burns up to 98 % of cases. According to our data, 4 strains out of the 48 isolated strains of *S. aureus* resistant to methicillin were found which is equal to 8.33 %. And when studying their sensitivity to antibiotics, it was found that 1 of them (which is 25 %) was resistant to antibiotics of 4 different groups.

Therefore, with a relatively low prevalence of *S. aureus* among outpatients with purulent skin lesions, the proportion of MRSA among them is not small and has a significant epidemic risk as the spread of multiple resistance to antibiotics.

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PROGNOSIS OF CHRONIC KIDNEY DISEASE DEVELOPMENT IN HYPERTENSIVE PATIENTS DEPENDING ON THE CYP 11B2 GENE ALLELIC STATE

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Considering a high mortality from cardiovascular diseases (CVD) and disabling lesions of target organs caused by essential arterial hypertension (EAH), the need to improve the effectiveness of early prediction of HMOD, unfavourable course of the disease, risk of chronic kidney disease (CKD) or diabetes with EAH occurs in order to correct treatment and secondary prevention.

The aim of the study was to assess the risks of chronic kidney disease in patients with essential arterial hypertension depending on the Cytochrome 11b2 Aldosterone Synthase Gene (CYP11B2, rs1799998) allelic state.

100 hypertensive patients with hypertensive-mediated target-organ damage (2nd stage), moderate, high or very high cardiovascular risk were enrolled in the case-control study and underwent a complex of clinical-laboratory investigations with the following epidemiological analysis. The patients' average age was 59.87±8.02 years. CKD was diagnosed according to the National Kidney Foundation recommendations (2012) after glomerular filtration rate (GFR) decline measured by CKD-EPI equations after Creatinine, or Cystatin-C blood level. The control group included 48 practically healthy individuals of a relevant age. Gene's nucleotide polymorphism *CYP11B2* (-344C/T) was examined by polymerase chain reaction in 72 EAH patients and in the control group.

The probability of CKD in the *T*-allele carriers of the *CYP11B2* gene (rs1799998) increases after GFR decrease (cystatin-C) almost 1.5 times [OR=1.86; 95 % OR:1.01–3.58; p=0.049], especially in women [OR=2.23; 95 % OR:0.99–5.90; p=0.052]. The presence of type 2 diabetes mellitus in EAH patients increases the CKD risk 2.4 times [OR=3.29; 95 % OR:1.06–10.19; p=0.034], the obesity onset increases risk 2.08 and 2.32 times [OR=3.30; 95 % OR:1.33–8.16; p=0.009 and OR=3.58; 95 % OR:1.02–9.34; p=0.048, respectively], 3rd degree blood pressure elevation increases the probability of CKD almost three times [OR=5.06; 95 % OR:1.942–13.23; p<0.001]. Hyperaldosteronemia increases the CKD risk in EAH patients 1.3 times [OR=5.29; 95 % OR:1.15–24.37; p=0.02].

The CKD risk (after creatinine) in the mutation *T*-allele carriers' women increases 6.5 times (p=0.007) with the lowest probability of such changes in *T*-allele carriers' men [OR = 0.15; p=0.009].

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COMPOUNDS AS THE BASIS OF MEDICAL DRUGS

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Heterocyclic nuclei form the basis for the construction of numerous homologous series containing hydrocarbon residues in the form of side chains, as well as various functional groups. Heterocyclic compounds include, in addition to those mentioned, many other important natural substances. These are, for example, alkaloids - nitrogen-containing plant physiologically active substances. Among them are strong poisons (strychnine, nicotine), and important drugs (quinine, reserpine). Heterocyclic nuclei form the basis of many antibiotics, such as penicillin, tetracycline

and vitamins (B vitamins, etc.). Purine and pyrimidine bases are a part of nucleic acids - material carriers of heredity, which play a crucial role in the processes of protein biosynthesis.

Among various heterocyclic compounds, aromatic heterocycles have become widespread in nature, and they form the structural basis of the molecules of many drugs. The most important of these are pyrrole, pyrazole, imidazole, pyridine, pyrimidine, furan, thiophene, indole, purine, benzimidazole, and others.

Thus, heterocyclic compounds have the widest potential for diversity, and they are indeed common (especially in nature). It is no coincidence that many of the published works on organic chemistry deal with heterocyclic compounds. This is also due to the fact that they are of great interest to chemists as convenient models for the study and development of theoretical principles of organic chemistry and the theory of structure.

Numerous drugs and most heterocyclic compounds that have practical application are not extracted from natural raw materials, but produced industrially. However, the source of inspiration for organic chemists is the study of natural products, which formed the basis for further research. Examples include the discovery of vat dyes based on the indigo structure and the ongoing search for new antibacterial drugs based on the / 3-lactam structure of penicillin.

Heterocyclic compounds are of great importance. Many of them are the basis of alkaloid molecules - important drugs, involved in the construction of some amino acids that are part of proteins. Some heterocycles are the basis of natural dyes, such as green matter of plants - chlorophyll and others.

The importance of heterocyclic compounds is obvious. Suffice it to say that they ensure the very functioning of life on the Earth, making a decisive contribution to the mechanisms of heredity, respiration, the action of the central nervous system and a number of enzymatic systems. Today, heterocycles are many hundreds of highly effective drugs, antibiotics, pesticides, the basis for the creation of valuable dyes, phosphors, heat-resistant fibers and many other practically useful substances.

It is logical to expect that with such great importance in the chemistry of living things, they should have found application in medicine. This is true. According to the latest data, of the 1,070 most widely used synthetic drugs, 661 (62 %) were heterocycles. Everything stated above is a small part concerning the interest in heterocycles.

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GENDER ASPECTS OF CONNEXIN 26 (GJB2) GENE POLYMORPHISM IN CHILDREN WITH HEARING LOSS

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Nowadays, hereditary hearing impairments with the development of deafness are most associated with the connexin-26 gene GJB2 (gap junction protein), localized in 13q11-q12. Mutation of 35delG is deletion of one of the six nucleotides of guanosines (G) between positions 30 and 35, including the formation of a stop codon in nucleotide 38, resulting in premature cessation of connexin protein 26. It results in disorders of endolymph homeostasis in the inner ear, leading to hearing loss mainly of sensorineural origin.

The aim of the study was to analyze the gender characteristics of the frequency distribution of polymorphic variants of connexin 26 genes (GJB2, c.35delG) (rs80338939) in children with hearing impairments of sensorineural and conductive genesis.

The prospective study included 102 children aged 8 to 18 years (average 11.5 ± 3.15 years) with hearing impairments, whose parents signed an informed consent to participate in the study, followed by a set of anamnestic-clinical and laboratory-instrumental examinations (otoscopy, speech audiometry, tone audiometry, tuning fork examinations, tympanometry). Study of gene polymorphism of GJB2 (c.35delG) was performed by polymerase chain reaction using Taq-DNA polymerase and specific primers. The obtained results were statistically processed using the