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ЗМІСТ (Contents)

РЕДАКЦІЙНА РАДА (EDITORIAL BOARD)

ЗМІСТ (CONTENTS)  1

ОГЛЯДИ (REVIEWS)  2-4

АДЬЮВАНТЫ В СОВРЕМЕННОЙ ВАКЦИНОЛОГИИ
Исаенко Е.Ю., Бабич Е.М., Елисеева И.В., Ждамарова Л.А., Белозерский В.И., Колпак С.А.
ADJUVANTS IN MODERN VACCINOLOGY
A concept of adjuvants and their story of creation is characterized in the article. They’re presented the various types of non-specific stimulators of immune systeme, thier excipients and classification. They’re described basic properties of adjuvant systems, their significant advantages and disadvantages. Particular attention is paid to the numerous antigen delivery systems, including alive vectors, nanoparticles, bacterial toxins, etc. They’re considered non-specific stimulators mechanisms of action on immune system and their interaction with antigens. They’re given examples of different adjuvants in licensed vaccines use.

Key words: adjuvants, non-specific stimulators of immune systeme, antigen delivery systems, immunogenicity, immunity.

РОЛЬ ЕНТЕРОКОКІВ У ВИНИКНЕННІ НОЗОКОМІАЛЬНИХ ІНФЕКЦІЙ
(огляд літератури)
Перетятко О.Г.
ROLE OF ENTEROCOCCI IN THE OCCURRENCE OF NOSOCOMIAL INFECTIONS
(REVIEW)
Peretyatko E. G.
In the article considers the role of microorganisms of the genus Enterococcus in the occurrence of nosocomial infections. The most common nosological forms of infections enterococci’s etiology: urinary tract infections, infectious endocarditis, sepsis, gynecological, neonatal, intraabdominal infections and infectious-inflammatory soft tissue lesions. Shows the clinical role not only E. faecalis and E. faecium, but other species, namely: E. avium, E. casseliflavus, E. durans, E. gallinarum, E. hirae, E. malodoratus, E. mundtii, E. raffinosus, E. solitarius.

Key words: enterococci, nosocomial infection, etiological role, E. faecalis, E. faecium.

ЕКСПЕРИМЕНТАЛЬНІ РОБОТИ (EXPERIMENTAL STUDY)

VALUE OF HOUSE AEROALLERGENS IN THE ETIOLOGICAL SPECTRUM OF BRONCHIAL ASTHMA IN CHILDREN
Makeeva N.I., Shmulych V.K., Chernenko L.N., Staruseva V.V., Shmulych A.V., Parameyeva K.O.
1487 children with asthma were examined by prick-test method. Were made a comparative assessment of the etiological significance of house aeroallergens: house dust mites, bird’s feathers, chironomids, fungi in the formation of bronchial asthma in children. Defined a dominating allergen from the house dust (Allergenum e pulvere domesticum e Dermatophagoides pteronyssinus), which could be used to optimize the specific immunotherapy of asthma in children.

Keywords: asthma, house aeroallergens, etiologic significance, children.

ДІЯ УЛЬТРАЗВУКОВОГО ВИПРОМІНЮВАННЯ НА СФОРМОВАНІ БІОПЛІВКИ ТА ЗДАТНІСТЬ ДО ЇХ ФОРМУВАННЯ S.AUREUS
Мішнина М.М.
STUDY OF ULTRASOUND RADIATION INFLUENCE ON FORMED BIOFILMS AND ABILITY TO THEIR FORMATION IN S.AUREUS
Mishina M.M.
Microbiological research of the clinical material received from patients with pyoinflammatory diseases was performed. It was found that low-intensity ultrasound radiation could destroy formed biofilms of S. pneumoniae and decrease ability of this pathogen to form secondary biofilms.

Key words: ultrasound radiation, biofilms, S.aureus.

ВИВЧЕННЯ ВПЛИВУ УЛЬТРАЗВУКОВОГО ВИПРОМІНЮВАННЯ НА СФОРМОВАНІ БІОПЛІВКИ KLEBSIELLA PNEUMONIAE
Мозгова Ю.А.
STUDY OF ULTRASOUND RADIATION INFLUENCE ON ABILITY TO FORM BIOFILMS AND FORMED BIOFILMS OF KLEBSIELLA PNEUMONIAE
Mozgova Yu.A.
With aim to detect ability to form biofilms in K. pneumoniae and to study effects of low-intensity ultrasound radiation on formed biofilms and their aggregation ability.Performed research showed that ultrasound radiation of low intensity could destroy biofilms and inhibit ability of microorganisms to form secondary biofilms.

Key words: biofilm, Klebsiella pneumoniae, low-intensity ultrasound radiation.
Andriychyn Y.M.
Stomatopharynx samples of 146 patients with influenza and acute respiratory viral infections were investigated. Diagnosis of influenza was confirmed in 2,7 % patients, the remaining persons had acute respiratory viral infections and their complications. Oral and nasal spreadable microorganisms were represented by associations of facultative anaerobic, aerobic, aerohumic bacteria, and fungi. Almost all isolated strains had different, however, all had characteristic features. Rest ones belonged to Candida genus. Bacteria were represented by 3 types and 7 classes. Coccobacteria, Strepococcus and Staphylococci colonized stomatopharynx mucosa most frequently – 91,8 % and 74,7 % of patients accordingly. Corynebacteria spp. Moraxella spp. and Neisseria were present in patients microcosmos in 3,3-4,1 times less. Haemophilus spp. colonized mucosa of 7,5 % of patients. Other bacteria had low consistency indexes that’s why there are typical transient inhabitants of mucosa. In Staphylococcus community there were two genera of cocci: Staphylococcus (99,2 % of strains) and Gemista spp. Coagulate positive staphylococci S. Aureus and S. intermedius put together 50,6 % of proper community. Another cocci belonged to coagulase negative ones. Colonization level of coagulase positive cocci was in ten-hundreds times more than coagulase negative ones - about 5.9-6.4 log CFU/ml. Micrococcus community was present by Micrococcus, Dermacoccus, Kokuria, and Rothia genera. Their colonization level fluctuated between 4,1 (Micrococcus) –6,4 (Rothia) log CFU/ml. Moraxella spp. were dominated in community of Moraxella and Neisseria, (64,1 % of strains) Such rare inhabitants of stomatopharynx microcosmos as Rothia spp., Granulicatella spp., Gemella spp., Faeklmania spp., Lactococcus spp., are appeared in patients with flu and acute respiratory viral infections. This situation may be as a result of dysbiosis formation in this biotope.

Key words: influenza, acute respiratory viral infections, stomatopharynx, microcosmos.

ДОСЛІДЖЕННЯ ВПЛИВУ КОМБІНАЦІЙ АНТИБІОТИКІВ НА МУЗЕЙНІ ПОЛІАНТИБІОТИКОЗЕРІСТЕННІ СТУПІНІ БІФІОРМІЙ ПАЛІЧКИ
Даченко В.Ф., Ягнюк Ю.А., Марющенко А.М., Бомко І.В., Городницька Н.І.

THE COMBINATION OF ANTI-BACTERIAL ACTION OF COMBINATION OF ANTIBIOTICS AGAINST POLYANTIBIOTIC-RESISTENT STRAINS OF PSEUDOMONAS AERUGINOSA BY OF CHECKERBOARD METHOD
Dyachenko V.F., Yagniuk Yu.A., Marischchenko A.M., Bomko T.V., Bacumenko A.V., Gorodnitskaya N.I.

Many researchers from different countries are searching synergistic combinations of antimicrobial preparations that allow, first of all, to achieve the elimination of severe infections caused by multiresistant pathogens. Research conducted under the direction of Sh. Ote and M. Masako, T. Kazumi et al. demonstrated the effectiveness of two- and three-component combinations of antibiotics for multiresistant strains of P. aeruginosa. The result of experimental study by method “time-bactericidal effect” was shown the high effectiveness of the combinations of cefepime and ciprofloxacin in relation to four multidrugresistant Pseudomonas aeruginosa strains obtained from the Museum of microorganisms of State Establishment “Mechnikov Institute of Microbiology and Immunology of the National Academy of Medical Sciences of Ukraine”.

Key words: combinations of the antibiotics, polyantibiotic-resistant strains, method “time-bactericidal effect”.

ОБРОТУВАННЯ ВИБОРУ АНТИСЕПТИКА ДЛЯ КОМПЛЕКСНОГО НАЗАЛЬНОГО ПРЕПАРАТУ ЗА АНТИМІКРОБНОЮ ТА СУДІННОЗВ'ЯЗУВАЛЬНОЮ ДІЄЮ
Бойко М.М., Нефедова Л.В., Рыбалкин М.Б., Одовченко Г.П.

ANTISEPTIC SELECTION RATIONALE FOR COMPLEX NASAL MEDICINE HAVING ANTIMICROBIAL AND VASOCONSTRICTOR ACTION
Boiko, N.N., Nefedova, I.V., Rybalkin, N.V., Oslodochenko, T.P.

Screening of antimicrobial properties of Myramistinum 0.01 % solution, Decasamin 0.02 % solution, Chlorhexidine digluconate 0.05 % solution, Benzalkonium chloride 0.05 % solution, and Ocenisep 0.1 % solution has been carried out. It has been found that Chlorhexidine digluconate 0.05 % solution has the greatest antimicrobial activity, whereas Myramistinum 0.01 % solution has the lowest activity. For manifestation of optimal antiseptic properties of cation-active antiseptics, it is proposed to increase their concentration in the preparation by not less than 0.05 % and not more than 0.1 %. It is noted that use of Ocenisep is inefficient due to its expensiveness and high concentration needed to achieve the optimal level of manifestation of its anti-microbial properties.

Keywords: nasal medicine, antiseptics, screening microbiological studies.

СОСТОЯНИЕ НЕСПЕЦИФИЧЕСКОЙ РЕЗИСТЕНТНОСТИ ОРГАНИЗМА РАБОЧИХ, ЗАНЯТЫХ ЛИТЬЕМ В ПОЛУШИФРОЧНОЙ ФОРМЕМ
Завгородний И.В., Перцев Д.П., Никулина Н.А., Никулина Г.Л.

STATE NONSPECIFIC RESISTANCE OF WORKERS EMPLOYED BY INJECTION IN A CONSTANTLYMETAL FORMS
Zavgorodniy I.V., Peppers D.P., Nikulin N.A., Nikulin G.I.

The purpose of this paper is to examine the state of nonspecific resistance in 52 men aged 22 to 57 years working in the foundry industry for at least three years ( professional groups - studied - zalivschiki, naplavschiki and smelters, the control group - fitters, turners) to Kharkov by copyright invention number 1180000. To determine the status of non-specific resistance of peripheral blood was used. In the blood was determined by the total number of white blood cells, the percentage of cells in the human leucocyte lekyoformule, phagocytic reaction rates as indicators of non-specific cell-mediated resistance. The serum titer of agglutinins and lysozyme activity as indicators of humoral non-specific resistance. On the basis of these data, the calculated integral index of non-specific resistance. Calculated on the basis of the obtained data the figures are non-specific resistance of the first group within Abs.n 91,67 ± 3,33, in the second - 104,94 ± 4,18 abs.n, a third - 102,87 ± 1 98 abs.n, in the fourth - 105,077 ± 4,86 abs.n at the rate of 110-140 abs.n Revealing the quantitative reduction of the level of non-specific resistance index shows a decline in the overall resistance of the organism associated with the working conditions in this industry.

Keywords: non-specific resistance, prenosological diagnostics, foundry industry.
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4
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ВОЛЯНСЬКИЙ А.Ю., РОМОНАНА О.А., ІГУМНОВА Н.І., СИДОРЕНКО Т.А., ЮХИМЕНКО В.І., КОНАРЕВА К.С.

FEATURES OF CELLULAR IMMUNITY IN CHILDREN WITH CHRONIC HERPES VIRUS INFECTION DEPENDING ON THE AGE AND DEGREE OF EXPOSURE TO THE DIFFERENT TYPES VIRUSES

The basic parameters of cellular immunity and leukocyte composition of peripheral blood of children suffering HGVI caused by herpes viruses of I-VI types, age groups 3-5, 6-11, 12-14 years, corresponding to different degrees of maturity of immune system, were studied. Regardless of age, a significant change in the quantity and composition of lymphoid subpopulations of leukocytes observed in patients with persistent groups of 3 or more types of herpes viruses in leukocytes. Typical for these patients all surveyed age groups are lack of cell subpopulations of γ- and τ-cytotoxic (CD95 + ) and τ-active (HLA-DR + ) lymphocytes and decreased functional capacity of T-lymphocytes (except for patients 12-14 years old) as a spontaneous and stimulated PHA blastogenesis. The most numerous irregularities characterized by cellular immunity HGVI with younger children (3-5 years). Regardless of the viral load in all patients 3-5 years, and a group with high viral load is observed 6-11 multiple increase of activated T-lymphocytes (CD25 + ) against a significant reduction of T lymphocyte apoptosis markers (CD3 + CD95 + ). With increasing age of the children with the HGVI, the amount of the changed parameters of cellular immunity in charge of anti-virus protection is reduced. Thus more rapid and complete normalization observed in patients infected with 1-2 herpes viruses.

Key words: HGVI, cellular immunity.

ВОЛЯНСЬКИЙ ЮРИЙ ЛЕОНИДОВИЧ

ON THE AGE AND DEGREE OF EXPOSURE TO THE DIFFERENT TYPES VIRUS

FEATURES OF CELLULAR IMMUNITY IN CHILDREN WITH CHRONIC HERPES VIRUS INFECTION DEPENDING ON THE AGE AND DEGREE OF EXPOSURE TO THE DIFFERENT TYPES VIRUSES

THE STUDY OF SOME CYTOKINES AND SIgA IN CHRONIC HYPER TROPHIC PHARYNGITIS

The macromicroscopic, ultramicroscopic studying macromicroscopic changes in the hair and its blood vessels in unilinear immunocompetitive laboratory male and female mice with the experimental ehlichiosis is presented in this article. The cardial destructive and degenerative changes, cardiomyopathy, cardiocerclerosis had been established in experimental animal group’s. The blood vessels endothelial layer disorganization, stasis, thrombosis has been noted.

Key words: macromicroscopic, ultramicroscopic changes, the unilinear immunocompetitive laboratory male and female mice, ehlichiosis, cardiac muscles and blood vessels, cardiomyopathy, stasis, trombosis.

KOLYADA T.I., ATTIKOV V.E., TUPOTILOV A.V., VDOVICHENKO N.I., EGOSHINA V.O.

STUDY OF CHANGES IN LEVELS OF SOME CYTOKINES AND SIgA IN CHRONIC HYPERTROPHIC PHARYNGITIS WITH THE USE OF IMMUNOCORRECTION

Found that in this pathology is a significant increase in pro-and anti-inflammatory cytokines in patients due to the predominance of pro-inflammatory cytokines during exacerbation of chronic inflammation of the lymphoid tissues of the pharynx. Found that after the standard treatment for patients with hypertrophic pharyngitis content IFN-γ levels and sIgA in the oropharyngeal secretions reaches levels of the control group , provided intermittent effect in terms of reducing cytokine levels in the serum of 45 and 90 days after initiation of treatment and partial restoration of local immunity oropharynx. In a joint application Derinat and IRS-19 was observed acceleration of restoring the balance of cellular and humoral immunity, no recurrence of the disease for the entire period of observation, that the efficiency of treatment of chronic hypertrophic pharyngitis.

Key words: cytokines, chronic hypertrophic pharyngitis, immunotherapy.

NEKROLOG. ВОЛЯНСЬКИЙ ЮРІЙ ЛЕОНИДОВИЧ

THE STUDY OF IMMUNOCORRECTION IN THE COMPLEX THERAPY FOR THE TREATMENT OF VARIOUS INFECTIOUS AND INFLAMMATORY DISEASES. IT HAD MODERATE ANTIMICROBIAL ACTIVITY.

It was found that Shiitake mushroom powder exhibited immunomodulatory effects and it could be used in perspective for immunity correction in the complex therapy for the treatment of various infectious and inflammatory diseases. It had moderate antimicrobial activity against a significant reduction of T lymphocyte apoptosis markers (CD3 + CD95 + ). With increasing age of the children with the HGVI, the amount of the changed parameters of cellular immunity in charge of anti-virus protection is reduced. Thus more rapid and complete normalization observed in patients infected with 1-2 herpes viruses.

Key words: HGVI, cellular immunity.

ВОЛЯНСЬКА Л.О., ПОПОВА Н.В., ОСОЛОДЧЕНКО Т.П., ФЕДОРИТЕНКО Н.О.

THE STUDY OF SPECIFIC ACTIVITY AND ANTIMICROBIAN ACTIVITY OF SHIITAKE MUSHROOMS POWDER (Lentinus edodes)

It was found that Shiitake mushroom powder exhibited immunomodulatory effects and it could be used in perspective for immunity correction in the complex therapy for the treatment of various infectious and inflammatory diseases. It had moderate antimicrobial activity against aerobic bacteria (Staphylococcus aureus ATCC 26923, Escherichia coli ATCC 25922, Basillus subtilis ATCC 6633), and fungi (Candida albicans ATCC 653/865).

Key words: immunopotentiating activity, shiitake mushroom powder, antibacterial activity.

THE INFLUENCE OF THE STAPHYLOCOCCUS INFECTION TO THE STRUCTURAL ORGANIZATION OF WISTAR RATS BRAIN AND CEREBRAL BLOOD VESSELS

In this article there are a dates about the influence of the staphylococcus infection to the structural organization of Wistar rats brain and cerebral blood vessels in experiment. The purpose of the experiment’s are achieving by the seding staphylococcus infection means of the characteristical structures of the brain and cerebral blood damages, that similar with the such in a human in a case of the development of a traditional clinic pathology. The results are evaluated to character of the morphological changes (brain cortex and cerebral blood vessels destructive and degenerative alterations, inflammatory processes).

Key words: staphylococcus infection, structural organization, brain, cerebral blood vessels, Wistar rats, experiment.

СЛАВОВСЬКИЙ О.В., КОВАЛЕВСЬКА Н.І., КОМАРОВСЬКА Е.В., ІГУМНИКОВА Н.І., ІГУМНОВА Н.І., ОСОЛОДЧЕНКО Т.П., ФЕДОРИТЕНКО Н.О.

THE INFLUENCE OF THE STAPHYLOCOCCUS INFECTION TO THE STRUCTURAL ORGANIZATION OF WISTAR RATS BRAIN AND CEREBRAL BLOOD VESSELS

IN CELLULAR IMMUNITY OF CHILDREN WITH CHRONIC HYPERTROC PHARYNGITIS WITH THE USE OF IMMUNOCORRECTION

THE STUDY OF IMMUNOCORRECTION AND ANTIMICROBIAL ACTIVITY OF SHIITAKE MUSHROOMS POWDER (Lentinus edodes)

Bobritskaya L.A., Popova N.V., Ossolodchenko T.P., Fedoritenko N.A.

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