



UDC 616.344-002.44-031.84-085.874.2

THE ROLE OF NUTRIENTS IN THE LIFE OF PATIENTS WITH UC: NUTRITION AS A KEY FACTOR

Eshniyazova G.Sh.

<https://orcid.org/0009-0002-5607-5426>

eshniyazova.gulmira@bsmi.uz

Bukhara State Medical Institute

Resume: Understanding and applying knowledge about the impact of nutrition on inflammatory processes and the overall health of patients opens up new opportunities to improve the quality and duration of life. These aspects also highlight the need for further research and development of programs aimed at improving nutrition and dietetic education for both health care professionals and patients and their families. Focusing on the importance of nutritional support can be a significant step towards long-term disease control, which is, of course, a priority for all involved.

Keywords: *UC, nutrients, nutrition, probiotics, health*

NYAK BILAN ORIGAN BEMORLARNING HAYOTIDA NUTRIENTLARNING ROLES: ABOUT ZIKLANISH ASOSIY OMYL SIFATIDA

Eshniyazova G.Sh.

Resume: Understanding and applying knowledge about the impact of nutrition on inflammatory processes and the overall health of patients opens up new opportunities to improve quality of life and longevity. These aspects also highlight the need for further research and development of programs aimed at improving nutrition and nutrition education for health professionals, patients and their families. Focusing on the importance of nutritional support can be an important step towards long-term disease control, which is certainly a priority for all parties involved.

THE ROLE OF NUTRIENTS IN THE LIVES OF PATIENTS WITH NUC: NUTRITION AS A KEY FACTOR

Eshniyazova G.S.

Bukhara State Medical Institute

Resume: Understanding and applying knowledge about the effects of nutrition on inflammatory processes and the general health of patients opens up new opportunities for improving the quality and duration of life. These aspects also highlight the need for further research and development of programs aimed at improving nutrition and nutrition education for both healthcare professionals and patients and their families. Focusing on the importance of nutritional support can be a significant step towards long-term disease control, which, of course, is a priority for all parties involved.

Keywords: *N U C, nutrients, nutrition, probiotics, health*

Relevance

Research into nutrition and its impact on the health of patients with UC is rapidly developing, revealing new aspects of the importance of an individualized approach to therapy. One of the key tasks is to develop a diet that would include products that have a positive effect on the functioning of the gastrointestinal tract and help reduce inflammation.

In this context, special attention is paid to fermented foods such as yoghurts and pickled vegetables, which can improve the intestinal microflora and help restore normal metabolism. Probiotics contained in these products can help regulate the immune system and reduce the symptoms associated with UC. All this emphasizes the importance of integrating knowledge about the intestinal microbiome into treatment methods and dietary therapy. In addition, it is necessary to note the importance of antioxidants such as vitamins C and E, which protect cells from oxidative stress caused by inflammatory processes. Increasing the consumption of fresh fruits and vegetables rich in these substances can help alleviate the clinical manifestations of UC. Studies show that patients with high levels of antioxidants in their diet have better general health and fewer flare-ups of the disease. Some studies also focus on the role of omega-3 fatty acids contained in fish and some vegetable oils. These fatty acids have anti-inflammatory properties and can reduce the levels of pro-inflammatory markers in the body, which in turn can help improve the condition of patients with UC. However, it is important to remember that fat consumption should be balanced and tailored to individual needs and health status.

An individualized approach to diet therapy also requires taking into account the dietary preferences and possible allergies of patients. It is important to create a diet that not only meets nutritional requirements, but is also acceptable in terms of taste. Discussing nutrition with patients and their parents can promote better adherence to the regimen, which is also extremely important for successful treatment.

Maintaining adequate hydration is another key aspect. Patients with UC may frequently experience symptoms such as diarrhea, which leads to loss of fluids and electrolytes. It is recommended to pay due attention not only to the amount of fluid consumed, but also to the choice of beverages to minimize discomfort and maintain overall health.

The aim of the study is to increase the effectiveness of nutritional support in various courses of ulcerative colitis.

Materials and methods

This study aimed to compare the effects of different diets on clinical manifestations and quality of life in patients with ulcerative colitis. The study was approved by the local ethics committee and all participants provided written consent to participate in the study.

The study population consisted of 78 patients who were enrolled between January and December 2024. Participants were recruited from the gastroenterology department of the Bukhara Regional Multidisciplinary Medical Center and divided into two groups: one group received a specialized dietary plan designed to meet generally accepted standards, the other group followed a standard diet without any additional modifications. The specialized dietary plan included low-fiber foods such as white rice, boiled meat, mashed potatoes, and low-fat dairy products. Fortified drinks were also recommended to maintain hydration levels and replenish electrolytes. The control group followed a typical diet but was instructed to avoid heavy and spicy foods that could potentially exacerbate symptoms.

The Clinical Disease Activity Assessment (CDAI) scale and a quality of life questionnaire, including an abdominal discomfort scale and a symptom scale, were used to assess baseline data

and subsequent changes. Measurements were taken at baseline, three months, and six months after the start of dietary therapy.

Data analysis was performed using statistical methods, including one-way analysis of variance (ANOVA) to compare means between groups, as well as significance tests such as the t-test. The significance level was set at $p < 0.05$. All data were processed using SPSS version 26.0 software. In addition, patients were regularly consulted with a dietician to receive individualized recommendations and optimize their diet throughout the study. At each stage, the health status of the participants was monitored, including the frequency of exacerbations and the need for medication.

Table 1
General characteristics of patients with UC (n = 78)

Indicator	Patient groups	
	1st group (n = 37)	2nd group (n = 41)
Floor		
Men, people.	23 (62.1%)	22 (53.7%)
Women, people	14 (37.9%)	19 (46.3%)

The average age of patients was 45.1 ± 3.2 years, which is a socially significant factor, since these are patients of working age. Most patients were men $n = 45$ (57.7%), there were fewer women $n = 33$ (42.3%).

The severity of non-specific ulcerative colitis is assessed using the Truelove - Witts severity criteria . The severity criteria for ulcerative colitis include the frequency of bowel movements per day, the presence of blood in the stool, fever, tachycardia, weight loss, as well as laboratory parameters - hemoglobin levels, ESR, leukocytes, CRP, the presence of hypoproteinemia and hypoalbuminemia .

Results and discussion

Of the 78 patients, 43 had moderate to severe disease. The average Mayo score in patients with moderate disease was 7.4, while in patients with severe disease ($n = 14$) it was 10.4. It should be noted that the average score in the moderate attack group was at the upper limit of normal. Although this was classified as moderate according to the Mayo criteria, a high score closer to the upper limit allowed such patients to be considered as belonging to the severe category.

Table 3
Comparative assessment of body mass index in observed patients with UC

Parameter	BMI, kg/m^2	Height, cm	Weight, kg
Norm	18.5-24.9		
1st group (n = 37)	22.05 ± 0.72 Below normal in 61.2%	172.11 ± 1.47	65.08 ± 2.05

2nd group (n = 41)	21.77 ± 0.74 Below normal in 42.8%	171.05 ± 1.34	63.73 ± 2.22
--------------------	---------------------------------------	---------------	--------------

In all study groups, the body mass index was within the normal range, which is probably due to therapy-induced edema and protein -energy malnutrition. Between-group analysis confirmed the uniform distribution of the body mass index among the participants. During the study, all patients with severe ulcerative colitis had their blood laboratory parameters monitored: in the general analysis - lymphocytes and ESR, and in the biochemical analysis - total protein, albumin, C-reactive protein, glucose, total and direct bilirubin, AST, ALT, GGT and alpha-amylase. We found significant changes in blood biochemical parameters, such as total protein, albumin and C-reactive protein. Blood tests are more sensitive and respond faster to changes, which allows us to assess the effectiveness of nutritional support at early stages.

Thus, anthropometric parameters such as body mass index, skin-fat fold thickness and shoulder volume are not informative for assessing the effectiveness of nutritional support in the short term and require additional assessment methods, especially considering possible tissue edema due to protein -energy malnutrition before the start of treatment.

The results of blood biochemistry analysis provided reliable data before and after the use of nutritional support regimens. We recorded a significant difference in the levels of total protein, albumin, and C-reactive protein ($p < 0.05$), which confirmed the effectiveness of the modified regimen in patients receiving biological therapy for severe ulcerative colitis compared with the standard regimen.

Analysis of relapses of ulcerative colitis between the first and second groups (OR - 4.321, 95% CI 1.082-17.252; χ^2 - 4.789, $p < 0.05$) 52 weeks after the start of therapy showed that anti-inflammatory therapy in combination with a modified nutritional support regimen significantly reduces the risk of relapse of ulcerative colitis during the year of observation.

Based on the data obtained, it can be concluded that the risk of relapse of UC or deterioration according to the Mayo index during anti-inflammatory therapy with both glucocorticosteroids and GIBP with a modified nutritional support regimen in the complex treatment of patients with ulcerative colitis is lower than in the group receiving standard anti-inflammatory therapy with a conventional nutritional support regimen during a year of observation.

Conclusions

Simultaneous administration of compound parenteral nutrition preparations (glucose, amino acids, fat emulsions) can be used for additional correction of nutritional deficiency and provision of adequate nutritional support for protein -energy balance.

In patients with ulcerative colitis and severe diarrhea, with a pronounced deficiency of adipose tissue, confirmed by the bioimpedance method and anthropometric data, we used parenteral fat emulsions as an additional source of energy.

Comparative evaluation of the effectiveness of standard nutritional support and the proposed modified treatment regimen showed its effectiveness, assessed by anthropometric methods and clinical and laboratory studies. The nutritional correction tactics included balanced protein -energy mixtures as oral support, containing amino acids, albumin, as well as preparations for total parenteral and mixed nutrition.

Used literature

1. Abdulhakov S.R. Nonspecific ulcerative colitis: modern approaches to diagnostics and treatment / S.R. Abdulhakov , R.A. Abdulhakov // Bulletin of modern clinical medicine - 2009 - V. 2, No. 1 - P. 32-41.
2. Akinshina A.I. Prospects for the use of microbiota correction methods in the treatment of inflammatory bowel diseases / A.I. Akinshina, D.V. Smirnova, A.V. Zagaynova, V.V. Makarov, S.M. Yudin // Russian Journal of Gastroenterology, Hepatology , Proctology - 2019 - T 29, No. 2 - P. 12-22.
3. Ardatskaya M.D., Minushkin O.N. Modern principles of diagnostics and pharmacological correction / M.D. Ardatskaya , O.N. Minushkin // Gastroenterology, supplement to the journal Consilium Medicum - 2006 - T. 8, No. 2.
4. Baranova T.A., Knyazev O.V., Tishaeva I.A. Modern principles of therapy of severe attack of ulcerative colitis: from simple to complex / T.A. Baranova, O.V. Knyazev, I.A. Tishaeva // Experimental and clinical gastroenterology - 2022 - No. 205(9) - P. 268-275.
5. Baranovsky A.Yu. Dietetics. Management. 5th ed., revised . and additional - St. Petersburg: Peter, 2022 - 1104 p.
6. Baranovsky A.Yu. Errors in dietetics (solving difficult problems in the nutrition of healthy and sick people) / A.Yu. Baranovsky, L.I. Nazarenko - St. Petersburg: Handbook of dietetics / Ed. A.Yu. Baranovsky - St. Petersburg: ID SPbMAPO , 2011 - 736 p.