzymes, preservation with ethanol, sedimentation, filtration, packaging, labeling of finished products. The organoleptic, physical and chemical analyses determined the following quality criteria for nettle juice: description – dark brown transparent liquid with a specific smell; density ranging from 0,994 to 1,106 g / ml; pH from 6,5 to 7,0; dry residue at least 3,5%; identification (TLC method) and quantitative determination: hydroxyl cinnamic acids at least 0,01%, carotenoids at least 2 mg%, chlorophyll at least 3 mg%.

Conclusion: Thus, the laboratory technology for obtaining nettle juice was developed with the yield at least 50%. Organoleptic, physical and chemical parameters of the obtained juice were determined: description, density, pH, dry residue, identification and quantification of hydroxyl cinnamic acids, carotenoids and chlorophyll.

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PECULIARITIES OF 1-11 GRADES PUPILS' NUTRITION IN THE CITY OF LVIV.

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The aim of the research: The object of the paper was to study the peculiarities of 1-11 grades pupils' nutrition in the city of Lviv.

Materials and methods: The study involved 193 pupils aged from 7 to 17 of Lviv secondary schools: girls (51%), boys (49%). Grade groups: 1-4 grades – 31.1% (60 students), 5 - 8 grades – 34.7% (67 students), 9-11 grades – 34.2% (66 students). The statistical processing of digital data was performed by the method of variational statistics using SPSS and Exsel software.

Evaluation of the research results and their authenticity was studied by determining the average mean (M) and the margin of error (m), the statistical significance of results was proven by the confidence level of p=95%.

Results: The overall analysis of obtained data showed that the diet of most pupils of Lviv secondary schools did not meet the requirements of a balanced nutrition. The optimal frequency of food intake was 4-5 times a day in 62.7% of surveyed parents and/or senior pupils. Pupils of 9-11 grades more frequently (p <0.05) ate only 3 times a day. And the habit of night eating was more common among them (p <0.05). There was no breakfast in the diet of 22% of pupils, among them 9-11 grades pupils constituted more than a half (63.7, p<0.05). Every third surveyed pupil had snacks throughout the day. The pupils' diet was unbalanced considering the consumption of food necessary for the growing body, like meat, fish, eggs, milk, dairy products, cereals. It mostly concerned seniors. The so called "non-child" food was popular among pupils of all age categories. Only 25.0% of pupils consumed a sufficient amount of safe drinking water. In contrast, 45.0%, p <0.05 of seniors drank beverages with harmful ingredients which triggered a tendency to spread this harmful habit.

Conclusions: Studying nutrition peculiarities of 1-11 grades pupils of Lviv secondary schools showed a high probability of pathological disorders due to eating behavior. It indicated the need to develop new and improve current programs for preserving children's health, including conducting individual counseling of pupils and their parents.

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INFLUENCE OF THIOTRIAZOLINE OINTMENT WITH SILVER NANOPARTICLES ON MORPHOLOGICAL CHANGES IN THE SKIN OF RATS WITH EXPERIMENTAL BURN

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The aim of the research: To study morphological features in the skin of rats with experimental thermal burn after administration of Thiotriazoline ointment with silver nanoparticles (SNP).

Materials and methods: Studies were conducted in 96 rats of the population WAG. The III degree thermal burn was induced. «Thiotriazoline Ointment 2%», «Argosulfan» (reference drugs) and Thiotriazoline ointment with SNP (primary drug) were applied daily for 28 days immediately after heat exposure. The material for morphological studies included tissues complex (skin, subcutaneous tissue, muscle) cut from the thermal damage zone in rats of all studied groups on 7, 14, 21, 28 day of experiment.

Results: A succession of reparative process phases with the formation and reconstruction of the scar was observed in rats with thermal burns without treatment. After application of «Thiotriazoline Ointment 2%» and «Argosulfan», the process of healing was characterized by decreased intensity and duration of traumatic inflammation, accelerated wound granulation, granulation maturation and epidermization in comparison with the control group. However, in 20%-40% of cases, there was a secondary formation of stromal necrosis and cysts, focal hyperplasia and degenerative changes in the epidermis with its desquamation loci, focal fibrosis of the stroma in the surrounding tissue. The reparative processes occurred more intensively after administration of Thiotriazoline ointment in comparison with the referent drugs. It was proved by decrease in destructive processes within epidermis and dermis, by absence of necrotic suppurative complications, acceleration of epithelization and complete closing of the defect in most supervisions.

Conclusions:

1. The thermal burn in rats without treatment was in the form of incomplete reparative regeneration with the formation of scar tissue.
2. After administration of «Thiotriazoline Ointment 2%» and «Argosulfan», the process of healing was characterized by decreased intensity and duration of traumatic inflammation, accelerated wound granulation, granulation maturation and epidermization in comparison with the control group.
3. The reparative processes occurred more intensively after application of Thiotriazoline ointment with silver nanoparticles in comparison with the referent drugs.

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MARKERS OF POSTNATAL ONTOGENESIS IN PREMATURE NEWBORNS DURING PRIMARY HEALTH CARE PERIOD

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The aim of the research: to develop a metric classification of threats in premature newborns for early stratification and prevention of negative consequences of premature birth due to data analysis of obstetric histories, objective examination, laboratory and instrumental examination results.

Materials and methods: The main clinical objects of research involved 58 premature newborns, with the following selection criteria: gestational age ≥ 32 weeks, minimum weight at birth – 1600 g, absence of significant congenital abnormalities, birth injuries, hereditary disease. The comparison group consisted of 26 apparently healthy premature newborns.

The first group (n=29) involved premature newborns with hypoxic and ischemic central nervous system damages (HID CNS). The second group (n=29) included premature newborns without any deviations of neurologic status during laboratory and instrumental examination. However, they needed treatment for bacterial and inflammatory

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diseases manifested on 9th-11th day of life (at age of 10±0,5 days). The method of metric classification of threats in premature newborns with a low body weight at birth was developed due to the sequential decision procedure by Bayes' method, on the ground of determining clinical manifestation of hypoxic and ischemic central nervous system damages or on the ground of absence of confirmed instrumental changes in central nervous system.

Results: A list of prognostics and range of signs with the highest probability of clinical manifestations or absence of hypoxic and ischemic central nervous system damages manifestations was elaborated. A list of signs specific for healthy premature newborns was specified as well.

Therefore, during the registration of signs («period of gestation – 30-33 weeks», «physical development – lower than average», «necessity for oxygen therapy», «body weight – 6-10 g for the first 14 days», «gastrogavage for 3-5 days», «duration of biliousness – for 15-18 days», «cuticularization of funicle wound – for 8-14 days», «temperature gradient – 3,1-3,5°C», «volume of thymus gland per piece of body weight – 2,48-2,86 ml/kg»), the probability of manifesting HID of CNS was 40 times more than preserving intact central nervous system, and probability of health in children with these signs cannot be predicted.

At the same time, with a total range of signs «period of gestation – 30-33 weeks», «high physical development – P50-90», «performance of intubation and apparatus of artificial ventilation of lungs», «body weight gain – 3-5 g / per day», «gastrogavage – for 1-2 days», «duration of biliousness and toxic erythema >21 days», «cuticularization of funicle wound – for 15-18 days», «temperature gradient $\Delta t^{0,2,4,2,0^{\circ}\text{C}}$ », «volume of thymus gland per piece of body weight – 2,48-2,86 ml/kg», the probability of absence of changes in central nervous system against coexisting perinatal pathology is 27,6 times more than probability of HID of CNS, as well as probable health in children with these signs cannot be predicted.

A total range of the following signs: «period of gestation – 36-37 weeks», «mid-level physical development – P50», «involvement of oxygen therapy», «body weight gain – 11-18 g per day», «breast-feeding», «duration of biliousness – for 10-14 days» and «toxic erythema – for 3-7 days», «cuticularization of funicle wound – for 5-7 days», «temperature gradient $\Delta t^{0,1,9-1,5^{\circ}\text{C}}$ », «volume of thymus gland per piece of body weight – 2,0-2,4 ml/kg» can predict successful postnatal ontogenesis in premature newborns.

Conclusions:

1. The proposed method of metric classification of threats involved comprehensive studying obstetric history and perinatal anamnesis, as well as objective examination of newborns. It is appropriate for differential and diagnostic searches of neonatal period.
2. The gradient of central and peripheral body temperature represented the state of equilibrium of thermoregulation processes.
3. Further search may involve studying clinical, laboratory and instrumental evaluation markers of general state in premature newborns during nursing, as well as developing uniform supervision standards for such infants.

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ROLE OF IL-1 β AND TNFRSF11B GENE POLYMORPHISMS IN PATHOGENESIS OF ACUTE PURULENT PERIOSTITIS

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The aim of the research: studying polymorphic variants of IL-1 β and TNFRSF11B genes in acute purulent periostitis (APP).

Materials and methods: The study involved 39 patients with diagnosed APP at the age from 20 to 75 years of both sexes and 60 volunteers (control group). DNA was isolated from the oral fluid. Investigation employed diagnostic test system “DNA-Express” for IL-1 β T-31C gene and TNFRSF11B Lys3Asn gene. The content of calcium, phosphorus, alkaline phosphatase and acid tartrate resistant phosphatase in the oral fluid was also evaluated.

Results: The frequency of TT, CT and CC genotype of IL-1 β gene polymorphism had no significant differences in patients with APP and in the control group. Statistically significant differences were obtained between the group with APP and the control group in Lys/Lys and Asn/Asn genotype of TNFRSF11B gene. Comparative characteristics of mineral exchange, bone metabolism and dental status in patients with APP in relation to polymorphisms of IL-1 β and TNFRSF11B genes established statistically significant results for the index of hard dental tissues condition and the duration of postoperative period (p/o period). The analysis of the association

degree between polymorphic variants of IL-1 β gene and APP did not reveal any statistical significance. The association between Lys3Asn polymorphism of TNFRSF11B gene and APP was found to be significant.

Conclusions:

1. Patients with APP were found to have an association between IL-1 β and TNFRSF11B gene polymorphisms and dental status. Patients with CC genotype of IL-1 β gene polymorphism and Asn/Asn genotype of TNFRSF11B gene polymorphism experienced more severe course of the disease.
2. The study allowed to determine essential differences in TNFRSF11B gene polymorphism between the group with APP and control group in Lys/Lys and Asn/Asn genotype.

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OPTIMIZATION METHODS OF PSORIASIS ARTHROPA TREATMENT INCLUDING CHANGES OF SOME STRESS-IMMUNOLOGICAL PARAMETERS

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The aim of the research: The objective is to improve diagnostics and differential diagnostics, as well as to increase the treatment efficacy for patients with psoriasis arthropica (PA) including changes in some immunological parameters and clinical course of psoriatic disease (PD).

Materials and methods: the study involved comprehensive examination of 187 psoriasis arthropica patients with the disease duration from 8 to 24 years; most of them had concomitant somatic diseases.

Results: It was found that the number of registered cases of psoriasis among the population of Lviv region increased in 1.9 times for the last 20 years (1993-2014).

Studying sera of PA patients revealed a significant reduction ($p < 0.01$) of immune cells with phenotype CD3+ in 50%, CD 22+ or B-lymphocytes – in 46.6%, moderate decrease of CD4 + – in 12.9%, CD8 + – in 19.6% and increased content of CD16 + – in 18.4%; increased level of cytokines IL-1 β – in 5-11 times, IL-8 – in 60 times, IL-17 – in ten times, IL-22 – in 5 times, stress hormone cortisol – in two times, IgG – in 5 times, and immunoglobulins IgM, CIC – in three times. It proved the intensity of stress mechanisms in patients.

Statistically reliable increase of cytokines concentration in patients' sera (in more than 2-3 times) and synovial fluid (in more than 2-5 times of corresponding values in the serum ($p < 0.05$)) during the first month since the beginning of PD articular syndrome can serve as an additional diagnostic criterion for early PA diagnostics.

The pathogenetically based tactics of step-by-step algorithm for integrated therapy of PA patients with non-steroid anti-inflammatory drugs (Arcoxia/ Naklofen Duo), disease-modifying medications (Sulfasalazine EP/ Methotrexate) and autohaemotherapy improved treatment efficacy and patients' life quality. It was proved by the normalization of clinical, laboratory and instrumental parameters.

Conclusions: Only an integrated approach to the examination of psoriatic patients with damaged locomotor system can provide the efficacy of early PA diagnostics and treatment.

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INVESTIGATION OF IMMUNOHISTOCHEMICAL MARKERS OF IMMUNE SKIN INFLAMMATION IN PSORIASIS

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The aim of the research: to investigate the mechanisms of local immune inflammation in psoriasis taking into account changes of immunohistochemical expression of toll-like receptor 2 (TLR2) in patients with dermatosis before and after systemic immunosuppressive therapy.

Materials and methods: Immunohistochemical study of biopsy material taken from 62 patients with psoriasis. In addition, biopsy materials taken from anterior abdominal wall of healthy individuals of corresponding age (5 patients) were studied for comparison. Immunohistochemical methodologies with identifying TLR2 marker expression were used to determine character and spreading of local cellular immune and inflammatory reactions.

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Results: Immunohistochemical study of biopsy material taken from the skin of healthy individuals for determining TLR2 expression pattern revealed background diffuse cytoplasmic and nuclear staining of epidermal cells, vascular endothelial and macrophage cell unit. Intense diffuse background staining of the epidermis and vascular endothelial cells of the inflammatory infiltrate in the dermis were detected during immunohistochemical reaction with TLR2 of the biopsies taken from psoriatic patients. The number of epidermis cells with positive background staining was about 80%. Activated macrophages increased in size and expressed TLR2 receptors actively. Activated macrophages migrated to the bottom of the papillae where they were included in the inflammatory infiltrates localized perivascularly. The results of performed immunohistochemical studying biopsy materials taken from healthy individuals and from psoriatic patients before and after systemic immunosuppressive therapy revealed considerable TLR 2 expression in developing immune skin inflammation in this dermatosis.

Conclusion: The revealed changes of immunohistochemical TLR 2 expression in psoriatic skin rash of patients with psoriasis in the treatment dynamics indicated a certain value of the corresponding receptor in developing immune skin inflammation in psoriasis, and may also serve as an additional diagnostic and prognostic marker for the clinical course of dermatosis. In addition, identified changes of TLR2 expression in the psoriatic skin rash areas may clarify the pathogenesis of psoriasis.

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ON THE HISTORY OF MEDICINE: UKRAINIAN AND POLISH HISTORICAL AND BIOGRAPHICAL PARALLELS

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The aim of the research: Despite contradictions, and, commonly, conflicts, administrative attribution to different countries with diverse civilization and political systems, medical science and practice, maybe more than other areas, demonstrated tolerance, cooperation, reciprocity, civilized professional and scientific competition. Therefore, it is not so easy to differentiate Ukrainian and Polish history of medicine. In some cases, it can even be incorrect to attribute some historical figure to only one of these two cultures or nationalities.

The investigations of Polish and Ukrainian interrelations in the field of medicine are not numerous. The interpretation and conclusions of particular aspects of medical history and especially problematic issues are not always historically correct. The study of lifetime and professional biographies of last centuries' famous medical professionals can outline the character of Ukrainian and Polish cultural relationships in historical context and also reveal the specifics and mutual influence of medical science, education and practice on the way towards civilizational progress. The aim of the historical and biographical analysis was to depict the Ukrainian and Polish interrelations in the field of medicine on the example of biographical parallels of the famous medical professionals and mutual influence in the development of science, education and practice on the territory of Eastern Europe.

Materials and methods: The information represented in printed and online sources was studied. The following methods were applied: systemic historical approach, information search, bibliography, biographical, and analytical analysis.

Results: The biographical research of the prominent representatives of Ukrainian and Polish medicine proved close interconnection of formation, and development of medicine on the territory of Eastern Europe. Despite some negative processes, particularly unnatural division of ethnically determined peoples into empires-metropolitan countries, medical branch demonstrated mutual enrichment of science and practice. The historic facts, biographies of the prominent representatives of medicine of the past centuries proved complexity or even impossibility to differentiate clearly national features of medical science and practice. Firstly, medicine existed and developed on certain territories long before national and, moreover, state identification of European peoples, regardless of administrative demarcation of the territories. Secondly, medicine of Eastern Europe took up medical achievements of metropolises due to complex geopolitical processes, changes in attributing administrative-territorial areas and indigenous people to different cultural and political empires. At the same time it preserved and developed its own traditions and experience. Thirdly, lack of clear, scientifically grounded criteria cannot attribute historical figures to certain national culture considering only biographical data. On the contrary, lifetime and professional biographies of medics-scientists and practitioners proved the remarkable role of doctors-foreigners in the development of medicine, particularly in Ukraine and Poland.

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Conclusions:

1. The applied research method of historical and biographical parallels in the field of medicine in a historical context proved close relationships and mutual penetration of cultures of neighboring peoples, particularly Ukrainian and Polish.
2. We found no examples of conflicts or arguments on an ethnic basis among the studied biographies of prominent Ukrainian and Polish physicians. Biographical characteristics (origin, religion, professional and everyday language, place of study, work, housing, burial) do not allow to attribute the outstanding physicians to any nationality and not always – to a single national culture.
3. Further study of the national history of medicine in the context of scientific and professional relationships is an important factor for international understanding of the neighboring nations on the way towards European integration.

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**PHARMACOECONOMIC ASPECTS
OF STEVENS-JOHNSON AND LYELL'S SYNDROMES TREATMENT**

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The aim of the research: to conduct frequency analysis of drugs administered for treatment of Stevens-Johnson syndrome (SJS) and Lyell's syndrome or toxic epidermal necrolysis (TEN) and to calculate the costs for pharmacotherapy of these diseases.

Materials and methods: the objects of study were Protocol Drug Order Forms (PDOFs) of 10 patients hospitalized to Lviv inpatient medical departments during 2009-2014. The cost of pharmacotherapy was calculated according to the data of *pharmbase.com* (12.07.2015). The information about costs of morphine, promedoli and sibason was obtained from a Lviv pharmacy.

Methods applied: systemic approach, clinical-pharmaceutical, comparative analysis, pharmacoeconomic, standardization. The frequency analysis was conducted to determine the structure of drug prescriptions. No conflict of interests was declared in process of the research. Statistical analysis was done using Statistica 10 Trial.

Results: a retrospective analysis of pharmacoeconomic aspects of SJS and TEN pharmacotherapy was conducted. The frequency analysis of drugs administered for treatment of these dangerous diseases was done. It was determined that in 10 clinical cases of SJS/TEN pharmacotherapy 38145,98 UAH were spent: 3819,13 UAH – for SJS and 34326,85 UAH – for TEN therapy.

Conclusions:

1. The results of conducted frequency analysis showed that the real clinical practice of SJS and TEN pharmacotherapy generally meets valid clinical guidelines approved by the Ministry of Health Care of Ukraine for the management of patients with SJS/TEN. At the same time, we believe that foreign guidelines should be taken into account as well, especially regarding thromboprophylaxis, prevention of eye and gastrointestinal tract lesions.
2. High mortality due to SJS/TEN, the necessity of administering numerous drugs for their pharmacotherapy (an average of 21,3 ± 9,1 drugs per 1 patient) and, therefore, significant costs of these

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diseases (38145.98 UAH for 10 cases of SJS/TEN) prove, in our opinion, priority of researches aimed at developing evidence-based approaches to minimization of the risk of SJS/TEN incidence with their further integration into clinical practice.

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INTEGRATED ABC/VEN/FREQUENCY ANALYSIS OF DRUGS FOR TREATMENT OF ACUTE COMMUNITY ACQUIRED PNEUMONIA IN CLINICAL PRACTICE

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The aim of the research: to determine rationality of pharmacotherapy for acute community acquired pneumonia (ACAP) in clinical practice.

Materials and methods: The continuous sampling of patients (age range 16-60-year-old) with ACAP was investigated. Methods: retrospective analysis of 142 medical histories, frequency analysis of the treatment regimens, analysis of treatment protocols, ATC/DDD-analysis, ABC-analysis, VEN-analysis.

Results: The frequency analysis revealed that the average number of drugs for one patient was 7.42±0.48. ABC/VEN/frequency analysis showed that the total number of intended drugs for treatment of ACAP, co-morbidities and complications was 46 (15 international nonproprietary names – INN). The total cost of DDD was 1304.64 UAH. The Group A included 12 drugs, the cost was 1036.30 UAH; the group B included 16 drugs, the cost was 19.86UAH; the group C included 18 drugs, the cost was 48.48 UAH. The ratio of the cost of drugs with the index «V», «E» and «N» in group A was 27.49 : 53.81 : 0; in group B – 1.49 : 9.44 : 4.25; in group C – 0 : 3.5 : 0.

Conclusions:

1. The frequency analysis revealed that the average number of intended drugs for one patient was 7.42±0.48.
2. ABC-analysis showed that the group A included 12 drugs (cost – 81.3%), the group B – 16 drugs (cost – 15.15%), the group C – 18 drugs (cost – 3.52%).
3. VEN-analysis identified that the group «V» included 7 drugs (15.2%), the group «E» included 35 drugs (76.09%), the group «N» included 4 drugs (8.71%).
4. The integrated ABC/VEN/frequency analysis revealed that the highest cost for the treatment of inpatients was in the group «E»: 53.81% of the costs in the group A. It indicated the presence of comorbidities and complications of ACAP in most patients.

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SYNTHESIS AND ANTITUMOR EVALUATION OF 5-YLIDENE DERIVATIVES 2-(5-ARYL-1,3,4- OXADIAZOLE-2-YL)IMINOTHIAZOLIDIN-4-ONES

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The aim of the research: The search of novel highly active chemotherapeutic agents among non-condensed 4-thiazolidinone derivatives is a promising direction of biological evaluation for mentioned compounds. Combination of 2-imino-4-thiazolidinone template with other heterocycles, such as 1,3,4-oxadiazole ring, is a perspective approach to drug-like molecules build-up, considering that oxadiazole is a famous pharmacophore

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fragment which has a wide spectrum of pharmacological activities. Among mentioned compounds telomerase inhibitors, histone deacetylase inhibitors, FAK inhibitors, tyrosinase inhibitors and mitochondrial mediated apoptosis inducers were identified. Further, 1,3,4-oxadiazole heterocycle are very good bioisostere of amides and esters which can contribute substantially to increasing pharmacological activity by participating in hydrogen bonding interactions with the receptors. Therefore, the synthesis and evaluation of anticancer activity of new 5-ylidene substituted 2-(5-aryl-1,3,4-oxadiazole-2-yl)iminothiazolidin-4-ones are promising directions of thiazolidine and oxadiazole derivatives investigation.

Materials and methods: Following the reaction of 2-chloro-*N*-(5-aryl-1,3,4-oxadiazole-2-yl)acetamides with ammonium thiocyanate in dry acetone the appropriate 2-imino-4-thiazolidinone derivatives were synthesized, as starting compounds for obtaining new 5-ylidene derivatives in Knoevenagel condensation with aromatic aldehydes and 5-substituted isatines. The structure of synthesized compounds was determined by ^1H NMR spectroscopy, elemental and X-ray analysis. Anticancer activity of synthesized compounds toward 60 human tumor cell lines panel (leukemia, melanoma, lung, colon, CNS, ovarian, renal, prostate and breast cancers) in National Cancer Institute was evaluated.

Results: Based on the acylation reaction of 2-amino-5-aryl-1,3,4-oxadiazoles with chloroacetyl chloride the corresponding *N*-oxadiazole substituted 2-chloroacetamides were synthesized and utilized in heterocyclization reaction with ammonium thiocyanate in acetone medium for obtaining 2-iminothiazolidin-4-one derivatives. Further chemical modification was performed via Knoevenagel condensation with aromatic aldehydes or isatin derivatives yielded 5-ylidene substituted 2-(1,3,4-oxadiazole-2-yl)iminothiazolidin-4-ones. The structure of obtained compounds was confirmed by NMR spectroscopy. In the ^1H NMR spectra of synthesized compounds the protons of dimethylamino and methoxyl groups showed singlets at δ ~3.00-3.01 ppm and δ ~3.84-3.89 ppm, correspondingly. The protons of the methylene group CH_2CO for 5-unsubstituted derivatives (**2a-b**) appeared as a singlet at δ ~4.08-4.12 ppm. The chemical shift for the methylenic group of 5-arylidene derivatives (**3a-j**) was insignificantly displaced in weak magnetic field, δ ~7.65-7.77 ppm, and clearly indicated that only *Z*-isomers were obtained. Synthesized compounds **2b**, **3a-b**, **3e-j**, **4b**, and **4e** were submitted and evaluated toward panel of approximately sixty cancer cell lines. Tested compounds displayed insignificant activity in the *in vitro* screen on tested cell lines in 10 μM concentration. However, selective influence of the compound **3b** on melanoma MDA-MB-435 cell line (GP = 16,02%), CNS cancer SF-295 cell line (GP = 29,18%) and leukemia SR cell line (GP = 29,97%) was found. Finally, the compound **3b** was selected in advanced assay against a panel of approximately sixty tumor cell lines at 10-fold dilutions of five concentrations and demonstrated significant antitumor activity (GI_{50} = 8.39 μM) without selectivity toward the illness subpanel (SI < 1.3).

Conclusions: Based on heterocyclization reaction and Knoevenagel condensation the synthesis of new 5-ylidene substituted 2-(5-aryl-1,3,4-oxadiazole-2-yl)iminothiazolidin-4-ones was performed. A screening of antitumor activity of synthesized compound was carried out.

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