

- specific (identification of antibodies and cells involved in the allergic reaction's immunological phases).

As non-specific tests are used: complete blood count, determination of erythrocyte sedimentation rate (ESR), level of C-reactive protein, tests for determining subpopulations of T and B lymphocytes, the level of immunoglobulins of various classes, complement, CIC, various autoantibodies (for example, with urticaria), mediators of allergic inflammation and cytokines, which are more involved in the immune response to allergens: interleukin-4 (IL-4) – activation of IgE, IL-10, IL-5, INF- γ production, etc. The definition of the absolute number of lymphocytes, T-cells CD4 + and the CD4 + / CD8 + ratio refer to simple and cost-effective laboratory tests for the diagnosis of T-linked delayed-type hypersensitivity reactions.

As specific tests are used: IgG-, IgG4 – tests, determination of the level of specific IgG- / IgG4-antibodies in human serum / plasma using ELISA and ICA, leukotriene test, determination of the ECP and chemoattractants levels.

Specific IgA-test allows to determine allergen-specific IgA, which is a part of the body's immune defense system, in human serum / plasma using ELISA.

The leukotriene tests include the basophil antigen stimulation test (CAST® Cellular Antigen Stimulation Test)/ Its technology is based on the determination of sulfidoleukrienes (LTC₄, LTD₄, LTE₄) secreted by primed IL-3 basophils under the antigens influence in vitro. It is also called in vitro provocative test. Due to the sulfidol-leukotrienes de novo synthesis, the CAST® assay has the highest specificity compared with the classical histamine release test.

The increase in the ECP (eosinophil activation marker) and chemoattractants levels in biological fluids may be an indicator of allergic inflammation. The ECP test makes it possible to determine the level of ECP in the serum.

Immunodiffusion (Ouchterlony method) is used to diagnose the hypersensitivity of the immunocomplex type. This is a method of identifying specific antigens or antibodies based on the precipitate formation as a result of their migration towards each other in the agar layer.

In the IDVNAMNU Laboratory of Allergology these specific tests are used: the ESR determining and the leukocyte agglomeration reaction with drug allergens.

Conclusions. Laboratory diagnostics of allerhodermatosis involves, first of all, the use of modern proven effective methods, characterized by high (acceptable) unification and reproducibility with sufficient evidence basis.

EXPERIMENTAL RATIONALE POSSIBILITIES COMBINED USE OF DRUGS FOR TREATMENT OF URINARY TRACT INFECTIONS

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Introduction. The structure of human renal diseases urinary tract infections are the largest group, ranking second among infectious human diseases in general. In recent years, changing spectrum of antimicrobial susceptibility of pathogens to the loss of sensitivity to many antibiotics and antiseptics. The use of antimicrobial compositions containing drugs with different mechanisms of action is a priority to find new ways to influence the diverse microbial cells in order to prevent the formation of resistance.

Aim. The aim of our study was a comparative study of antimicrobial activity under conditions in vitro drug – Nokamen and Canephron and determine the effect of the drug Nokamen the level of antimicrobial activity of drugs Bi-sept, Furazolidone, Ciprofloxacin and Levofloxacin.

Materials and methods. The antimicrobial activity of drugs studied in vitro in terms of generally accepted practice in microbiological agar diffusion method of modifying wells. As test microorganisms using reference strains of a typical American cultural collections: *S. aureus* ATCC 25923, *E. coli* ATCC 25922, *P. aeruginosa* ATCC 27853, *B. subtilis* ATCC 6633, *C. albicans* ATCC 885-653 and clinical strains isolated from the urine of patients with glomerulonephritis – *Kl. pneumoniae* kl.S10 and *E.coli* cells. D 11.

Results and discussion. The results of microbiological studies showed that the drug Nokamen compared with drugs Canephron and Urolesan in conditions in vitro showed higher levels of antimicrobial effect. Found synergistic antimicrobial effect of the Nokamen with the drug Ciprofloxacin, virtually no effect in the combined use of the drug Nokamen with drugs Bi-Sept, Levofloxacin, Furazolidone.

Conclusions. The prospects of further exploring the possibility of sharing drugs for the treatment of infections of the urinary tract.

L-FORM BACTERIA AND CHRONIC DISEASES

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Introduction. In the human body, under the action of antibiotics, enzymes and antibodies, bacteria can completely or partially lose the cell wall, that is, transform into *L*-forms. In spite of the absence of a cell wall, *L*-forms retain their ability to multiply and develop. *L*-forms are formed under the action of agents that block the synthesis of the cell membrane (antibiotics), in conditions of increased osmotic concentration of the medium. *L*-transformation of bacteria can often complicate the process of treating the disease that they cause.

Aim. Determine which diseases and treatments with which chemotherapeutic agents most often form *L*-forms of bacteria.

Materials and methods. Analysis of the scientific literature and the results of the advanced research in the field of medicine and pharmacology.

Results and discussion. The most studied are *L*-forms of mycobacterium tuberculosis, which is associated with the widespread use of various anti-tuberculosis drugs and antibiotics for the treatment of sick people. *L*-forms of mycobacterium tuberculosis can be found in a macroorganism in a stable and unstable state, that is, to reverse the original microbial form with restoration of virulence, which can greatly complicate the treatment of this disease. It has been proven that mycobacterium tuberculosis forms *L*-forms that can survive long time in the human body, animals and in the environment. *L*-transformation of mycobacterium tuberculosis can occur under the influence of the factors of the environment itself, the use of chemotherapy, protective reactions of the organism.

One of the representatives of microorganisms that can form *L*-form, is mycoplasma. Mycoplasmas usually populate the mucous; In many species of animals, they cause chronic inflammation of the respiratory and urinary tract, genital organs, and joints. In the human body 14 species of mycoplasmas live, but they occur with different frequencies. *Mycoplasma orale* and *Mycoplasma salivarium* are part of the normal microflora of the oral cavity. *Mycoplasma pneumoniae* – a common pathogen for pneumonia in adults and children. *Ureaplasma urealyticum* and *Mycoplasma hominis* live in the urinary tract and genital organs of many healthy people; it is conditional pathogenic microorganisms that cause a number of infections in adults and newborns.

L-transformation is inherent in almost all types of bacteria, such as cocci, intestinal sticks. *L*-forms are often found in the body with long-running pathological processes, such as brucellosis. The ability to *L*-transformation has a brucellosis pathogen, which also complicates the treatment process.

Brucella – gram-negative bacteria, small in size, differ in large polymorphism. In one preparation one can see both the rod-shaped and the covalent variants, the spores do not form, are non-moving, belong to intracellular parasites. Grow on many artificial nutrient media, but grow very slowly.

Brucellosis is an infectious zoonotic disease with a tendency to prolonged course accompanied by fever, damage to the vascular, nervous, sexual and other systems with a particularly frequent involvement in the pathological process of the musculoskeletal system.

Conclusions. The property of bacteria to *L*-transformation is investigated. The exclusive significance of *L*-transformation of pathogenic bacteria is that it is a frequent cause of the transition of acute forms of diseases to chronic and their exacerbations. The ability of pathogenic bacteria to *L*-transformation very often complicates the treatment process.