

segmental neutrophilic granulocytes of the peripheral blood. In patients with acute bronchitis the adaptation index was 0.75 ± 0.07 u., which corresponds to the adaptive response with increased activation. It was higher than the control indicator by 10.29 %, which corresponds to an increased level of activation of adaptive processes. The final in the development of acute bronchitis is cellular reactivity, the level of which in patients increases by 87.44 %, which reduces intoxication by 64.14 %, and indicates a decrease in endogenous intoxication and the absence of tissue breakdown. Increase of the ratio of the total pool of leukocytes and erythrocyte clotting rate by 2.8 times confirms the presence of endogenous intoxication associated with infectious process rather than autolysis.

In patients with acute bronchitis, immunological reactivity is 5.36 times higher than nonspecific one, which is the evidence of the formed nonspecific resistance. The formed nonspecific anti-infective protection is in the final stage, and the specific immune response is in the early stages of formation.

The basis of nonspecific pre-immune anti-infection protection of the body is humoral (complement system, interferon, lysozyme, natural killers, monocytes / macrophages, etc.). The key role in nonspecific anti-infection protection belongs to neutrophilic granulocytes – the largest population of immunocompetent cells in patients with acute bronchitis. The activity of the complement system is 2 times reduced and the titer of natural antibodies by 23.68 % increased, which inhibits granulocytes by 7.41 %, and the exciting ability of phagocytes decreases by 44.56 %. Phagocytosis disturbance was found at the final stages. The natural bactericidal activity of phagocytic cells is reduced by 17.06 %, and stimulated by 25.33 %. At the same time, the secretory activity of neutrophilic granulocytes against preimmune proinflammatory cytokines increases: tumor necrosis factor - , interleukins - 1,6,8.

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PREVALENCE OF METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS AMONG AMBULANT PATIENTS WITH PURULENT SKIN DISEASES

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Despite a slight decrease in the prevalence of methicillin-resistant *Staphylococcus aureus* (MRSA) strains in most high-income European countries in recent years, these bacteria belong to the group of pathogens with acquired antibiotic resistance that pose the greatest threat to hospitalized patients. These strains are: *Enterococcus spp*, *Staphylococcus aureus*, *Klebsiella pneumonia*, *Acinetobacter baumannii*, *Pseudomonas aeruginosa*, and *Enterobacter species*. At the same time, in recent years, the spread of MRSA was associated not only with medical institutions (hospitals acquired / HA MRSA), but also outpatient departments, so-called community acquired / CA MRSA. Staphylococci, as representatives of the skin microbiome, are very often the cause of various inflammatory processes in this biotop.

The aim of our study was to study the prevalence of MRSA among clinical strains of staphylococci, that were isolated from ambulant patients with purulent skin diseases of Chernivtsi city.

Material and methods. 48 clinical strains of *S. aureus* from outpatients with purulent skin diseases were studied. The presence of methicillin-resistance in isolated strains was determined by a surrogate test with cefoxitin. In all the strains, sensitivity to β -lactam antibiotics, aminoglycosides, fluoroquinolones, macrolides, clindamycin, tetracycline and co-trimoxazole was determined as well. Technique for antibiotic sensitivity determination was conducted according to the CLSI recommendations, 2017. Discs with antibiotics, manufactured by Oxoid, were used.

Results and discussion. In our studies, *Staphylococcus aureus* was isolated from the purulent content on an average in 12.53 %. As we think, the nature of the lesion determines the frequency of detection of this pathogen. In our work this figure in outpatients with purulent skin diseases was close to the frequency detection of *S. aureus* in healthy people. Whereas, according to the literature, in patients of surgical hospitals, the incidence of *S. aureus* is from 18 to 26 %, and in the case of

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