



THE EFFECTIVENESS OF A NEW FOOD SUBSTANCE - A HARD GELATIN CAPSULE - «VIZION JUNIOR» IS BEING STUDIED IN CHILDREN WHO HAVE RECOVERED FROM THE CORONAVIRUS.

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Article history:	Abstract:
Received: January 8 th 2023 Accepted: February 4 th 2023 Published: March 7 th 2023	Based on the results of our own research, a new food product has been developed - prophylactic capsules - «Vizion Junior» produced, contains a sufficient amount of protein, minerals, vitamins and dietary fiber. The study of effectiveness in patients with coronavirus showed: normalization of metabolism; improvement of hematological parameters, decrease in plasma concentration of liver enzymes (AST, ALT and GGT), as well as total bilirubin, which characterize the detoxification activity of the liver.
Keywords: nutritional substance - prophylactic capsules - «Vizion Junior» , sick children after coronavirus, biochemical parameters	

Nutrition is an important determinant of immune status, while malnutrition is the most common cause of immunodeficiency worldwide [1]. Deficiency of vitamins A, B6, B12, folic acid, C, D, E, as well as trace elements such as iron, selenium, copper and zinc, is associated with immune dysfunction. A balanced diet can provide most of the necessary nutrients, including zinc, iron, magnesium, manganese, selenium and copper, which contribute to maintaining and modulating the function of the immune system [22, 23]. Several epidemiological and clinical studies suggest that in addition to poor personal hygiene, sanitation, or contamination of food and water, the risk of infection increases with nutritional deficiency [24]. To date, food safety agencies around the world have not allowed labeling of any food or nutrients as protecting against infection. The role of vitamins C and D in maintaining immunity is particularly well studied. Vitamin C affects several aspects of immunity, including epithelial barrier support, growth and function of both innate and adaptive immune cells, leukocyte migration to the infection site, phagocytosis, and antibody production [2].

At the beginning of the COVID-19 viral infection pandemic, the World Health Organization (WHO) identified the nutrition factor as one of the key factors in maintaining the health of the population in

quarantine and self-isolation. The WHO European Office for the Prevention and Control of Noncommunicable Diseases has developed a set of the most necessary relevant rules. It is known that the nutrition factor plays a key role in the prevention of not only various diseases, but also health disorders in conditions of self-isolation and quarantine.(1,13).

THE PURPOSE OF THE WORK: to study the effectiveness of a new food substance - a solid gelatin capsule – “Vizion Junior” in children who have been ill with coronavirus.

MATERIALS AND METHODS OF RESEARCH.

The materials for the study were a food substance - preventive capsules – “Vizion Junior” with additives from minerals, vitamins, plant extracts (TI), medical records, medical histories of children who have suffered coronavirus.

Evaluation of the effectiveness of the new nutritional substance - capsule – “Vizion Junior” was carried out in 16 and 18 family polyclinics of Almazar district of Tashkent. 37 children (19-girls), (18- boys) aged 3 to 14 years who had been ill with coronavirus were under observation. The average age was 51.6 ± 0.82 (Table 1).



Table 1.
The average age of patients suffering from coronavirus (in%).

Age	girls, n=19	boys, n=18	Total number, n=37
3-5	9 (47,36)	6(33,33)	15 (40,54)
6-8	4 (21,05)	3 (16,67)	7 (18,91)
9-11	4 (21,05)	5 (27,77)	9(24,32)
12-14	2 (10,52)	4 (22,23)	6 (16,21)

In the polyclinic, together with doctors, a clinical and outpatient examination was conducted, which included a biochemical blood test with the determination of hemoglobin and erythrocytes in the blood, The study was carried out at the beginning and at the end of diet therapy.

The data obtained during the study were subjected to statistical processing on a Pentium-IV personal computer using the Microsoft Office Excel-2013 software package, including the use of built-in statistical processing functions

RESEARCH RESULTS AND DISCUSSION.

The food substance is "Vizion Junior" obtained by pressing with additives from minerals, vitamins, plant extracts, as well as other substances by mixing and further producing them in the form of soft and hard encapsulated forms.

We have studied the effectiveness of "Vizion Junior" in children who have suffered coronavirus. The study was conducted, as indicated in the materials and methods of research in 16 and 18 family polyclinics of the Almazar district of Tashkent. 37 children (19-girls), (18– boys) aged from 3 to 14 years who had been ill with coronavirus were under observation.

During the examination of children with coronavirus infection who were ill during the study of the medical history, concomitant diseases were found: anemia, obesity, diabetes mellitus, chronic tonsillitis, parasitic diseases. According to the results of the study and scientific, literary data, patients with coronavirus younger than 5 years are twice as likely to need hospitalization if they have anemia, bronchial asthma (literature).

When studying the actual nutrition with the help of a questionnaire of mothers of sick children with coronavirus, it was revealed that parents themselves violated the diet, bought fast food, confectionery for children, low consumption of fruits, berries and vegetables, melons, as well as vitamins was revealed, and this led to insufficient use of macro and microelements, vitamins and other biologically active compounds.

According to the melon literature (12,14,20), patients with anemia are more susceptible to infections. Research by scientists shows that the age

of children of patients and concomitant diseases such as anemia, diabetes mellitus, bronchial asthma are the most powerful predictors of hospitalization. The WHO Center for Disease Control and Prevention (CDC) reported that children with anemia and diabetes are at higher risk of complications of COVID-19.(8,9,10)).

Analysis of literature data shows that detoxification of patients with coronavirus infection and persons during quarantine and self-isolation is most effective with the use of specialized dietary preventive food products (3,4,5). All this requires intensive research, as well as rehabilitation measures, not only during the illness, but also after clinical recovery and discharge of patients.

Sick children with coronavirus who were under our supervision received a standard diet at home. The purpose of the appointment: to provide full nutrition, moderately stimulate the secretory function of the digestive apparatus, normalize motor function. General characteristics: a physiologically complete diet with moderate sparing and moderate stimulation of the secretion of the digestive apparatus. Dishes of different degrees of grinding and heat treatment are allowed — boiled, stewed, baked, fried without the formation of a rough crust (do not bread in breadcrumbs or flour). Mashed dishes are made from foods rich in connective tissue or fiber. Excluded foods and dishes that linger in the stomach for a long time, are difficult to digest, irritate the mucous membrane of the digestive tract, very cold and hot dishes. Chemical composition depending on the age of children: proteins — 90-100 g (60% animal), fats —90-100 g (25% vegetable), carbohydrates — 400-420 g; energy value 11.7—12.6 MJ (2800-3000 kcal); sodium chloride — up to 15 g, free liquid — 1.5 L. Diet: 4-5 times a day without heavy meals.

Sick children with coronavirus (3) received capsules twice a day at home during breakfast and dinner: "Vizion Junior".

Sick children with coronavirus underwent a clinical examination: complaints, anamnesis of the disease, examination of children were revealed.

The results of the conducted clinical studies of the effectiveness of the "Vizion Junior" capsule showed that within three months, the examined children with coronavirus had an improvement in their health.



In the table. 2 and 3 before and after taking the "Vizion Junior" capsule, the following biochemical

blood parameters were recorded in sick children with coronavirus.

Table 2.
Biochemical blood parameters in sick children with coronavirus when using a solid gelatin capsule "Vizion Junior"

№	Indicators	Standard	Control Group (10 people)			
			Before treatment	After treatment	Before treatment	After treatment
1	Hb (hemoglobin)	110,0-150,0g/l	98,6±20,2	122±11	97,4±16,3	100,2±20,2
2	(COE)	3; 15mm/watch ⁴⁻	13,0±7,98	6,33±7,42	14,2±8,8	8,8±12,7
3	WBS (leukocyte)	5,0-9,5 10 ⁹ /l	6,6±6,9	4,6±0,58	6,9±8,2	5,0±12,4
4	Lymph (lymphocyte)	26-60 %	55,25±5,77	31,96±4,08	57,8±8,67	45,0±8,22
5	ALT	0-40	38±39	22,83±23,5	37,4±33	32,0±22,2
6	ACT	0-40	34,94±35,5	22±20	38,6±25,3	29,2±20
7	Glucose	3,3-6,1mmlo/l	5,76±0,48	4,83±0,31	6,00±2,2	5,5±0,2

After taking "Vizion Junior" for 3 months, mothers of ill children noted a significant improvement in the condition of their children, an improvement in appetite. There was an improvement in hematological parameters, a decrease in the concentration of liver enzymes (AST, ALT and GGT) a in the blood plasma, while the differences in the comparison group were minimal (Table 3).

Laboratory studies in the main group showed a significant increase in hemoglobin by 10-12%. The most pronounced decrease was in the subgroup of patients with ESR and CRP concentration, which decreased by 16 and 13% of the baseline level, respectively, and in the subgroup receiving – by 34 and 26%. In all subgroups of the main group, a statistically significant decrease in glucose concentration by 6-17% and cholesterol by 9-18% from the baseline level was revealed. No such changes were detected in the control groups compared to the main group.

Consumption of products– "Vizion Junior" led to a significant decrease in the concentration of urea and creatinine, which indicates an accelerated elimination of toxins formed in the body, metabolic products.

Thus, the food substance – "Vizion Junior" for detoxification of the body are indicated for use:

- during self-isolation and quarantine in order to prevent intoxication of the body;
- with chronic diseases and their exacerbation; with a general deterioration of the body, accompanied by a decrease in immunity, appetite, chronic fatigue and weakness;
- after drug therapy (antibiotic therapy, hormone therapy and taking other medications);

CONCLUSION

1. There was an improvement in hematological parameters, a decrease in the concentration of liver enzymes in blood plasma (AST, ALT and GGT), as well as total bilirubin, while in the comparison group the



differences were minimal, a decrease in the concentration of liver enzymes in blood plasma (AST, ALT and GGT) characterizing liver detoxification activity.

2. Preventive "Vizion Junior" " are indicated for use: during self-isolation and quarantine in order to prevent intoxication of the body, with chronic diseases and their exacerbation; with general deterioration of the body, accompanied by a decrease in immunity, appetite, chronic fatigue and weakness; after drug therapy, antibiotic therapy, hormone therapy and other medications.

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