Comparative analysis of methods to identify food intolerances

I.S. Tikhonov[one], S.I. Fedorenko[one], L. B. Kosareva[one], N.R. Shevchenko[one], M.E. Meilitseva[2]
([one]Center "IMEDIS", [2]"Dr. Volkov Center", Moscow, Russia)

Food that is not digested eats up the one who ate it.
(Abul-Farajr)

HEALING NUTRITION (syn. Diet therapy) is a scientifically based system of treatment with specially developed diets. Sometimes nutritional therapy is the main component in the complex therapy of a disease, in some cases it serves as a mandatory therapeutic background for another, incl. and specific therapy. Diet therapy for any disease is, first of all, the nutrition of a sick person, which ensures his physiological needs for nutrients, and, at the same time, a method of treatment with nutrition from specially selected and prepared foods, which affects

pathogenetic mechanisms of the disease [4].

In order to implement the Concept of State Policy in the Field of Healthy Nutrition of the Population, Improve the Organization of Medical Nutrition and Increase the Efficiency of Its Application in Complex Treatment of Patients, on 05.08.2003, the Order of the Minister of Health of the Russian Federation No. 330 “On Measures to Improve Medical Nutrition in Medical and Prophylactic Institutions of the Russian Federation ". The order emphasizes that the organization of medical nutrition in a medical and preventive institution (LPU) is an integral part of the treatment process and is one of the main therapeutic measures. The Instructions for the organization of therapeutic nutrition in health care facilities (Appendix No. 4) contain information on the introduction of a new nomenclature of diets (system of standard diets), which differ in the content of basic nutrients and energy value, cooking technology and the average daily set of products. Such a system makes it possible to significantly individualize therapeutic nutrition, depending on the nature of clinical manifestations, the course of the disease, its phase or severity. If one patient has several diseases, the prescribed diet should correspond to the underlying disease, i.e. the one that currently has the most pronounced clinical manifestations. This diet is adjusted to take into account comorbidities. In some cases, with the complexity of the correction of the main diet, an individual diet is made, which takes into account the requirements for nutritional therapy for several different diseases, and individual intolerance of patients to certain foods and dishes [2]. Such a system makes it possible to significantly individualize therapeutic nutrition, depending on the nature of clinical manifestations, the course of the disease, its phase or severity. If one patient has several diseases, the prescribed diet should correspond to the underlying disease, i.e. the one that at the moment has the most pronounced clinical manifestations. This diet is being adjusted to take into account comorbidities. In some cases, with the complexity of the correction of the main diet, an individual diet is made, which takes into account the requirements for nutritional therapy for several different diseases, and individual intolerance of patients to certain foods and dishes [2]. Such a system makes it possible to significantly individualize therapeutic nutrition, depending on the nature of clinical manifestations, the course of the disease, its phase or severity. If one patient has several diseases, the prescribed diet should correspond to the underlying disease, i.e. the one that at the moment has the most pronounced clinical manifestations. This diet is being adjusted to take into account comorbidities. In some cases, with the complexity of the correction of the main diet, an individual diet is made, which takes into account the requirements for nutritional therapy for several different diseases, and individual intolerance of patients to certain foods and dishes [2]. If one patient has several diseases, the prescribed diet should correspond to the underlying disease, i.e. the one that at the moment has the most pronounced clinical manifestations. This diet is being adjusted to take into account comorbidities. In some cases, with the complexity of the correction of the main diet, an individual diet is made, which takes into account the requirements for nutritional therapy for several different diseases, and individual intolerance of patients to certain foods and dishes [2]. If one patient has several diseases, the prescribed diet should correspond to the underlying disease, i.e. the one that at the moment has the most pronounced clinical manifestations. This diet is being adjusted to take into account comorbidities. In some cases, with the complexity of the correction of the main diet, an individual diet is made, which takes into account the requirements for nutritional therapy for several different diseases, and individual intolerance of patients to certain foods and dishes [2].

In some patients, specific foods or types of foods appear to cause digestive upset. Careful documentation of the signs of such a relationship is sometimes of great help in clarifying the etiological diagnosis. Certain foods can be poorly tolerated due to impaired intestinal digestion or absorption. Some patients may have a congenital or acquired deficiency of a specific enzyme necessary for the intestinal absorption of a certain food product, or this enzyme may not be present at all (for example, lactase). Certain substances can also cause the development of lesions due to the presence of biochemical defects in the patient, which make these substances especially dangerous for the patient (for example, galactosemia). There are a number of other conditions in which certain foods are poorly tolerated. An example is allergic reactions. Other foods can have a toxic effect on the intestines in individuals who are hypersensitive to these foods (for example, to gluten) [3].

The mechanisms described above do not explain most of the clinical situations in which general disorders of the condition and, in particular, digestion, are associated with the use of specific foods. Research in this direction continues. New theories are emerging - attempts to explain the mechanisms of occurrence of such situations. For example, in 1930, Dr. G. Rinkel described the syndrome of "masked (hidden) food allergy." The product may not cause the reactions typical of food allergies, but its pathogenicity is detected in other ways. The controversy around this issue continues. The theory has its supporters and opponents. Proponents adhere to theory

"Transcytosis". Others generally reject its existence, arguing that the principle of nutrition for all animal organisms is based on the fact that only digested components can be absorbed through the wall of the digestive organs into the blood. Any ingestion of undigested food components can occur if the intestinal wall is damaged. And in this case, it should cause a violent reaction of the humoral immune system, which manifests itself in the inflammatory process [3]. Proponents of the theory of "transcytosis" use the results of blood tests for the administration of extracts of food products to create individual diets. Since the discovery of food allergy in disguise, repeated attempts have been made to develop a simple yet reliable test for food immunoantagonists. In the early 1980s, a diagnostic test was patented in the United States to detect foodstuffs, affecting leukocytes and platelets in blood taken from an individual. The test is called ALCAT (Antigen Leukocyte Cellular Antibody Test). Blood samples from the donor are incubated with food extracts, after which the erythrocytes are lysed, and the white cells and platelets are passed through the analyzer, which determines their size. If a given extract causes a change in the size of leukocytes, primarily neutrophils, then the food product from which it is obtained is considered to cause an abnormal reaction in the individual. In the 1990s, a similar test for immunoantagonists called the Nutron-Test was patented in England. Another test for individual food intolerance is based on the detection of IgG4 to food extracts in the patient's blood serum. In particular, it is this test that has been used in recent years to diagnose celiac disease. In our country, three of these methods are used: the method for determining the individual sensitivity of the organism to food, known as the method of Dr. Volkov, hemocode-diagnostics and the nutron-test. The first two are domestic developments, the Nutron test is English.

Purpose of the study: to carry out a comparative analysis of the data on the composition of diets carried out by the ART method and:

1) assigned rations in accordance with orders dated 05.08.2003 - No. 330 of the Ministry of Health and Social Development of the Russian Federation;

2) enzyme-linked immunosorbent assay for the determination of Ig E and G 4 in blood when treated with extracts food products in vitro;

3) a modified method for studying the erythrocyte sedimentation rate.

Materials and methods

Comparative analysis was carried out based on the results of examining patients of the following groups:

1. Patients with a prescribed diet in accordance with the orders of the Ministry of Health and Social Development of the Russian Federation No. 330 dated 05.08.2003 and No. 624 dated 07.10.2005.

2. Patients with examination data by the enzyme immunoassay method for the determination of Ig E and G 4 in blood when treated with food extracts in vitro.

3. Patients with the data of the modified method for determining the rate of subsidence erythrocytes when processing food extracts. This method is patented by a group of researchers from the Department of Biology of Moscow State University. way. After taking from the patient venous blood samples prepared with natural food products are added to its samples (currently more than 120 products are tested). Blood samples are drawn into standard pipettes for measuring ESR and determined after 15, 30, 60 and (if necessary) 120 minutes, the height of the plasma column is measured, and if there is a significant difference between the control group and test tubes, then such a reaction is considered positive. The concentrate that caused the acceleration of ESR is conflicting for a person.

doctors of the clinic "EcoLabMedTest" and the Test is carried out as follows anticoagulant-stabilized saline extracts

Patients of these groups were simultaneously examined by the ART method in order to determine the coincidence of the test results. Testing was carried out at APK IMEDISEXPERT. The examination of the 2nd and 3rd groups was carried out on the same day with blood sampling for examination according to the appropriate method. Testing of the 1st group of patients was carried out within the first week from the moment of the appointment of the diet. The criterion for the rational selection of products were chosen: optimization of the biological index, increasing the reserves of adaptation, a negative indicator for Cytochrome A D60, etc.

Results:

1. When comparing the data of the first group (23 patients), a coincidence was found the list of products from the prescribed diet for the main disease and the data of testing by the ART method by 58% (arithmetic mean);

2. The analysis was carried out according to the survey data of 8 people. List match result products - 73% when used in the ART method as the main index Ig E and / or Ig G.

3. 7 people were examined. The highest match result - 78% - was products found through ART pointers to enhance the drainage functions of the body.

table

Groups	Quantity people	Pointers to optimality Cu met. D400	Pointers Ig G, Ig E	VRT pointers toxic load
1st group	23	58%		
Group 2	eight		73%	
Group 3	7			78%

Conclusions:

1.In the course of the research and comparative analysis, it was revealed that what a greater percentage coincidences of the names of products was in the 3rd group - in patients whose diet was compiled on the basis of the results of a modified method for determining the erythrocyte sedimentation rate when exposed to food extracts.

2. When testing products, pay attention to indicators such as Ig E and Ig G, and also drugs to enhance drainage functions, tk. in the course of the study, the largest number of matches was when they were used as pointers. Of course, normalization of the diet alone is not sufficient for the complete cure of a patient, especially with severe pathology, although, in our opinion, nutritional optimization is a prerequisite for any other therapeutic measures. Comparing the results of the survey, we can say that the purpose of any diet is:

- reduction of intoxication;
- strengthening of antioxidant systems;
- normalization of enzyme systems;
- decrease in fluid retention;
- reduction of energy consumption for the splitting of food products inappropriate to the state of the body.

The results obtained are preliminary and require further study.

Literature:

1. Lawrence S. Friedman, Kurt J. Isselbacher. Violation of the digestive process.
2. Matushevskaya V.N. Diseases of the digestive system. - 2003. - No. 2.
3. Mikhelson V.M. head Laboratory of Cytology RAS (Review).
4. Handbook of gastroenterology, 2000.

I.S. Tikhonova, S.I. Fedorenko, L.B. Kosareva, N.R. Shevchenko, M.E. Meilitseva Comparative analysis of methods to identify food intolerances // XII

P.324-329