

accordance with the requirements of GMP we have all: shopfloors and engineering systems for creation of the special terms of production of pharmaceutical equipment, skilled personnel, system of providing of quality, clearly worked out system of documentation, control on all stages of production.

CHECKING THE QUALITY OF CHILDREN'S NUTRITION

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Introduction Children are the future of mankind, thus the quality of baby food should be of primary importance to any country. In our time, the crazy rhythm of life for parents comes to the aid of a wide range of specialized products for children of all ages. It is necessary to be careful, as the development and health of the child will depend on the choice.

Aim Determine the microbiological parameters in canned nutrition for children under one year of their discovery.

Materials and methods. Materials - samples of children's canned nutrition of five popular brands on the Ukrainian market (after their opening, taking into account the expiration date and storage conditions). For the study, the following environments were used as: Codex and further hang on Endo agar, Thioglycolic medium (TGS), Meat peptone agar (MPA). When performing the experiment, officially permitted research methods were used.

Results and discussion. After the checking was completed, the following results were obtained. Immediately after opening of caned nutrition, an analysis was performed that showed that all specimens were sterile. Over time, in the sample number 1, the number of colony-forming units was 2.42×10^3 CFU/g; №2— 4.3×10^2 CFU/g; №3— 1.1×10^1 CFU/g; №4— 1.1×10^1 CFU/g; №5 - growth was not detected (possibly due to preservatives not declared by the manufacturer). The total number of colony-forming units (CSFs) in each of the samples was not exceeded, in accordance with the sanitary-epidemiological rules and norms for special food products (medical, dietary, baby food products, etc.). In all specimens of the bacteria, the E. coli group was not detected. But after a longer period of time than the one indicated on the marking of each sample, the number of CSUs has increased, so it is necessary to closely monitor the time of opening the baby food.

Conclusions. Hence, in the Ukrainian market, canned nutrition meet the standards, and are safe for the future generation. At the same time, parents should be careful, and watch out for the terms of opening and conditions for the preservation of canned nutrition. It is desirable, after opening, to feed the baby immediately, or to eat it himself, or to dispose of it, in order to preserve the child's health.

INFECTIOUS FACTOR AS A TRIGGER MECHANISM OF AUTOIMMUNE PROCESS (MYASTHENIA GRAVIS)

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Introduction. Autoimmune disease is one of the most complex problems of modern clinical immunology. More than twenty theories are proposed that explain the causes of the breakdown of tolerance and, as a consequence, the development of autoimmunity.

Recently, the classic postulate that autoimmune reactions develop exclusively on their own antigens, have been subjected to serious revision, since it has been established that the inflammatory foci for some autoimmune diseases are not aseptic, but, on the contrary, contaminated with microorganisms. Special role belongs to intracellular pathogens (microorganisms). From the centers demyelination in patients with multiple sclerosis isolated human herpesvirus type 6. There is information about the role of some strains Klebsiella and other types of Enterobacteriaceae in the development of peripheral arthritis in

patients with Bechterev's disease. With Behcet's syndrome, the etiological role of the herpes simplex virus and streptococcal infection is assumed. With Wegener's granulomatosis, it has been established that herpesviruses and *S. aureus* contribute to the development of this pathology. It is believed that pathogens of respiratory infections - *Mycoplasma pneumoniae* and *Klebsiella pneumoniae* - can induce an autoimmune process leading to myasthenia.

Infectious agents play a much more important role not only at launch, but also in support of the autoimmune process in the lesion zones due to changes in the antigenic composition of cells, tissues and organs of the human body and induction of inflammatory process.

Aim: to investigate the frequency of detection of bacterial infections and the profile of various classes and subclasses of immunoglobulins to determine the role of opportunistic bacteria in the mechanisms of formation of autoimmune reactions (myasthenia).

Materials and methods. Object of research: pathogens of respiratory infections (*Klebsiella pneumoniae* and *Mycoplasma pneumoniae*); patients with myasthenia; subject of the study is the frequency of infection, caused by *Kl. pneumoniae* and *M. pneumoniae*, their antigenic properties; concentrations of Ig A, M, G in serum of patients; the ratio of subclasses of IgG in patients with different clinical phenotypes of myasthenia; Ig E content in blood serum of patients with myasthenia. Methods: bacterioscopic, bacteriological, immunological (immunoassay analysis), statistical.

Results and discussion. There were analyzed 227 protocols for the examination of patients with different clinical myasthenia phenotypes, which were classified into groups depending on the structural and functional changes of the thymus (M, MH, MT). The first group included 72 patients with an average age of 43 years with myasthenia without thymus affection (M). The second group included 57 myasthenia patients with thymus hyperplasia (MH) with an average age of 30 years. The third group consisted of 98 patients with an average age of 45 years, with myasthenia in the background of thymomas (MT).

The analysis of the results suggests that the possible trigger factors for autotolerance loss in myasthenia are pathological reactions of the immune system to infectious processes caused by opportunistic bacteria of the genus *Klebsiella* and *Mycoplasma*. In particular, the presence of *Kl.pneumoniae* in the study material of patients with different clinical phenotypes of myasthenia was confirmed by laboratory methods from 5.1% to 8.7% of the subjects; for group M, 6.94%, MH 8.77%, MT 5.10%, respectively.

The incidence rate of *M. pneumoniae* in patients with myasthenia was slightly higher, ranging from 18 to 27% of cases, depending on the clinical phenotype. In the study of the concentration of IgA, M, G in the serum of patients, a decrease in IgA and IgG levels was observed, and the IgM concentration in patients of all groups was elevated. The next step was to study the serum IgE content in patients of different groups. In the group of patients with myasthenia in the background of hyperplasia, IgE increased, which was three times the reference value. In neoplasia of the thymus gland, IgE level was significantly lower than that of the control group.

In the study of different IgG subclasses in patients with myasthenia, it was found that the violation of their relationship was characteristic for all groups of patients, but IgG3 was absent in all forms of myasthenia. In group M IgG4 predominates, which are not able to activate the complement in the classical way; in group MH revealed approximately the same degree of dominance of IgG1 and IgG4 subclasses, which are also synthesized in atopic reactions and autoimmune processes; in MT group IgG1 and IgG2 dominated, which include antibodies to T-independent polysaccharide antigens of capsular bacteria, including *Klebsiella*.

Conclusions. Thus, there is a definite link between the pneumonia and autoimmune condition, which is confirmed by the results obtained.

This is consistent with the theory of superantigen and the theory of polyclonal activation of the lymphocytes, which was proved in the course of the work performed.