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Analysis of Dietary Characteristics in Patients with Chronic Hepatitis

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Abstract Adequate nutrition plays a crucial role in maintaining the resistance of both children and adults to environmental physical and chemical factors. Disruption of dietary patterns reduces the effectiveness of therapeutic interventions during recovery from chronic diseases, burns, or major surgical procedures, and negatively affects the length of hospital stay. Proper nutrition contributes to prolonging life, preventing diseases, improving work capacity, and supporting adequate adaptation to environmental conditions. The primary aim of this study was to examine the nutritional status of patients with chronic liver diseases as a factor contributing to disease progression.

Keywords Chronic liver diseases, Nutritional status, Immune-inflammatory response, Hepatocyte damage, Diet therapy

1. Introduction

2Accumulated clinical experience over recent decades confirms that in modern therapeutic and surgical strategies, priority should be given to correcting metabolic disturbances and ensuring optimal provision of energy and structural needs of the body. These approaches serve as the foundation for restoring homeostasis and enhancing the effectiveness of comprehensive therapy [1,2,3,6,7].

It is scientifically proven that rational and balanced nutrition is a key factor in preventing a wide range of diseases, prolonging life, maintaining physical and cognitive performance, and forming a full adaptive response to various environmental stressors. Therefore, improving clinical nutrition systems and increasing their effectiveness in managing patients with chronic and acute pathologies remains one of the key tasks of modern clinical medicine.

Chronic hepatitis occupies a leading position among liver diseases and represents a significant medical and social problem. Its relevance is associated with a high likelihood of progression to liver cirrhosis and hepatocellular carcinoma (HCC), conditions characterized by high rates of disability, complications, and mortality [5]. Despite the active development of etiological and pathogenetic treatment methods, less attention has been given to factors related to individual patient characteristics, which may interact with the etiologic agent, alter drug pharmacodynamics and pharmacokinetics, and consequently determine the effectiveness of therapy.

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One such factor is nutritional status, with disturbances observed in a large proportion of patients with chronic hepatitis of various etiologies [4,6]. Deficiencies in macro- and micronutrients, imbalances in protein, fat, and carbohydrate intake, and disorders of amino acid, lipid, and carbohydrate metabolism lead to changes in body composition, reduced muscle mass, hypoproteinemia, vitamin deficiencies, and weakened immunobiological resistance. These changes are of significant scientific interest for predicting disease progression, assessing risk factors for complications, and determining individualized approaches to nutritional support and dietetic correction. Evaluating nutritional status allows for more accurate assessment of liver functional reserves, identification of high-risk groups for complications, and personalization of therapeutic strategies in patients with viral, alcoholic, toxic, and autoimmune forms of chronic hepatitis.

2. Aim of the Study

To examine the actual dietary intake of patients with chronic hepatitis as a factor influencing disease progression.

3. Materials and Methods

The dietary intake of patients with chronic hepatitis was studied in the general therapy department of Tashkent Medical Academy. Patient assessments included questionnaires and survey methods recommended by the World Health Organization (WHO), focusing on the regular consumption of specific foods at breakfast, lunch, and dinner outside the hospital. The study accounted for both the quantity and chemical composition of consumed foods, as well as energy

expenditure.

For sanitary-hygienic monitoring and assessment of nutrition in different populations, it is necessary to evaluate dietary intake both as an environmental factor (energy value, nutrient composition, meal schedule, etc.) and as an indicator of nutritional status, reflecting the health condition of the studied group. Active questionnaires were employed to assess food intake.

Poor dietary habits and non-compliance with dietary recommendations in chronic liver disease result in metabolic disturbances and contribute to the development or activation of chronic hepatitis, potentially progressing to liver cirrhosis. Patients' diets were characterized by increased fat and carbohydrate consumption, insufficient intake of proteins and vitamins, alcohol consumption, and minimal energy expenditure. Energy value of the diet was determined using the chronometry method.

The study analyzed the intake of macronutrients (proteins, fats, carbohydrates), selected vitamins, and minerals in the daily diets of 40 patients with chronic hepatitis.

4. Results and Discussion

Dietary analysis revealed non-compliance with Pevzner diet No. 5 in some patients. Meal frequency was: 57% ate four times daily, 18% five times, and 25% six times. Most patients (90%) ate at home, while 10% ate outside.

Comorbidities included chronic cholecystitis in 11% of patients, chronic gastritis in 31%, peptic ulcer disease in 7%, history of gastrointestinal bleeding in 5%, and anemia of varying degrees in 20%.

Consumption of fish was extremely low, and intake of fresh vegetables, fruits, and berries in winter was inadequate. Conversely, consumption of fatty foods, pasta, and bakery products was excessive. Animal protein constituted 72% of total protein intake, while intake of vitamins C, B1, B2, B6, and minerals (potassium, calcium, magnesium, phosphorus, iron, copper, manganese) was below recommended levels and did not meet physiological needs.

Daily intake deficits were observed as follows: protein deficiency 13%, fat deficiency 15–20% (particularly polyunsaturated fatty acids), deficiencies in vitamins A, C, P, B1, B6, B12, and excessive carbohydrate intake (sucrose 43% above recommended levels due to bread products). Micronutrient intake was inadequate.

Dairy consumption (milk, yogurt, curd, cheese) averaged 300 mL/day (women 250 mL, men 200 mL), which is twice below hygienic norms. Daily egg consumption averaged 12.6 g (women 9.3 g, men 16 g), curd 10–15 g, cheese 10–20 g. Meat consumption averaged 78 g/day (beef, lamb, chicken), below the hygienic norm of 176 g.

Cereal consumption (bread, rice, peas, wheat flour) totaled 500–1400 g/day, 1.2 times higher than recommended. Vegetable and fruit intake (potatoes, carrots, beets, tomatoes, cucumbers, onions, greens, apples, grapes, pomegranates, pears, persimmons, figs, peaches, citrus) averaged 190.5 g/day, 1.5–2 times lower than hygienic norms.

5. Conclusions

1. In patients with chronic hepatitis, intake of major protein sources (dairy, meat, fish, chicken), vitamin C, iron, and polyunsaturated fatty acids is below recommended norms.
2. Dietary correction is necessary, with additional supplementation of proteins, amino acids (lysine), and monounsaturated fatty acids (particularly linolenic and arachidonic acids). Diets should be enriched with meat, liver, fish, dairy products, vegetables, and fruits.
3. The ideal daily food ratio (1:1:4) should be strictly observed, meals consumed four times daily, variety increased, and pectin intake enhanced by 5–10%.

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