GASTROINTESTINAL TRACT AND ESSENCE OF MICROELEMENTOSIS

Nasirova S.Z.
Bukhara State Medical Institute

Relevance. From a modern perspective, the gastrointestinal tract is considered as one of the main organs that protects the entire body and as the main component of the entire immune system of the body. It has long been shown that the intestine is not only a digestive organ, but also a part of the immune system that protects the body from bacteria, viruses and other ills, such as cancerous tumors. Of all the functions of the intestine, the protective function is the leading one, because this function protects the entire body and maintains homeostasis while simultaneously performing all other standard functions of absorption of trace elements and water. According to the above, the intestine performs two main functions: protection and absorption of trace elements for the body.

The purpose of the study: To identify the essence of microelementosis on the function of the gastrointestinal tract.

Materials and methods: Analysis of scientific and specialized literature, generalization.

The results of the study. Deficiency, excess and imbalance of trace elements in the body can lead to metabolic disorders and diseases with a common name - trace elements, which can manifest themselves in the form of gastrointestinal, cardiovascular pathologies, obesity, diabetes, atherosclerosis, cancer and other diseases. The most common cause of microelementosis is: low content of trace elements in the environment; monotonous unbalanced diet; improper culinary processing of food; the use of special diets; treatment of certain diseases with dialysis.

Recently, much attention has been paid to studying the role of dyselementoses in the development of gastrointestinal diseases, since macro- and microelements, which are part of enzymes, hormones and proteins, determine the functioning of the entire body as they are absorbed from the gastrointestinal tract. Gastrointestinal diseases remain one of the most serious health problems of the Republic of Uzbekistan and other world countries. Also, in the pathogenesis of many diseases, there is a deficiency of trace elements and gastrointestinal pathology. Moreover,

microelementosis is the leading cause of death for both men and women worldwide.

Thus, it has been proven that a lack of minerals can have a significant impact on the function of the gastrointestinal tract, leading to pathological changes in the entire body, premature cell aging, diabetes and carcinogenesis. It should be borne in mind that trace elements significantly affect the functioning of pro- and antioxidant systems. Trace element correction in modern practical medicine is gaining more and more supporters, convinced of the vital need to fill the deficiency of essential trace elements for the successful treatment of patients with various pathologies.

Conclusions:

1. Hypomagnesemia creates conditions for the occurrence of pathological processes in the abdominal cavity, manifested by abdominal pain. Syndromes such as pylorospasm, functional pyloric stenosis, hypokinetic dyskinesia of the gallbladder in combination with spasm of the Oddi sphincter create, along with other factors, prerequisites for the development of pancreatitis, as this disrupts the evacuation of pancreatic secretions, increases pressure in the virsung duct.
2. The effects of iron on the intestinal microbiota are represented by both positive and negative results. The intestinal flora changes as a result of iron enrichment, which leads to a decrease in the number of bifidobacteria, as well as an increase in Enterobacteriaceae and some specific enteropathogens (pathogenic E. coli). In addition, iron fortification of the diet increases the level of fecal calprotectin, initiating intestinal inflammation, and a decrease in iron levels leads to an increase in the frequency of intestinal infections due to changes in the composition of the intestinal microbiota. Both iron deficiency and excess play a role in dysbiosis of the intestinal microbiota, as well as the development of the inflammatory process up to colorectal cancer.
3. Zn is a cofactor of repair and regeneration processes due to its antioxidant properties and stabilizes the permeability of cytoplasmic membranes damaged by products. Zn participates in the process of inhibition of apoptosis in epithelial, endothelial, lymphoid and glandular tissues and stimulates DNA synthesis.
4. Se, as one of the main trace elements with antioxidant properties, affects the severity and activity of the inflammatory process in the mucous membrane of the stomach, duodenum, liver as a result of a decrease in the protective properties of cells from the damaging effects of free radicals.

Literature

1. Luzina EV, Lareva NV. Anemia and gastrointestinal tract diseases. *Therapeutic Archive.* 2013;85(4):102-105.

2. Григус Я. И., Михайлова О. Д., Горбунов А. Ю., Вахрушев Я. М. Значение магния в физиологии и патологии органов пищеварения // ЭиКГ. 2015. №6 (118). Бакирова А.Э., Алексеев Д.Г., Парцерняк А.С., Бакиров Б.А. Взаимосвязь кишечной микробиоты и железодефицитной анемии. Эффективная фармакотерапия. 2024; 20 (30): 56–62.

3. Хохлова Елена Анатольевна, Тарасова Лариса Владимировна, Степашина Татьяна Евгеньевна Участие селена и цинка в патогенезе воспалительных заболеваний желудочно-кишечного тракта (анализ литературных данных) // Вестник ЧГУ. 2011. №3. URL: