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Збірник містить тези доповідей VII Міжнародної науково-практичної конференції «Ліки – людині», де розглядаються проблеми фармакоterapiї захворювань людини, наводяться результати експериментальних та клінічних досліджень, аспекти вивчення й упровадження нових лікарських засобів, доклінічні фармакологічні дослідження біологічно активних речовин природного і синтетичного походження. Наведено також праці, присвячені особливостям викладання медико-біологічних і клінічних дисциплін у закладах вищої освіти.

Видання розраховано на широке коло наукових і практичних працівників медицини і фармації.

Відповідальність за зміст наведених матеріалів несуть автори.

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«Medicines for humans. Modern issues of pharmacotherapy and drugs prescription»: materials VII International. scientific-practical conf. (March 21-22, 2024) - Kh. : NUPh, 2024. - 324 p.

The collection contains abstracts of the VII International Scientific and Practical Conference «Medicines for humans. Modern issues of pharmacotherapy and drugs prescription», which deals with the problems of pharmacotherapy of human diseases, presents the results of experimental and clinical studies, aspects of study and implementation of new drugs, preclinical pharmacological studies of biologically active substances of natural and synthetic origin. There are also works devoted to the peculiarities of teaching medical-biological and clinical disciplines in higher education institutions.

The publication is designed for a wide range of scientific and practical workers in medicine and pharmacy.

The authors are responsible for the content of these materials.

EGFR inhibitors bind to certain parts of the EGFR and slow down or stop cell growth. Two pharmacological approaches for inhibiting EGFR function are to use low-molecular-weight tyrosine kinase inhibitors (TKIs), which bind to the tyrosine kinase domain in the EGFR and stop its activity, or to use monoclonal antibodies (mAbs) to impede ligand binding to the extracellular domain of EGFR and prevent cell division. Both approaches inhibited cell proliferation and induced apoptosis, showing that these agents trigger cytostatic effects, which have great potential in treating certain cancers. However, some things could be improved for both mAbs' and TKIs' usage. Targeting cancer cells with specific antibodies coupled with radioactive isotope or cytotoxin could prevent normal cells' cytotoxicity. At the same time, the problem with TKIs is that irreversible TKIs show non-selectivity and resistance due to TK mutation (Sabbah et al., 2020).

Clinical trials demonstrate that both TKIs and mAbs treatment protocols might improve cancer treatment, especially for tumors that overexpress EGFR. Anti-EGFR mAbs are approved for head and neck (H&N) and advanced colorectal cancers, whereas TKIs are approved for Non-Small Cell Lung Cancer (NSCLC), pancreatic, glioblastoma, and H&N tumors (Sabbah et al., 2020).

EGF or EGFR antagonists as a medicinal agent has excellent potential. The EGF family is involved in many processes in the body, which makes it possible to use drugs containing EGF or EGFR antagonists to treat gastrointestinal problems, tumors. Undoubtedly, this topic requires further consideration and deeper analysis.

PHARMACEUTICAL ANALYSIS AND CLINICAL APPLICATION OF COMBINED MEDICATIONS FOR ARTERIAL HYPERTENSION

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Primary and secondary arterial hypertension is one of the most widespread pathologies of the cardiovascular system with a predominant lesion of vessels of the elastic smooth muscle type, which is accompanied by thickening of the vascular wall, hypertrophy of the intima-media complex, impaired endothelial function, and the formation of wall atherosclerotic substrates. Very often today, the increase in blood pressure in patients is not an independent clinical form but is combined with other chronic diseases: coronary heart disease, chronic kidney diseases, disorders of the metabolic profile (diabetes, gout, diffuse atherosclerosis), or acts as a controlled risk factor. In the modern internal medicine clinic, this is called poly- or comorbidity. Accordingly, combined drugs are used for the pharmacotherapy of polymorbid diseases with arterial hypertension. It is pathogenetically justified, clinically

effective, and safe, because the treatment lasts a lifetime with the use of minimal dosages of the components in the drug, once a day, which increases the compliance of pharmacotherapy. The above-mentioned determined the main goal of the work - to conduct a clinical and pharmaceutical analysis of combined drugs in comorbid pathology.

According to the tasks of the work, the clinical effect can be assessed both in the rapidly changing condition of the patient and in the long term - improving the quality of life, slowing the progression of the disease, preventing the development of complications and target organ damage. It should be noted that the combination of antihypertensive drugs is used starting from the second stage of moderate hypertension, and this already presupposes the presence of initial lesions of the heart, eyes, and kidneys, albeit without clinical symptoms.

The short-term effect was assessed by changes in systolic, diastolic, pulse pressure, frequency, and pulse characteristics (twice a day). This was done by surveying patients, teaching them self-control at the start of therapy and at the end of the first and second weeks of treatment. Typically, these periods allow you to select and titrate the required drug and dosage regimen. A pharmacist in a pharmacy when dispensing drugs, a clinical pharmacist in a hospital, reminds patients of the need to strictly follow the doctor's orders, about long-term, almost life-long therapy, they are interested in the effectiveness, checking the self-monitoring sheet, they always ask about the tolerability of the drug and possible side effects. This, from our point of view, is the place of the pharmacist when prescribing combined drugs. Subjective signs were monitored (headache, dizziness, vision, hearing, cardialgia, daily diuresis, palpitations).

The long-term effect was evaluated during 3 months of regular pharmacotherapy - 1 drug 1 time per day in minimally effective optimal titrated doses. Subjective and physical indicators of the disease and the dynamics of laboratory and instrumental changes characteristic of target organ damage were evaluated. The latter indicators include the presence and level of proteinuria, the degree of damage to the vessels of the fundus, ultrasound parameters of peripheral vessels (thickness of the intima-media complex), hemodynamic parameters of the heart (ejection fraction, end-systolic and end-diastolic volumes, thickness of the interventricular membrane, thickness of the posterior wall left ventricle) according to echocardiography. These indicators are integral and allow you to use them at the stage of treatment selection and further evaluation of effectiveness.

The analysis of clinical results showed the greatest effectiveness of double combined means among drugs containing ACE inhibitors and thiazide-like diuretics, BRAIs and thiazide-like diuretics, ACE inhibitors and vasotropic calcium antagonists. Triple combinations include ACE inhibitors, thiazide-like diuretics, and

vasotropic calcium antagonists. Perhaps this effectiveness of the mentioned combinations is a consequence of the effect on various mechanisms of arterial hypertension and the presence in the drugs not only of an antihypertensive effect, but also of an additional renoprotective, vasoprotective, cardioprotective effect. At the same time, good tolerability of combined drugs was noted due to the use of minimal doses of drugs, metabolically neutral activity, mild prolonged action. These advantages are increasingly promoted by the use of fixed combinations.

Taking into account the existing correlation between lipid metabolism disorders, blood coagulation properties, vascular wall elasticity, blood pressure level, it is possible to use combined drugs for simultaneous regulation of the indicated pathological changes. Fixed combinations of the vasotropic calcium antagonist amlodipine with statins (atorvastatin, rosuvastatin) are most often used on the pharmaceutical market of Ukraine - caduet, amlostat, atordapine, roxera-combi; or dual combinations of statins and acetylsalicylic acid - klivas-duo, aspiroza, rozzor. There are also triple combinations registered at this time in Ukraine, for example, trinomia (acetylsalicylic acid/atorvastatin/ramipril).

In summary, several conclusions can be drawn: the modern market of antihypertensive drugs and drugs for the treatment of pathologies comorbid with hypertension, primarily atherosclerosis and thrombus formation, involves the use of combined drugs of double or triple composition in minimum fixed dosages; the market is mainly dependent on imports, but the price policy of drugs fluctuates within a high or medium level of affordability for the majority of the country's population; the main components are represented by ACE inhibitors, vasotropic calcium channel blockers, statins, which allows the use of pharmacological effects to correct the main pathophysiological mechanisms of the specified pathology with a high level of effectiveness and a low safety profile of short- and long-term pharmacotherapy.

Peupet N'Guessan Elie Justin. MODERN METHODS OF CONTRACEPTION AMONG DIFFERENT GROUPS OF THE POPULATION	62
Popusoi C., Pantea V., Andronache L., Reabiseva M., Gudumac V. CHANGES IN THE GLUTATHIONE SYSTEM UNDER THE ACTION OF COPPER COORDINATING COMPOUNDS WITH THIOSEMICARBAZONES <i>IN VIVO</i> ..	63
Prozor A. V., Pisarkova L. R., HOLEMBIOVSKA O. I. CURRENT HORMONAL AND NON-HORMONAL AGENTS FOR MALE CONTRACEPTION	64
Rakhimova M.V., Bondarenko I.S., Yaremenko V.D., Sych I.A., Kobzar N.P., Bezv O.V., Perekhoda L.O. SOME ASPECTS OF TRAINING SPECIALISTS IN THE FIELD OF NANOBIO TECHNOLOGY	66
Ryzhenko I.M., Derimedved L.V., Bondariev Ye.V.: STUDY OF PSYCHOTROPIC PROPERTIES AND ACTOPROTECTIVE ACTIVITY OF A NEW DERIVATIVE OF 1-ARYLTRIAZOLYL-SILENCED 2,4-DIOXO-QUINAZOLINE	68
Shchokina K.G., Rachida El Mansouri. PHARMACOLOGICAL STUDY OF POLYPHENOLIC COMPLEX OF LINDEN CORDIFOLIA GASTROPROTECTIVE PROPERTIES	69
Snihur N.O., Mindova K.V., Serba N.A., Ruzhytska B.A., Golembiovska O.I. MECHANISM OF ACTION AND PHARMACOLOGICAL CHARACTERISTICS OF EGF	71
Streichen S.B., HirajiRime, Alaoui Chrifi Mohammed. PHARMACEUTICAL ANALYSIS AND CLINICAL APPLICATION OF COMBINED MEDICATIONS FOR ARTERIAL HYPERTENSION	73
Sulashvili Nodar, Beglaryan Margarita, Gorgaslidze Nana, Chichoyan Naira, Gabunia Luiza, Kvizhinadze Natia, Alavidze Nato, Abuladze Nino, Gabunia Ketevani, Giorgobiani Marina, Zarnadze Irine, Zarnadze Shalva (Davit), Pkhakadze Giorgi, Tadevosyan Ada (Adel), Okropiridze Tamar, Sulashvili Marika. THE SCIENTIFIC DISCUSSION OF THE MODERN CHARACTERISTIC OF PHARMACIST SPECIFIC OCCUPATION, ROLE, PROFESSIONAL VIEWPOINTS, CAREER PROSPECTS AND SOME PHARMACEUTICAL ORGANIZATIONAL AND EDUCATIONAL ISSUE CHALLENGES IN VARIOUS DIRECTION IN GEORGIA	76
Sulashvili Nodar, Beglaryan Margarita, Gorgaslidze Nana, Tadevosyan Ada (Adel), Gabunia Luiza, Abuladze Nino, Gabunia Ketevani, Sulashvili Marika, Okropiridze Tamar. THE SCIENTIFIC DISCUSSION OF MANIFESTATION OF KEY ISSUES ASPECTS OF CHARACTERISTICS OF THE EFFECTS OF BEHAVIORAL AND PSYCHOSOCIAL ARGUMENTS OF OPIOID-DEPENDENT PATIENTS ON METHADONE REPLACEMENT THERAPY IN GENERAL	82